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Correct Classification Level of Young Adults Who Abuse and Do Not Abuse Their Partner in The Romantic Relationship of Forgiveness

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Abstract

In this study, the correct classification level of whether forgiving oneself, others and the situation is abusing their partners was determined by logistic regression analysis. There are 221 young adults ranging from 19-30 in this study, which was designed in the scanning model. Heartland Forgiveness Scale and Information Form were used in the study. In the initial model of the analysis, all participants were classified in the group that exploited their partner, with a classification percentage of 62.9%. The biggest contribution to the initial model comes from the variable of forgiving others, respectively, the variables of self-forgiveness and forgiveness. Cox & Snell R² value for the final model was calculated as .10. This finding shows that when the predictor variables are included in the model, 10% of the predicted variable is explained. Accordingly, the model has a good fit. Of the 82 individuals who did not abuse the result model, 34 were classified correctly and 48 were incorrect, with a percentage of correct classification of 41.5%. Of 139 individuals abused, 120 were correct and 19 were incorrectly classified, with an accurate classification percentage of 86.3%. One-unit increase in the self-forgiveness variable is 7.90% in the odds of abuse [(1-.921).100]; One-unit increase in forgiveness to others causes an 8.10% [(1-.919).100] increase in exploit odds. Findings show that the variables of self-forgiveness and forgiveness for others make significant contributions to classifying individuals who abuse and do not. The variables of forgiving yourself and others increase the predictive power of the model created.

Keywords: Self-Forgiveness, Forgiving Others, Forgiving The Situation, Romantic Relationship,

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INTRODUCTION

Close relationships have an important place in human life. Romantic relationships that affect individuals mentally and physically as well as family and friendship relationships are extremely important in human life (Kantarci, 2009). In a romantic relationship, partners experience problems from time to time. One of the problems experienced in romantic relationships is the violence of the partners towards each other. Violence mostly affects adolescents and young people (Makepeace, 1987). In romantic relationships in young adulthood, individuals can behave verbally, threaten, intimidate, slap or force sexual intercourse to their partners in the face of their problems (Malik, Sorenson & Aneshensel, 1997). In romantic relationships, abuse involves malicious and compulsive behaviors of individuals, including physical, emotional and sexual assault against their partners (Offenhauer & Buchalter, 2011).

Physical abuse is in the person's body by hitting, pushing, shaking, burning or biting by hand or any device for damaging to leave a mark (Kaplan, Pelcovitz & Labruna, 1999). Emotional abuse can be expressed as shouting, rejecting, humiliating, swearing, leaving alone, intimidating, threatening, not fulfilling emotional needs, not valuing, caring, humiliating, mocking speech, nicknames, excessive pressure and authority, dependency and overprotection. It can be explained as exposure (Runyan, Corrine, Ikeda, Hassan & Ramiro, 2002). Sexual abuse is the use of a person by force or persuasion for sexual satisfaction (Nurcombe, 2000). Since abuse behaviors in romantic relationships affect individuals negatively, abuse in romantic relations is seen as a preventable society problem in most countries (Creasey & Ladd, 2004). When the literature is examined, it has been determined that the abuse of romantic relationship causes psychological disorders such as anxiety, depression, sleep problems (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards & Marks, 1998). Abusive behaviors in romantic relationships can occur in the form of physical, emotional and sexual abuse (Eaton, Davis, Barrios, Brener & Noonan, 2007).

One of the variables whose relationship with romantic relationship abuse is examined is forgiveness. When the literature is examined, it shows that the abuse of romantic relationship is related to forgiveness (Davidson, Lozano, Cole & Gervais, 2014). Partners in romantic relationships can react differently when faced with hurtful events or situations. Forgiveness is one of these reactions. Relationships may end in cases of injury between partners, or the injured party may choose to forgive the other party and maintain the relationship (Şamatacı, 2013). Forgiveness also provides the continuation of the relationship by removing the barriers between the injuries caused by the other person (Fincham, 2000). Conflicts between partners can lead to problems that negatively affect relationships. Forgiveness behavior has a key role in the relationship so that the course of the relationship turns positive (Hodgson & Wertheim, 2007). By Hargrave and Sells (1997), forgiveness is defined as the healing process of frustrations caused by reorganizing relationships and hurt, leaving the feeling of anger and revenge towards the person who made the mistake. In cases of abuse in romantic relationships, forgiveness takes the form of reassessing the event, rather than changing the cognitive processes of abuse (Davidson, Lozano, Cole & Gervais, 2014). The benefits of forgiveness are less when the behaviors involving abuse are intense in the relationship of the partners (Fincham & Beach, 2005).

Forgiveness is explained in four dimensions by Toussaint & Jorgersen (2008). The first dimension is for the individual to forgive someone who hurt him/her. The second dimension is a mistake made by the individual in the past, forgiving him/her for an event that creates regret. The third is the belief that a sin committed will be divinely forgiven by God. The fourth is to initiate the process of forgiveness and forgiveness for forgiveness.

Forgiving others focuses on the response to hurt when someone has to forgive another person, while forgiveness focuses on the emotions that arise as a result of the person hurt himself/herself or someone else. In forgiving others, the person tries to get rid of the negative reactions he has to those who hurt him/her and to forgive them. Self-forgiveness involves the regulation of negative reactions towards the person, such as anger and hatred towards him/her or accusing himself/herself (Bugay &
Demir, 2012). There are very few definitions and explanations in the literature on the concept of self-forgiveness. Because the concept of self-forgiveness has remained a neglected concept for many years (Hall & Fincham, 2005). An important part of the researches focuses on the perspective of the injured or injured person, so what the person doing or injuring is in the background of self-forgiveness remains behind (Bassett, Bassett, Lloyd & Johnson, 2006; Hall & Fincham, 2005).

Self-forgiveness is the motivation of the person to move away from the situation he cannot forgive about himself/herself and the feeling of helping him/her by leaving behind his sense of revenge and anger towards him/her (Hall & Fincham, 2005). There are two different types of forgiveness. The first is forgiveness of the individual for the harm he/she has done to him/her, and the second is forgiveness of himself/herself for the harm he/she caused to the person against the individual. The process of self-forgiveness is a decrease in the negative emotions towards him/her as a result of confronting the person's error, and the increase of their positive emotions towards him/her (Enright & The Human Development Study Group, 1996). Self-forgiveness occurs when he sees himself as responsible for the event and believes that he has done wrong. Because of this situation, the person experiences negative feelings and thoughts such as guilt, shame or regret (Milam, 2017). The concepts of forgiving others and self-forgiveness are mostly included in researches. However, the concept of forgiveness has not been a topic frequently researched in the literature. Many researchers have not even mentioned the concept of forgiving the situation. The situation in the concept of forgiving the situation and the events that are beyond the control of the person such as illness and natural disaster were discussed. A disease or natural disaster can cause negative reactions in the person. Due to this situation, a person may experience angry and sad feelings. Forgiveness of the situation is when the individual turns his negative responses into situations into neutral or positive (Thompson, Snyder, Hoffman, Michael, Rasmussen, & Billings, 2005). Studies for forgiveness show that it makes it easier to overcome the hurtful or abusive situations that arise in romantic relationships (Coyle & Enright, 1997; DiBlasio & Benda, 2002; Reed & Enright, 2006; Rye, Pargament, Pan, Yingling, Shogren & Ito, 2005).

Some studies show that forgiveness is effective in decreasing post-traumatic stress disorder and depression levels and increasing self-confidence of individuals who experience emotional abuse in their romantic relationships (Berry, Worthington, O’Connor, Parrott & Wade, 2005; Freedman & Knupp, 2003; Özgün, 2010). Based on the results of the research, it is seen that there is a significant relationship between forgiveness and psychological health, forgiveness and well-being (McCullough, Bono & Root, 2007; Thompson, Snyder, Hoffman, Michael, Rasmussen & Billings, 2005). Barcaccia, Schneider, Pallini and Baiocco (2017) discussed forgiveness as a variable that mediates the negative effects of abuse. According to the results of the research, forgiveness decreases the behaviors of taking revenge or flight from the abuser, and increases psychological well-being. When studies are examined in general, it is understood that forgiveness is important and necessary for the psychological health of individuals and the quality of romantic relationships.

In this study on young adults with romantic relationships, the following questions were sought:

1. At what accuracy level do self-forgiveness scores classify young people in romantic relationships as individuals who abuse their partners and those who do not?

2. At what accuracy level does the forgiveness scores of others classify young people in romantic relationships as individuals who abuse their partners and do not?

3. At what accuracy level do the situation forgiveness scores classify young people in romantic relationships as individuals who abuse their partners and do not?
Purpose of the research

In this research, young adults with romantic relationships; It has been tried to determine the level of accuracy that the scores related to the levels of self-forgiveness, others and the situation are classified as “those who exploit their partner” and “those who do not abuse their partner”.

METHOD

Model of the Research

This research is a survey model that examines the level of accuracy that young adults in romantic relationships classify themselves, others and the partners of their level of forgiveness as individuals who abuse and do not. Screening models are evaluated as research methods aiming to describe a current or past situation as it exists (Karasar, 2000). Survey research is studies that aim to collect data to determine certain characteristics of a group (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz & Demirel, 2013).

Research Group

The sample of the study consists of 221 young adults aged 19-30. While determining the sample in the research, criteria sampling, which is one of the purposeful sampling methods, was used.

Table 1. Demographic information on the research group

<table>
<thead>
<tr>
<th></th>
<th>non-abusing group</th>
<th>abusing group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>55</td>
<td>76</td>
<td>131</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>63</td>
<td>90</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>139</td>
<td>221</td>
</tr>
</tbody>
</table>

As seen in Table 1, 67% of the non-abusing group consists of female, 33% are males, 55% of the abusing group is female and 45% are males.

Data Collection Tools

In this research, “Heartland Forgiveness Scale and Personal Information Form” were used to collect data.

Heartland Forgiveness Scale

The 18-item Heartland Forgiveness Scale developed by Thompson, Snyder, Hoffman, Michael, Rasmussen, & Billings (2005) was used to determine the tendency to forgive young adults with romantic relationships. 7-point Likert type scale; It has 3 sub-dimensions: self-forgiveness, forgiving others and forgiving the situation. The first 6 items of the scale are items that measure forgiveness, the second 6 items forgive others, and the third 6 items measure forgiveness. The lowest score that can be obtained from the sub-scales of the scale is 6 and the highest score is 42, while the lowest score that can be obtained from the total of the scale is 18 and the highest score is 126. In the overall scoring of the scale, items 2, 4, 6, 7, 9, 11, 13, 15 and 17 are scored in reverse.

The translation and suitability of the scale for Turkish culture was carried out by Bugay & Demir (2010) on 376 university students. As a result of confirmatory factor analysis, goodness of fit index (GFI) .92; comparative fit index (CFI) .90; root mean square approach error (RMSEA) = .06. The construct validity of the scale was found to be sufficient (Meydan & Şeşen, 2015). Cronbach alpha coefficient was calculated for the reliability of the Turkish form of the scale. Cronbach alpha values for the subtests of the scale are .64 for self-forgiveness, respectively; original study (Bugay & Demir, 2010) was calculated as .79 for forgiveness of others, .76 for forgiveness, and .81 for total forgiveness score. It was determined that the scale has a 3-factor structure in accordance with the
original and is suitable for the Turkish sample.  

\[ \chi^2 (124) = 289.49, p = .00; \chi^2 / df\text{-ratio} = 2.33; \text{GFI} = .92, \text{CFI} = .90, \text{RMSEA} = .06 \]

**Table 2. Goodness of fit values (Meydan & Şeşen, 2015)**

<table>
<thead>
<tr>
<th>Measurement (Compliance statistics)</th>
<th>Good fit</th>
<th>Acceptable Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \chi^2 )</td>
<td>p &gt; .05</td>
<td>-</td>
</tr>
<tr>
<td>( \chi^2 / sd )</td>
<td>≤ 3</td>
<td>≤ 4.5</td>
</tr>
<tr>
<td>RMSEA</td>
<td>≤ 0.05</td>
<td>0.06 – 0.08</td>
</tr>
<tr>
<td>SRMR</td>
<td>≤ 0.05</td>
<td>0.06 – 0.08</td>
</tr>
<tr>
<td>GFI</td>
<td>≥ 0.90</td>
<td>0.89 – 0.85</td>
</tr>
<tr>
<td>IFI</td>
<td>≥ 0.95</td>
<td>0.94 – 0.90</td>
</tr>
<tr>
<td>TLI</td>
<td>≥ 0.95</td>
<td>0.94 – 0.90</td>
</tr>
<tr>
<td>CFI</td>
<td>≥ 0.97</td>
<td>≥ 0.95</td>
</tr>
</tbody>
</table>

**Personal Information Form**

The personal information form was created by the researcher in order to determine the variables of the research group such as gender and age. Information on what the abuse is and the types of abuse are explained in the personal information form. However, the variables of gender and age were requested only to describe the research sample.

**Data Analysis**

In this study, the level of accuracy of young adults who have a romantic relationship to forgive themselves, others and the situation classifies individuals who “abuse their partner” and “those who do not abuse their partner” by Logistic Regression Analysis. During the analysis of the data, 8 missing forms were removed from the dataset before proceeding to logistic regression analysis. Then, it was checked whether the distribution is compatible with the assumptions of Logistic Regression Analysis. Logistic Regression Analysis does not need to meet assumptions in linear regression models (Tabachnick & Fidell, 2013). However, in Logistic Regression Analysis, assumptions regarding sample size, extreme values and multiple connection problem should be taken into consideration. In this context, the data set was examined in terms of extreme value and it was observed that there was no extreme value that could negatively affect the analysis. According to Çokluk, Şekercioğlu & Büyüköztürk (2012), in order to achieve stable results in Logistic Regression Analysis, there should be at least 50 groups in each independent variable. In this context, it can be said that the sample is of sufficient size. The multiple connection problem was evaluated by examining the correlation values between variables and VIF and tolerance values. Considering all the bilateral correlations in the data set, multiple connection problems can be mentioned in cases where the correlation is greater than .90 and the VIF values are greater than 10 and the tolerance values are less than .10 (Çokluk, Şekercioğlu & Büyüköztürk, 2012). In this study, all binary correlations are less than .90 and all VIF values of independent variables are less than 10 and tolerance values are greater than .10 (Table 3).

**Table 3. Correlation values of scores**

<table>
<thead>
<tr>
<th></th>
<th>Self-forgiveness</th>
<th>Forgiving others</th>
<th>Forgiving the situation</th>
<th>Total forgiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-forgiveness</td>
<td>1</td>
<td>.178**</td>
<td>.415**</td>
<td>.662**</td>
</tr>
<tr>
<td>Forgiving others</td>
<td>1</td>
<td>.578**</td>
<td>.796**</td>
<td></td>
</tr>
<tr>
<td>Forgiving the situation</td>
<td>1</td>
<td>.849**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total forgiveness</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)**

At what level of accuracy does it classify the states of self-forgiveness, forgiveness, and forgiveness, which are the sub-dimensions of forgiveness, whether the partners are abusive in romantic relationships? In this research, in which an answer to the question was sought; Logistic Regression Analysis was performed. First of all, individuals who abuse their partner at least once are
coded as "1" and individuals who do not abuse are coded as "0". Then, regression analysis was carried out using the "Enter" method. In the analysis, -2LL (-2log likelihood) was examined first. In Logistic Regression Analysis, two values related to -2LL are calculated. The first of these values is only the value of the model with the constant term as the value belonging to the baseline model. The second value for -2LL is the value of the result model (the model formed by the predictive variables entering the model). By comparing these two values related to -2LL, the improvement in the model due to the predictive variables can be evaluated (Çokluk, Şekercioğlu & Büyükoztürk, 2012).

RESULTS

In this study, in which the accuracy level of the sub-dimensions of forgiveness, self-forgiveness, forgiveness of others and forgiveness of the situation, whether or not partners engage in abusive behaviors in romantic relationships were analyzed, first descriptive findings related to the predictive variables, followed by the findings of logistic regression analysis were included. Then logistic regression analysis results are explained.

Findings related to the variables of forgiveness of self, forgiveness of others and the situation are given in Table 4.

Table 4. Findings related to the predictor variables

<table>
<thead>
<tr>
<th>N=221</th>
<th>Mean</th>
<th>Sd</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-forgiveness</td>
<td>27.55</td>
<td>5.61</td>
<td>14.00</td>
<td>41.00</td>
</tr>
<tr>
<td>Forgiving others</td>
<td>25.16</td>
<td>6.78</td>
<td>6.00</td>
<td>42.00</td>
</tr>
<tr>
<td>Forgiving the situation</td>
<td>26.50</td>
<td>5.33</td>
<td>10.00</td>
<td>42.00</td>
</tr>
</tbody>
</table>

When Table 4 was examined, the mean scores of the sample for forgiveness were found to be 27.55 (Sd= 5.61), the mean of forgiveness of others scores as 25.16 (Sd = 6.78), and the mean of forgiveness scores of 26.50 (Sd = 5.33). When the sub-dimensions of forgiveness are evaluated; It is observed that the mean scores of self-forgiveness are higher for forgiving others and without forgiving the situation.

Findings regarding the accuracy level at which the sub-dimensions of forgiveness, such as self-forgiveness, forgiveness of others, and forgiveness of the situation, classify the abusive behaviors of partners in romantic relationships are given below.

Table 5 explains the initial model for the fixed term. The initial model is the model created in order to make comparisons with the model entered by the independent variables in the next steps.

Table 5. First classification table

<table>
<thead>
<tr>
<th>Observed</th>
<th>Expected</th>
<th>Correct Classification Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whether to abuse</td>
<td>I didn’t abuse</td>
</tr>
<tr>
<td>Step 1</td>
<td>I abused</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>I didn’t abuse</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of Total Correct Classification</td>
<td>62.9</td>
<td></td>
</tr>
</tbody>
</table>
forgiveness, forgiving others and forgiving the situation contributed significantly to the model (p = .000).

Up to this stage, only the analyzes related to the starting model in which the constant term is included are mentioned. In the next analysis, the findings of the result model formed by including the predictive variables are presented. In the final model, the Omnibus Test results were examined first. In this study, model chi-square values for the omnibus test were determined to be 23.582 (p = .000). The -2LL value, which was calculated as 291.502 in the initial model, was determined as 267.920 in the final model. The -2LL difference between the initial model and the final model was calculated as 291.502 - 267.920 = 23.582. The fact that this difference is significant shows that the predictive variables in the result model increase the predictive power of the model. Cox & Snell R Square value for the final model was calculated as .10. This finding shows that when the predictive variables are included in the model, 10% of the predicted variable (whether or not to exploit it) is explained. The fact that the Hosmer and Lemeshow Test, which evaluates the fit of the logistic regression model as a whole, is meaningless (p> .05) indicates that the model has acceptable fit. In this study, chi-square value of Hosmer and Lemeshow Test was determined as 4.570 (p> .05). Accordingly, the model has a good fit.

The findings related to the classification obtained as a result of the logistic regression model are presented in Table 6.

Table 6. Findings related to classification

<table>
<thead>
<tr>
<th>Observed</th>
<th>Expected</th>
<th>Correct Classification</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whether to abuse</td>
<td>I didn’t abuse</td>
<td>I abused</td>
</tr>
<tr>
<td>I abused</td>
<td>34</td>
<td>48</td>
<td>41.5</td>
</tr>
<tr>
<td>I didn’t abuse</td>
<td>19</td>
<td>120</td>
<td>86.3</td>
</tr>
<tr>
<td>Percentage of Total Correct Classification</td>
<td></td>
<td></td>
<td>69.7</td>
</tr>
</tbody>
</table>

As seen in Table 6, 34 of 82 non-abused individuals were classified correctly and 48 were classified incorrectly. Individuals who are not abused are classified with an accurate classification percentage of 41.5%. Of the 139 individuals who abused, 120 were classified correctly and 19 were misclassified. Individuals who are abused are classified with an accurate classification percentage of 86.3%. In the initial model, 139 individuals who abused and 82 individuals who did not abuse were classified with an estimate of 62.9%.

In Table 7, findings related to the coefficient estimates regarding Wald statistics and result model are presented.

Table 7. Coefficient estimates of variables related to the result model

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Standard error</th>
<th>Wald</th>
<th>sd</th>
<th>p</th>
<th>Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-forgiveness</td>
<td>-.082</td>
<td>.030</td>
<td>7.459</td>
<td>1</td>
<td>.006</td>
<td>.921</td>
</tr>
<tr>
<td>Forgiveness for others</td>
<td>-.084</td>
<td>.028</td>
<td>8.845</td>
<td>1</td>
<td>.003</td>
<td>.919</td>
</tr>
<tr>
<td>Forgiveness for situation</td>
<td>.018</td>
<td>.037</td>
<td>.235</td>
<td>1</td>
<td>.628</td>
<td>1.018</td>
</tr>
<tr>
<td>Constant</td>
<td>4.496</td>
<td>.983</td>
<td>20.930</td>
<td>1</td>
<td>.000</td>
<td>89.650</td>
</tr>
</tbody>
</table>

p<.05

As can be seen in Table 7, a one-unit increase in self-forgiveness variable abuse (coded as “1”) odds of 7.90% [(1-.921) .100]; one-unit increase in the predictor of forgiving others causes an increase in exploit odds of 8.10% [(1-.919) .100]. These findings show that self-forgiveness and forgiveness for others make significant contributions to classifying individuals who abused and not.

CONCLUSION AND DISCUSSION

Forgiving himself/herself, forgiving others and forgiving the situation correctly classifies people who abused and did not use their partner in their romantic relationship by 69.7%. The variables...
of self-forgiveness and forgiveness for others make significant contributions to this classification. The biggest contribution to the classification percentage comes from the variable of forgiving others. The variable forgiving others follows the variable forgiving yourself. As a result of this study it can be said that forgiving others and self-forgiveness have a critical effect on the classification of individuals who abuse and do not abuse their partner. When the literature is examined, there is no study that classifies whether forgiveness has been abused in a romantic relationship. In romantic relationships, partners can experience conflicts due to their disagreements. Various problems may arise in the relationship due to conflicts. According to Etchevery, Le & Charania (2008), romantic relationships, which are one of the most important development tasks of young adulthood, can sometimes accommodate abuse. The reactions of individuals who have a romantic relationship after the abuse can be very diverse. In some cases, partners can continue their relationships and in others, they can end their relationships. One of the reactions that the partners can give after abuse is forgiveness. In many studies (Allem and Hill, 2012; Bono, McCullough & Root, 2005; Karremans, Van Lange, Ouwerk & Kluwer, 2003) examining the relationship between forgiveness and abuse or perception of abuse, it is stated that there is a significant relationship between these two variables.

Fincham and Beach (2002) found that there is a negative relationship between forgiveness and abuse, and as forgiveness increases, abuse decreases. In their study, Davidson Lozano, Cole & Gervais (2014) show that there is a negative and significant relationship between forgiveness of themselves, someone else and situations and abuse. McCullough et al., (1997) stated in their research that the general condition of the partner and the relationship is effective in forgiving the abuser. It is also very important that the person who hurt the opposite party in the process of forgiveness said that he/she regretted it. It is easier for both parties to put aside their anger and desire to take revenge. According to Eaton, Struthers & Santelli (2006), the person who hurts the opposite party does something to correct this situation and the degree of responsibility of the person who made the mistake is affected by forgiveness. Forgiveness helps restore trust between partners, despite the hurtful behavior that a person is exposed to by their partner. It also allows both the hurt and hurt person to think about the situation they live in and improve their relationship (Hargrave & Sells, 1997). In order to talk about forgiveness, there is a decrease in feelings of anger, revenge and avoidance while an increase in positive emotions is required (Worthington, 1988). According to Murray (2002), forgiveness is not to deny crime. Thanks to forgiveness, the negative cycle in the person is destroyed and a healthy start is created. Forgiveness is a conscious and freely given gift that the person offers to the person who is hurt. Especially in the experiences of abuse, the ability of people to forgive themselves is much more important than forgiving the perpetrator of abuse (Van Der Kolk, 2018).

In many romantic relationships, the relationship between the parties is not limited to control behaviors or aggressive behaviors aimed at gaining power and control, but also coercive and malicious behaviors in the form of violence or abuse are observed in the relationship (Cofone, 2011). Kaura & Lohman (2009) stated in their study that being a victim during romantic relationship abuse is also related to the level of commitment to the relationship.

It is stated that being exposed to abuse in a romantic relationship is the most important determinant in turning into a perpetrator (O'Keefe, 1998). Johnson et al. (2005) state that the male perpetrator of violence in a romantic relationship resorts to abuse as a way of displaying power over his partner, but women consider this situation as a sign of love or commitment. All these show that abusers and victims interpret the abusive behavior differently. It is thought that studies on this subject will have a special importance in order to prevent the spread of abuse.

It can be observed that individuals exposed to abuse-type behaviors give different reactions. One of them is the forgiveness response. Although abusive behaviors in romantic relationships have serious negative consequences, some partners who are exposed can be forgiving. As in the research that states that it is very difficult to forgive abuse in a romantic relationship (Tsang & Stanford, 2007), it is stated that the abused partner's thoughts and approaches to forgiveness are effective when deciding to continue or terminate the relationship (Gordon, Burton, & Porter, 2007).
When individuals in relationship experience negative events such as abuse, they may see themselves as responsible not only for someone else but also for the incident. In this forgiveness process, it is important for the individual to forgive himself/herself as well as forgiving the partner (Hall & Fincham, 2005). Self-forgiveness can be one of the coping responses that result from the negative event(s) of the victim who has been subjected to abuse. It is easier for an individual to forgive someone else after negative experiences such as abuse without forgiving himself/herself. The individual can criticize, judge and even punish himself/herself in such cases. Due to the negative event, the individual can blame someone else and hold him/her responsible for the abuse process. Self-forgiveness Hall and Fincham (2005) is a process in which an increase in anger, anger, guilt feelings, self-harming behaviors and desire to self-punishment increase in positive emotions and thoughts. When the person exploits his partner in the relationship, he/she can blame himself/herself for hurting the other party. Or he may regret what he/she did. In such cases, self-forgiveness appears as a key concept. The person may feel the need to forgive himself/herself. He/She gives up his feelings of sadness, anger and grudge due to the situation he/she had forgiven him/her.

The fact that forgiveness can classify whether to exploit or not exploit in a romantic relationship shows that the role of forgiveness in romantic relationships is an important factor.

**RECOMMENDATIONS**

1. It can be said that the subject of forgiveness in romantic relationships should be included in the psychoeducational studies aimed at raising awareness on the role of forgiving oneself, others and the situation in romantic relationships that can be experienced in life and especially in young adulthood and after.

2. As a result of this research, group guidance studies should be carried out to increase awareness about forgiveness, especially in young adulthood, when romantic relationships are important.

3. In this direction, it can be said that by increasing their awareness of concepts in the field of positive psychology such as mindfulness and forgiveness, they will be more forgiving and take more responsibility for their lives, thus contributing to social mental health.

4. Statistical modeling or experimental studies can be done on some concepts in the field of mental health (psychological resilience, mindfulness, spirituality...) that are thought to be related to forgiveness.

**REFERENCES**


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Evaluation of the Intensive English Language Teaching Program for the 5th Grade according to Teachers’ Views*

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Abstract

Language policies of countries have focused especially on the teaching and learning of English, the universal language of communication because of the increase in international exchange of information. In this context, one of the changes which were made in the field of foreign language teaching in recent years in Turkey is that the intensive foreign language education, put into practice in the 2017-2018 academic years, is implemented in the 5th grades of the determined pilot schools. The aim of the study is to evaluate the intensive English language teaching program for the 5th grade (IELTP) according to the teachers’ views. The research is conducted in the phenomenological pattern, one of the qualitative research methods. In the 2018-2019 academic years, the data were collected by interviewing 26 volunteer English teachers from seven different districts of İstanbul. Descriptive and content analysis methods were used to analyse the data. As a result, most of the teachers generally have expressed positive opinions about the intensive English language course for the 5th grade and its curriculum. The instructional activities, methods, and techniques; tools and materials; measurement tools, methods and activities used by the teachers in their lessons are in line with the ones suggested in the curriculum. However, some teachers have indicated that they face with some problems such as being the subjects in the curriculum intense, above the students’ level, and focusing on the grammar; abundance of the number of objectives; the lack of materials.

Keywords: Intensive English Course; English Language Teaching Program; Program Evaluation; Teachers’ Views; The 5th Grade

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INTRODUCTION

International relationships have increased with the development of information technologies and globalization and it has become an obligation to learn English, which is the common communication language all around the world (lingua franca), to manage these relationships. Great importance is attached to foreign language education in Turkey, as well as in other countries. More specifically in the context of Turkey, many innovations, and changes especially in the foreign language education field have occurred in order to join the European Union and reach a more contemporary position by catching up with the standards of European countries in the 21st century (Salihoğlu, 2003).

Looking at the last years, it is seen that there had not been any foreign language courses at the primary education level in Turkey until 1997. Nevertheless, with the 8-year Education Reform which was enacted in 1997, formerly, foreign language education starting from the 6th grade and continuing through 3-year high school education remained limited and that situation brought along the necessity that foreign language education should be included in the primary schools’ educational program (Akdoğan, 2004). Therefore, the English course started to be taught in the 4th grade. Thereby, the principle of starting foreign language teaching at an early age was considered, and as Cameron (2003) stated that with the growth of the number of children around the world, English language education started to be seen at earlier ages. Following the 1997 reform, English lessons were decided to be given only for two hours a week in the 4th and 5th grades and four hours a week in the 6th, 7th, and 8th grades.

On the other hand, at the secondary education level in our country in 1992-1993, apart from the schools using a foreign language as a medium of instruction, 22-25 hours of foreign language instruction per week began to be provided in schools called "super high schools" (Demircan, 2013). However, because of the failure of the Anatolian and Super High School models after the 8-year compulsory primary educational program, the view that the 3-year education period in all high schools should be increased to four years gained importance (Akdoğan, 2004). Foreign language courses have been taught necessarily since the past in primary and secondary education institutions in Turkey as in all other countries of the world. Nonetheless, in addition to the first foreign language, a second foreign language course started to be given as a compulsory elective course firstly in 92 Anatolian Teacher High Schools as a pilot scheme in the 2001-2002 academic years (Genç, 2002).

In 2006, Foreign Language Education Regulation was published in the Journal of Announcement and it was notified that the primary and secondary curricula are complementary and also they are the continuation of each other.

After the 4+4+4 education reform started to be implemented in the 2012-2013 academic year, school starting age decreased to 5 (primary school 1st grade) and the age of starting to learn a foreign language to 6 (primary school 2nd grade). With this reform, students started English language learning from the 2nd grade on (Bayyurt, 2012). After the 4+4+4 education model was introduced to the Turkish education system in the 2012-2013 academic years, the need to review the curricula arose. Within the Ministry of National Education’s framework of the policies to increase the quality of education, it is aimed to ensure that lower secondary and secondary school students learn at least one foreign language well in a way that they can communicate in written and verbal ways. Accordingly, in the 5th grade of some lower secondary schools and religious vocational lower secondary schools across the country, intensive foreign language (English) education was carried out in the 2017-2018 academic years. Intensive English language teaching for the 5th graders is reminiscent of the old Anatolian High School system (Yaman, 2018).

The pilot scheme of the intensive English language teaching for the 5th grade was started in 620 schools in 81 provinces determined by the Ministry of National Education (MoNE). In all the 5th grades of these schools, "Intensive English Language Teaching Program for the 5th Grade" prepared by the MoNE was used. For the 2017-2018 academic years, 15 lesson hours were given to English
course in the classes where the pilot scheme was conducted, while 20 lesson hours were given to other lessons. In the document which was sent to the relevant institutions by the MoNE, it was stated that studies aiming to develop students' four language skills (speaking, listening, reading, writing) would be essential during the studies toward both teaching of the lesson and assessment and evaluation of the course at schools that provide intensive English language teaching. The increased number of English lesson hours of the 5th grades has also affected the number of units that need to be taught in that year, so it has been aimed to cover 40 units in the 5th grades of the schools that were determined as the pilot schools, while 10 units are covered in the other ones (MoNE, 2017).

However, some changes were made regarding this pilot scheme in the 2018-2019 academic years. First, the course hours were changed; while in the fifth grade of lower secondary school, foreign language (English) lessons could be taught up to 18 lesson hours on-demand, the lesson hours for other lessons remained as 20. In the same academic year, pilot schools started to use the “Intensive English Language Teaching Program for the 5th, 6th Grade”, which was approved by the Authority Approval dated 21.09.2018. Therefore, in the 2018-2019 academic year, the “Intensive English Language Teaching Program for the 5th Grade” to be applied in the schools teaching intensive English language in the 5th grades of lower secondary; the “English Language Teaching Program for the 6th Grade” –prepared as the follow-up of the “English Language Teaching Program for the 5th Grade” which was implemented in the 2017-2018 academic year- is applied in the 2018-2019 academic year in the 6th grade level of lower secondary school. Unlike the previous year's curriculum, the last 4 units were removed from the IELTP and the total number of units was reduced to 36 (MoNE, 2018).

If the IELTP which underwent little change in 2018 is examined in detail, it is possible to see that the Common European Framework of Reference for Languages (CEFR) was taken into account in the preparation of this curriculum. In the IELTP, after the A1 and A2 levels, of the levels determined in the CEFR, are presented intensively in the first semester, it is aimed to provide English language learning at B1.1 level in the second semester of the program. As in the English Language Teaching Program (Primary School and Lower Secondary School the 2nd - 8th Grades), in this intensive program, the communicative approach is adopted, as well. Therefore, it provides a communicative environment that covers different themes (Board of Education and Discipline (BOEAD), 2018).

The adoption and implementation of this practice by all schools in the country depend on the success of the current pilot scheme. Each curriculum is just an outline of the designed curriculum before its implementation. Although a decision can be made on the effectiveness of educational programs based on available information, the main judgment can only be reached after the program is implemented and it is observed whether there is a difference in students' learning. Although the starting point of program evaluation activities is the design, it is not possible to talk about a realistic evaluation if the implementation is not taken into consideration (Erden, 1998). Therefore, if the program design is piloted/tested before being disseminated to the whole country, and if this scheme is evaluated, the possibility of rearranging the program’s deficiencies arises. Thanks to the pilot schemes, the problems encountered in the program’s functionality and practicality are determined and necessary measures are taken to eliminate those in the program design (Özdemir, 2009). For these reasons, it is necessary to question the effectiveness of the curriculum, which includes teaching activities, serves the purpose; whether it leads to unwanted results, and whether excessive energy is wasted while doing these works (Ertürk, 1972). This is possible by evaluating the program. It can be said that curricula are not static but dynamic on the grounds that their deficiencies and insufficiency must be made up and revised according to the changing conditions.

Program evaluation is a stage of program development and thanks to the feedback obtained at this stage, the program is improved in a more useful and effective way. Uşun (2012) defined curriculum evaluation as the decision-making process about the different dimensions of the curriculum, which is developed by using scientific research methods, such as accuracy, practicality, sufficiency, propriety, efficiency, effectiveness, utility, success, and feasibility. Curriculum evaluation serves two crucial functions which are providing an information-gathering tool that can be used to improve a course and as a basis for making decisions regarding curriculum adoption and effectiveness.
(Welch, 1969). The results obtained during the evaluation phase provide feedback to program development experts, such as whether to adopt the program or to review its shortcomings and reuse it. Based on the view that all components of a curriculum should be examined one by one, it is seen that different approaches are used while evaluating the curriculum (Demirel, 2005).

To summarize, there are still problems encountered in foreign language education in Turkey. As one of the practices to support foreign language instruction, intensive English language teaching has been implemented in the 5th grades. The evaluation of the IELTP, which was reviewed in 2018, and the results which were obtained from this evaluation are of importance as it will provide information about the continuity of the pilot scheme for curriculum development experts. Since it is a new implementation, very little research has been done in this field. These studies are mostly related to the IELTP prepared in 2017 (Aksoy et al., 2018; Canher & Bümen, 2018; Dilekli, 2018; Erdem & Toy, 2017; Kambur, 2018). In other words, the problem of this study is that there are not enough studies about the pilot scheme of teaching intensive English language to the 5th graders. In line with this problem, the purpose of the study is to evaluate the 2018 Intensive English Language Teaching Program for the 5th Grade (IELTP) which is implemented in pilot schools where intensive foreign language education is given to the 5th graders, according to teachers’ views. It is thought that by taking the opinions of the teachers –who are the implementers of the curriculum- about the program, important information about the program’s strengths and weaknesses was obtained.

METHODOLOGY

Research Design

In this research, the qualitative research method was used since it is aimed to present a descriptive picture regarding the IELTP applied in the 5th grade to the reader by revealing the teachers' views realistically and holistically. The phenomenological pattern was used in order to determine teachers' views on the program in-depth. The phenomenological pattern focuses on phenomena which we are aware of but do not have an in-depth and detailed understanding about (Yıldırım & Şimşek, 2016). Accordingly, in this study, the phenomenon of the IELTP was investigated in-depth by referring to the teachers' views.

Participants

Demirel (2005) showed teachers and students as the main reference source within the scope of program evaluation studies so as to check whether the program is effective in terms of making the desired changes. On the other hand, teachers were specified as the main reference source in this study. Since the thoughts, perceptions, and experiences of the individuals about a phenomenon are tried to be revealed in the phenomenology design, the people who have experience in the subject matter are selected for the study group and therefore a purposeful choice is made (Onat-Kocabıyık, 2016). Hence, the snowball sampling method, one of the purposeful sampling methods, was used in the study. Snowball sampling is based on the fact that the people accessed earlier in the research process pioneer to access more people so as to include in the study group and so the list of the study group grows like a snowball (Yıldırım & Şimşek, 2016).

Twenty-six volunteer teachers who teach in public schools in seven different districts of Istanbul including Bahçelievler, Silivri, Kadıköy, Üsküdar, Küçükçekmece, Kartal and Ataşehir, and teach English in the 5th grade classes, where intensive English language teaching is implemented, participated in the study. Twenty of these teachers are women and six are men and their service years vary between 2 and 34 years.

Data collection process

Initially, from these seven districts, teachers who volunteered to participate in the study were contacted. The interviews were conducted face-to-face by going to the schools, where the teachers worked, at a suitable time for the teachers. The interviewed teachers’ colleagues who attend the 5th grade English lessons in these pilot schools and want to participate in the interview were also included.
in the study. A structured interview form which comprises ten questions and was developed by Küçüktepe, Küçüktepe and Baykin (2014) was used as a data collection tool. The recording of the interview data was provided by both the notes taken by the researchers during the interview and voice recordings with the permission of the interviewed teachers.

**Data analysis**

The qualitative data were obtained through interviews and the NVIVO package program was used for analysis. Descriptive and content analysis methods were used during the analysis of the research data. Descriptive analysis was used since the data were analysed considering the predetermined interview questions and direct quotations were made from the teachers’ views about the questions which were asked. Interviews with teachers were analysed and the teachers' views on each question were tried to be determined. However, content analysis was also used in order to reach unnoticed concepts and themes by analysing the data which were summarized in the descriptive analysis more in-depth (Yıldırım & Şimşek, 2016). Content analysis is the development of appropriate categories, ratios, and scoring that the researcher can use to make comparisons in order to illuminate what he is researching (Fraenkel, Wallen & Hyun, 2011). Accordingly, the data which were gathered through interviews were coded and the frequency and percentage values of these codes were presented.

**Validity and reliability**

In the study, it was aimed to ensure consistency by involving both researchers in the analysis of qualitative data and by receiving audio recordings from volunteering participants. The detailed description of research data and direct quotations from teachers’ views contributed to the research in terms of transferability and persuasiveness.

**FINDINGS**

In this section, the findings regarding the qualitative data which were obtained from the interviews are presented. Each interview question constitutes the themes and each theme presented in the tables.

**Table 1 Suitability of the Objectives of the English Course to the Students' Mental and Social Development Levels**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitability of the objectives to the students' mental and social development level</td>
<td>Suitable</td>
<td>10</td>
<td>38.46</td>
</tr>
<tr>
<td></td>
<td>Partly Suitable</td>
<td>9</td>
<td>34.61</td>
</tr>
<tr>
<td></td>
<td>Unsuitable</td>
<td>7</td>
<td>26.92</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>

The teachers’ answers which were given to the question “Are the objectives of the English course suitable for the students’ mental and social development level?” are shown in Table 1. Ten teachers (38.46%) found the objectives suitable for the student level, nine teachers (34.61%) stated that they were partly suitable and seven teachers (26.92%) stated that they were not. While P11 coded teacher found the objectives partly suitable for students’ mental and social development level, P12 stated that they were unsuitable in these words:

P11: “Partly, of course, as not every student's readiness level and background knowledge about English are the same.”

P12: “They aren’t suitable. The objectives for the 5th grade are beyond their mental level. I mean, it should be more simplified, more conversational. There are too many objectives. It is hard to acquire the objectives in that timespan.”
Table 2 Suitability of the English Course Content to the Students’ Level

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The suitability of the content of the English course to the student level</td>
<td>Suitable</td>
<td>8</td>
<td>30.76</td>
</tr>
<tr>
<td></td>
<td>Partly Suitable</td>
<td>12</td>
<td>46.15</td>
</tr>
<tr>
<td></td>
<td>Unsuitable</td>
<td>6</td>
<td>23.07</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2 shows the teachers' answers to the question "Is the content of the English course determined according to the student level?". Most of the teachers (n=12; 46.15%) found the content partly suitable for the student level while eight teachers (30.76%) found it suitable and six teachers (23.07%) found it unsuitable. The views of P1, P9 and P24 coded teachers are given below:

P1: “Yes, it is suitable. It is interesting both for the kids and me. We already have the lesson joyfully. It’s nice; I think there aren’t any problems.”

P9: “If it were only the first 20 units, the content would be appropriate for the kids. But as it goes further the content starts to become too much for the kids.”

P24: “It’s not suitable. Since there are topics beyond their cognitive levels that require them to narrate the sentence to a third person such as passive, direct, indirect and causative.”

Table 3a Suitability of the Suggested Teaching Methods, Techniques, and Activities in the Program

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitability of activities, teaching methods and techniques suggested in the program</td>
<td>Suitable</td>
<td>13</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>Partly Suitable</td>
<td>10</td>
<td>38.46</td>
</tr>
<tr>
<td></td>
<td>Unsuitable</td>
<td>3</td>
<td>11.53</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3a shows the teachers’ views regarding the suitability of teaching methods, techniques and activities which were suggested in the program. It is seen that half of the teachers (n=13) found the teaching methods, techniques and activities suggested in the program suitable. While ten of the teachers (38.46%) found them partly suitable, very few teachers (%11.53; n=3) stated that they were not. While P14 from the participants stated that the teaching methods, techniques, and activities which were suggested in the program were suitable, P19 stated that they were partially suitable. The views of these teachers are as follows:

P14: “Kids don’t like explicit grammar teaching. Today’s generation loves very different games, songs, drama role-play, dialogue. In that sense, they are suitable, yes.”

P19: “Not all of them are suitable because the class sizes are not small; they look like they are arranged for classrooms which include 15 people…”

Table 3b The Most Used Teaching Methods and Techniques While Teaching English Course

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The most used teaching methods and techniques</td>
<td>Question-Answer</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Educational Games</td>
<td>23</td>
<td>23.95</td>
</tr>
<tr>
<td></td>
<td>Drama</td>
<td>15</td>
<td>15.62</td>
</tr>
<tr>
<td></td>
<td>Computer-Assisted Instruction</td>
<td>11</td>
<td>11.45</td>
</tr>
<tr>
<td></td>
<td>Group Work</td>
<td>7</td>
<td>7.29</td>
</tr>
<tr>
<td></td>
<td>Communicative Language Teaching</td>
<td>4</td>
<td>4.16</td>
</tr>
<tr>
<td></td>
<td>Total Physical Response (TPR)</td>
<td>4</td>
<td>4.16</td>
</tr>
<tr>
<td></td>
<td>Direct Method</td>
<td>3</td>
<td>3.12</td>
</tr>
<tr>
<td></td>
<td>Translation</td>
<td>3</td>
<td>3.12</td>
</tr>
<tr>
<td></td>
<td>Other (Station, Brainstorming)</td>
<td>2</td>
<td>2.08</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>96</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 3b shows the teachers’ answers to the question “Which teaching methods and techniques do you use the most while teaching English?”. When the table is examined, most of the teachers (n=24; 25%) stated that they used the question-answer method. It is respectively followed by these methods/techniques: Educational games (23.95%), drama (15.62%), computer-assisted instruction (11.45%), group work (7.29%), communicative language teaching (4.16%), TPR (4.16%), direct method (3.12%), translation (3.12%), station and brainstorming.

Table 3c The Most Used Activities While Teaching English Course

<table>
<thead>
<tr>
<th>Activities that are used the most</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singing a Song</td>
<td>19</td>
<td>21.34</td>
<td></td>
</tr>
<tr>
<td>4 Skill-Based</td>
<td>16</td>
<td>17.97</td>
<td></td>
</tr>
<tr>
<td>Speaking</td>
<td>13</td>
<td>14.6</td>
<td></td>
</tr>
<tr>
<td>Matching</td>
<td>11</td>
<td>12.35</td>
<td></td>
</tr>
<tr>
<td>Colouring</td>
<td>8</td>
<td>8.98</td>
<td></td>
</tr>
<tr>
<td>Board/Poster Preparation</td>
<td>8</td>
<td>8.98</td>
<td></td>
</tr>
<tr>
<td>Storytelling</td>
<td>6</td>
<td>6.74</td>
<td></td>
</tr>
<tr>
<td>Word Games</td>
<td>4</td>
<td>4.49</td>
<td></td>
</tr>
<tr>
<td>Memory Games</td>
<td>2</td>
<td>2.24</td>
<td></td>
</tr>
<tr>
<td>Arts &amp; Crafts</td>
<td>2</td>
<td>2.24</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 3c shows the answers which were given to the question "Which activities do you use the most while teaching English?". It is observed that in the English teaching process, the teachers mostly make use of singing songs (21.34%), 4 skill-based (17.97%), speaking (14.6%), and matching (12.35%) activities. These are respectively followed by colouring (8.98%), board/poster preparation (8.98%), storytelling (6.74%), word games (4.49%), memory games (2.24%) and arts & crafts (2.24%) activities.

Table 4 Sufficiency of the Periods That Are Determined in the IELTP for Teaching All Subjects

<table>
<thead>
<tr>
<th>Sufficiency of the periods that are determined in the program</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient</td>
<td>12</td>
<td>46.15</td>
<td></td>
</tr>
<tr>
<td>Partly</td>
<td>1</td>
<td>3.84</td>
<td></td>
</tr>
<tr>
<td>Insufficient</td>
<td>13</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The teachers’ views regarding the time that is allocated for covering the subjects in the IELTP are shown in Table 4. It is seen that half of the teachers stated that the allocated time was insufficient, while 46.15% of them found this period sufficient. Only one teacher (3.84%) found the time partially sufficient. The views of the teachers who found the periods that are allocated in the program to be sufficient, partly sufficient, and insufficient for the subjects to be covered are as follows:

P4: “It is sufficient; I mean for now there aren’t any problems. We teach 13 hours, 11 plus 2 more hours are enough as there are elective courses.”

P22: “Partly sufficient. The units are very dense. There are many units to finish. When it has a hitch for one day, it breaks off.”

P26: “No, it isn’t sufficient enough for them to understand the subjects totally.”

Table 5a Suitability of Suggested Tools and Materials in the Program

<table>
<thead>
<tr>
<th>Suitability of the suggested tools and materials in the program</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable</td>
<td>19</td>
<td>73.07</td>
<td></td>
</tr>
<tr>
<td>Partly Suitable</td>
<td>2</td>
<td>7.69</td>
<td></td>
</tr>
<tr>
<td>Unsuitable</td>
<td>5</td>
<td>19.23</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Table 5a includes the findings of the question "Are the tools and materials suggested in the program suitable for the structure of the course?". The great majority of the teachers (n=19; 73.07%) stated that they were suitable, while five teachers (19.23%) stated that they were unsuitable and two teachers (7.69%) stated that they were partially suitable. The views of the teachers coded P5, P24 and P25 are given below:

P5: “No, there isn’t anything that comes for us, no books.”

P24: “Partially suitable but we aren’t given any tools in practice.”

P25: “They are suitable; the visual materials appeal to all types of intelligence.”

Table 5b The Most Used Tools and Materials While Teaching English Course

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The most used tools, equipment and materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Board</td>
<td>19</td>
<td>19.19</td>
<td></td>
</tr>
<tr>
<td>Song</td>
<td>17</td>
<td>17.17</td>
<td></td>
</tr>
<tr>
<td>Video</td>
<td>13</td>
<td>13.13</td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>7</td>
<td>7.07</td>
<td></td>
</tr>
<tr>
<td>Poster</td>
<td>6</td>
<td>6.06</td>
<td></td>
</tr>
<tr>
<td>Animation</td>
<td>5</td>
<td>5.05</td>
<td></td>
</tr>
<tr>
<td>Flashcard</td>
<td>5</td>
<td>5.05</td>
<td></td>
</tr>
<tr>
<td>EBA (Education Information Network)</td>
<td>5</td>
<td>5.05</td>
<td></td>
</tr>
<tr>
<td>Cartoon</td>
<td>4</td>
<td>4.04</td>
<td></td>
</tr>
<tr>
<td>Web site</td>
<td>4</td>
<td>4.04</td>
<td></td>
</tr>
<tr>
<td>Puzzle</td>
<td>3</td>
<td>3.03</td>
<td></td>
</tr>
<tr>
<td>Puppet</td>
<td>2</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>Web 2 Tools</td>
<td>2</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>Paper-Crayon</td>
<td>2</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>PowerPoint Presentation</td>
<td>2</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>Other (Map, Microphone, Toys)</td>
<td>3</td>
<td>3.03</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 5b, the tools and materials that the teachers use the most in English lessons are detected as smart board (19.19%), song (17.17%), video (13.13%), visual (7.07%) and poster (6.06%). These are followed respectively by animation (5.05%), flashcard (5.05%), EBA (5.05%), cartoon (4.04%), website (4.04%), puzzle (3.03%), puppet (2.02%), web 2 tools (2.02%), paper and crayon (2.02%), PowerPoint presentation (2.02%), map, microphone, and toys.

Table 6a Suitability of the Assessment Tools, Methods and Activities That Are Suggested in the Program

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The suitability of measurement tools, methods and activities that are suggested in the program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suitable</td>
<td>14</td>
<td>53.84</td>
<td></td>
</tr>
<tr>
<td>Partly Suitable</td>
<td>9</td>
<td>34.61</td>
<td></td>
</tr>
<tr>
<td>Unsuitable</td>
<td>1</td>
<td>3.84</td>
<td></td>
</tr>
<tr>
<td>No idea</td>
<td>2</td>
<td>7.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

When Table 6a is examined, views of the majority of the teachers (53.84%) regarding the suitability of measurement tools, methods and activities that are suggested in the program are in the direction of those being suitable. Nine teachers’ (34.61%) views are in the direction of those being partly suitable and only one teacher’s (3.84%) view is in the direction of those being unsuitable. Two of them (7.69%) stated that they had no idea about the issue. Quotations from some of the participants’ views on this question are presented below:

P2: “I have no idea. I actually haven’t used measurement a lot.”
P10: “Suitable considering the program, but not the children. In theory, it is suitable and very nice but when you attempt to do it, it is not.”

P16: “I can say partly suitable. Some of them really fully measure but some of them don’t, I think. It differs from child to child. For example, some children don’t want to participate in speaking activities.”

Table 6b The Most Used Measurement Tool, Method and Activities While Teaching English

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple-Choice</td>
<td>19</td>
<td>14.72</td>
<td></td>
</tr>
<tr>
<td>Gap-Filling</td>
<td>18</td>
<td>13.95</td>
<td></td>
</tr>
<tr>
<td>Quiz</td>
<td>14</td>
<td>10.85</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>14</td>
<td>10.85</td>
<td></td>
</tr>
<tr>
<td>Matching</td>
<td>13</td>
<td>10.07</td>
<td></td>
</tr>
<tr>
<td>Short Answer</td>
<td>10</td>
<td>7.57</td>
<td></td>
</tr>
<tr>
<td>Question-Answer</td>
<td>8</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>True-False</td>
<td>6</td>
<td>4.65</td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td>4</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Portfolio</td>
<td>4</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Worksheet</td>
<td>3</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>Drama</td>
<td>3</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>Poster/Banner</td>
<td>3</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td>3</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>Dialogue/Story Building</td>
<td>3</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>Rubric</td>
<td>2</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Audio/Video Recording</td>
<td>2</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>129</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The question “Which measurement tools, methods and activities do you use the most while teaching English?” has been posed to the teachers. Their answers are shown in Table 6b and they mostly have stated that they used measurement tools, methods, and activities such as multiple-choice (14.72%), gap-filling (13.95%), quiz (10.85%), project (10.85%), matching (10.07%) and short answer (7.57%). These are followed respectively by the question-answer (6.2%), true-false (4.65%), observation (3.1%), portfolio (3.1%), worksheet (2.32%), drama (2.32%), poster/banner (2.32%), presentation (2.32%), dialogue/story building (2.32%), rubric (1.55%) and audio/video recording (1.55%).

Table 7a Relationship between the English Course Units and Topics and the Other Courses’ Topics

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship with other courses</td>
<td>Yes</td>
<td>15</td>
<td>57.69</td>
</tr>
<tr>
<td>Partially</td>
<td>8</td>
<td>30.76</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>11.53</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

In Table 7a, it is seen that many of the teachers (n=15; 57.69%) can build a relationship between the English course and other courses. Besides, 30.76% of the teachers stated that they could build a relationship partially, while 11.53% stated that they could not. One of the teachers (P2) stated that she could not build a relationship between the English course and other courses, while P11 stated that she could partially build a relationship with other courses:

P2: “I have never related to other courses. I have unfortunately never attempted a thing like this. Maybe it should be done but I haven’t.”
P11: “I partially do. For example, this does not always happen of course but as an example, while teaching adjectives, I ask children to make a connection to Turkish definitely. Thus, they understand the topic better.”

Table 7b The Courses That Can Be Related While Teaching English Course

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship with other courses</td>
<td></td>
<td>71</td>
<td>100</td>
</tr>
<tr>
<td>Turkish</td>
<td>19</td>
<td></td>
<td>26.76</td>
</tr>
<tr>
<td>Social Studies</td>
<td>15</td>
<td></td>
<td>21.12</td>
</tr>
<tr>
<td>Science</td>
<td>12</td>
<td></td>
<td>16.9</td>
</tr>
<tr>
<td>Music</td>
<td>11</td>
<td></td>
<td>15.49</td>
</tr>
<tr>
<td>Mathematics</td>
<td>10</td>
<td></td>
<td>14.08</td>
</tr>
<tr>
<td>Arts</td>
<td>4</td>
<td></td>
<td>5.63</td>
</tr>
</tbody>
</table>

According to Table 7b, the teachers’ answers regarding which courses they can relate to the most while teaching English concentrate on the Turkish course (26.76%). The other courses teachers can relate to the English course are social studies (21.12%), science (16.9%), music (15.49%), mathematics (14.08%), and arts (5.63%), respectively. Some teachers’ statements on this issue are as follows:

P3: “For example, on ‘Animals’ subject, we give children pictures of animals and have them colour the pictures. They learn both animals and colours. At the same time, we relate to music by singing and art course.”

P9: “Inevitably we most relate to Turkish course. Because both are language courses anyway. Our topics are more or less similar.”

P7: “There is a relationship built with the social studies course. …things related to different cultures… there are a lot of festivals that other countries have. …we teach scientists, scientific developments. Yes, it can be related to the science subjects.”

Table 8 Finding a Suitable Environment for Achieving the English Course’s Objectives

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finding a suitable environment</td>
<td>Yes</td>
<td>16</td>
<td>61.53</td>
</tr>
<tr>
<td>environment while teaching the</td>
<td>Partly</td>
<td>6</td>
<td>23.07</td>
</tr>
<tr>
<td>course</td>
<td>No</td>
<td>4</td>
<td>15.38</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

When the answers (Table 8) to the question “Can you find a suitable environment (tools, materials, resource book, laboratory, etc.) to achieve the objectives while teaching English course?” are examined, it is seen that most of the teachers (n=16; 61.53%) could find a suitable environment while teaching English lessons. While 23.07% of the teachers could partially access it, 15.38% of them could not find a suitable environment. The expressions of the teachers who have different views are below:

P5: “Unfortunately, no. We do not have our own classroom. But we have a smart board. At least, we do the listening activities with it.”

P23: “Partly. The internet and electricity may be cut. The board may get broken. We can’t always reach those.”

P25: “Yes, we just don’t have a language laboratory. I make use of EBA application, lesson materials and Morpa Campus application.”
Table 9 In-Service Training Status about Teaching the Intensive English Course for the 5th Grades and the IELTP

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-service training status</td>
<td>No</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>

When Table 9 is examined, it is ascertained that none of the teachers received any in-service training regarding teaching the intensive English course for the 5th grades and the IELTP. In this regard, the views of P10, P24 and P26 are presented below:

P10: “I haven’t received in-service training. I truly do not know if there is training like that. There should be in-service training. We haven’t had any preparation regarding the program.”

P24: “We haven’t. We were just given a file in which what we would do was written.”

P26: “No. An hour-long introduction of the program was given.”

Table 10 The Problems That Are Encountered While Teaching the Intensive English Course in the 5th Grade

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The problems that are encountered while teaching lessons</td>
<td>Large class sizes</td>
<td>16</td>
<td>16.16</td>
</tr>
<tr>
<td></td>
<td>Inappropriateness of the program for the student level</td>
<td>16</td>
<td>16.16</td>
</tr>
<tr>
<td></td>
<td>Boredom of the students due to extra class hours</td>
<td>12</td>
<td>12.12</td>
</tr>
<tr>
<td></td>
<td>Extreme intensiveness of the subjects in the program</td>
<td>11</td>
<td>11.11</td>
</tr>
<tr>
<td></td>
<td>Extreme variety of students’ readiness</td>
<td>11</td>
<td>11.11</td>
</tr>
<tr>
<td></td>
<td>The absence of a coursebook</td>
<td>8</td>
<td>8.08</td>
</tr>
<tr>
<td></td>
<td>Extreme numbers of objectives in the program</td>
<td>8</td>
<td>8.08</td>
</tr>
<tr>
<td></td>
<td>Having inclusive students</td>
<td>8</td>
<td>8.08</td>
</tr>
<tr>
<td></td>
<td>The program’s being focused on grammar</td>
<td>4</td>
<td>4.04</td>
</tr>
<tr>
<td></td>
<td>Classroom management problem</td>
<td>3</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>Not being able to use a supplementary resource</td>
<td>2</td>
<td>2.02</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

According to Table 10, the most common problems that the teachers faced in the 5th grade were the large class sizes (16.16%) and the inappropriateness of the program for the student level (16.16%). These problems are respectively followed by the boredom of the students due to extra class hours (12.12%), the extreme intensiveness of the subjects in the program (11.11%), extreme variety of students’ readiness (11.11%), the absence of a coursebook (8.08%), extreme numbers of objectives in the program (8.08%), having inclusive students (8.08%), the program’s being focused on grammar (4.04%), classroom management problem (3.03%) and not being able to use a supplementary resource (2.02%).

DISCUSSION AND CONCLUSIONS

The findings from this study have revealed that the majority of the teachers generally presented positive opinions regarding the implementation of intensive English language teaching for the 5th grade and IELTP. There are also studies in the literature (Aksoy et al., 2018; Dilekli, 2018; Berkant et al, 2019; Kambur, 2018; Kayabaşı & Köse, 2019) whose results are in parallel with the current study. According to the critical period hypothesis Lenneberg (1967) put forward, brain plasticity is lost after adolescence and the obstacles of learning a language increase rapidly after the adolescence period. In a similar vein, Long (1990) alleged that it is impossible for individuals to have a native-like accent after the age of twelve for the reason that they lose their phonological abilities in second language acquisition. When the critical period hypothesis in language learning and the benefits of teaching a foreign language to children at an early age are considered, it can be said that the
implementation of the IELTP for the 5th grade students, who are ten years old on average, occupies an important place.

Although the majority of teachers’ views regarding the suitability of the objectives to the students’ mental and social development level are in the direction of them being suitable (38,46%), it is seen that the views that are in the direction of them being partly suitable (34,61%) and unsuitable (26,92%) are not few in number. It is observed that the teachers’ views concerning this question are almost evenly distributed to the three categories. The objectives in the IELTP are about students’ being able to understand written and oral texts which include the basic words about daily topics; participate in dialogues about family, hobbies, daily life, interests, and school; produce oral and written texts and make statements with limited vocabulary related to these contexts and events and use the different functions of the language in simple dialogues (BOEAD, 2018). However, when the teachers’ views are scrutinized, the reason for this diversity may be tackled in two ways: (1) some of the objectives are suitable for the mental and social development level while some of the objectives are above students’ levels; (2) the objectives are suitable for some students, but they are unsuitable for the others because of the discrepancy of their prior schemata. Besides, some teachers (P3, P6, P12) stated that the number of objectives is high. The findings from the studies both by Dilekli (2018) and Berkant, Özاسlan and Doğan (2019) support our research findings in that the objectives in the program are many and unsuitable for the students’ development level. In Balım’s (2020) research, it is determined that the objectives in the program are many yet accomplishable.

The majority of the teachers stated that the content is partly suitable for the student level. The teachers came up with reasons for this such as the topics in some units exceeding the students’ level, the number of units being high and units being predominantly grammatical. In the research of Dilekli (2018) and Balım (2020), it was concluded that the content was intense, as well. When the curriculum of 2018 is examined, it is seen that the IELTP consists of 36 units. It is understood that in these classes one unit is expected to be covered almost every week when the fact that an academic year consists of 36 weeks is taken into consideration. Some teachers (P5, P12, P14) implied that inasmuch as a new unit being covered every week, the next unit has to be moved onto before the students are able to comprehend a topic fully. The previous subjects are forgotten, as new subjects are covered in the following weeks constantly, even if the objectives of that week’s lesson are met (P3). When the curriculum is examined, it is seen that different contexts are presented so as to provide rich and relevant input. Hence, in order to create a relationship between language learning and daily life, the themes of each unit are selected to represent the ideas and problems that students are familiar with, and themes such as family, friends, animals, holidays, leisure activities are emphasized (BOEAD, 2018). However, when the subjects of the units are examined in detail, it is observed that abstract subjects are included in the curriculum. For example, there are grammar subjects like the reported speech in unit 24 and the passive voice in unit 27. It can be inferred that these subjects are unsuitable for students’ readiness levels as both students have not had these subjects in Turkish lessons and these subjects are overcomplicated for their age group. In this regard, it might be considered that there will be more accurate implementations when it is taken into account that a child is ready to learn when their cognitive disposition and what is to be taught are matched, as Fisher (1996) stated.

Most of the teachers declared that the activities, teaching methods and techniques which are suggested in the program were suitable and partially suitable. In Dilekli’s (2018) research, teachers stated that the activities which are suggested in the program can be diversified according to the level of the class and they find most of the activities suitable, which shows similarity with our study.

It is seen that teachers respectively appeal to the question-answer, educational game, drama, computer-assisted education, group work, communicative language teaching method, TPR, direct method, translation and brainstorming out of teaching methods and techniques while teaching in classes where intensive English language instruction is applied. According to Büyükalan-Filiz (2009), thanks the question-answer method students’ ability to think and reviewing strategy enhance and this method arouses curiosity. Games, on the other hand, make students use the language without worry or shyness by getting them to be active participants and a more effective learning environment can be
provided for students by making the lesson more enjoyable; additionally, games are one of the
effective ways of teaching vocabulary in that they give learners a chance to use the same patterns
repeatedly in a meaningful and purposeful way (Ataş, 2019; Bakhsh, 2016; Gürbüz, 2013; Lilić &
Bratož, 2019). Based on the literature, it can be said that the question-answer and educational game
method/technique, which teachers say they use the most in their lessons, are qualified in a way that
facilitates the teaching, motivates the student, and enables the active participation of the student. In the
IELTP, it is depicted that since no single language teaching methodology was viewed as flexible
enough to meet the needs of learners at various proficiency and developmental levels and to
accommodate a wide variety of learning styles and strategies, an eclectic blend of instructional
techniques has been adopted (BOEAD, 2018). Based on the suggestion of various teaching methods
and techniques such as TPR, drama, educational game, question-answer, etc. within the scope of the
eclectic approach in the curriculum, it has been detected that the methods and techniques that the
teachers who participated in the research claimed to use in intensive English language classes were in
line with those suggested in the program.

As for the activities, English teachers stated that they respectively used singing, four skill-
based activities, speaking, matching, colouring, preparing a board-poster, storytelling, vocabulary
games, memory games, and arts & crafts activities. In terms of the activities that are used by the
teachers, it is seen that the activities are like those suggested in the IELTP. Gürbüz (2013) argued that
while learning a foreign language, especially young learners are more receptive to songs and keener on
singing; they love drawing, colouring, and craft activities.

While half of the teachers think the time that is allocated to implement the curriculum is
insufficient, almost the other half of the teachers (46.15%) uttered that this time is sufficient. When the
statements of the teachers who think the time is insufficient are examined, it is perceived that they
thought the time was insufficient because of the extra number of the objectives, the content density,
and the excessive number of the units. Besides, the teachers coded P10 and P11 complained that they
could not spare time for each student because the class size is crowded and one of the teachers (P11)
stated that it caused time problems in crowded classes to arrange activities regarding the speaking skill
especially. When looking at the 2018 IELTP, it is seen that it is proposed for an entire academic year,
comprising approximately 540 hours of classroom input and practice. After A1 and A2 levels are
presented to the students in the first semester, it is aimed to get students’ proficiency levels to B1.1
level at the end of the second semester by teaching them half of the B1 level (BOEAD, 2018). Canlıer
and Bümen (2018) affirm the scope of the curriculum is too wide in that there is the objective to
upgrade students’ foreign language proficiency five levels in a time span as short as a year in the
IELTP and it may affect the permanency and continuity of the learning outcomes negatively. However,
in the research carried out by Dilekli (2018) majority of the teachers stated positive views
regarding the timespan being sufficient.

Most of the teachers (73.07%) stated that the tools and materials suggested in the curriculum
are suitable. For instance, one of the teachers (P7) asserted that they are suitable because materials that
are technological and address students’ cognitive levels are suggested. On the other hand, in the
research by Berkant et al. (2019), teachers stated that the materials prepared for the intensive English
language teaching implementation are unsuitable to the readiness levels of students and not appealing
to the students.

According to the research findings, teachers mostly benefit from technological tools and
materials such as smartboard, songs, videos, animations, cartoons, PowerPoint presentations, EBA,
web 2 tools, websites, respectively. Apart from technological materials, teachers also implied that they
use traditional tools and materials such as visuals, posters, flashcards, puzzles, puppets, paper-crayons,
maps, microphones, and toys. It can be inferred that the tools and materials which are used by teachers
in their lessons are effective in foreign language instruction, as taking advantage of technological
innovations in a class environment will increase the interest in the topics that are covered and increase
motivation by making learning fun (Göçerler & Çoraklı, 2019). In addition, there are studies in the
literature on the positive effects of the smartboards and songs, which the teachers stated they use the
most, in the teaching environment. In the study of Tilbe et al. (2017), it is seen that smartboards increase students’ learning eagerness and motivation and made a positive impact on students’ participation by making the subjects more interesting and fun. Songs, on the other hand, can be used to set a context of a lesson; they can be incorporated into all language skills and components and are effective at making classes engaging and fun (Shin, 2017; Teopilus, 2009). When the tools and materials suggested in the IELTP that plans to keep students continuously exposed to English through audio and visual materials are observed (BOEAD, 2018), it is seen that they are like the tools and materials that teachers use in their lessons. Similarly, in the research of Erdem and Yücel-Toy (2017), English teachers stated that smartboards, videos, and computers could be used in intensive English language teaching applied in the 5th grade.

Most of the teachers stated that the measurement tools, techniques, and activities suggested in the curriculum are suitable and partly suitable. In Dilekli's (2018) study, most of the teachers thought that the assessment-evaluation activities in the program were based on classical approaches and the skill-based assessment-evaluation approach was ignored. In the study by Balım (2020), it was concluded that detailed assessment-evaluation of listening and speaking skills were not carried out while reading and writing skill-based assessment-evaluation was carried out.

It stands out that some teachers did not have any ideas about the measuring tools, methods and activities suggested in the curriculum and even made statements such as “…I actually haven’t used measurement a lot”. This situation can be interpreted as teachers' low curriculum literacy and insufficient pedagogical knowledge. Furthermore, when asked whether the objectives were appropriate for the student level, the teachers gave more content-related answers (the content is dense; it is difficult to teach tenses, etc.).

It is concluded that, while teachers are making an assessment and evaluation regarding their lessons, they mostly use both traditional and alternative measurement tools, methods and techniques such as multiple-choice, quiz, project, matching, question-answer, true-false, observation, portfolio, drama, presentation, rubric, audio/video recording, etc. When the curriculum is observed, it is stated that the theoretical frame of measurement tools, methods and techniques that are suggested in the program is based on the CEFR, in which various types of assessment and evaluation techniques are emphasized and it is heavily centered on alternative and process-oriented measurement procedures. Portfolios, projects, performance assessment, creative drama tasks, class newspaper/social media projects, journal performance, etc. are emphasized in the curriculum as an alternative assessment. In addition to alternative and process evaluation, it was mentioned that formal evaluation would be made through written and oral exams, quizzes, homework, and projects (BOEAD, 2018). In Erdem and Yücel-Toy's (2017) research, while intensive English language 5th grade students thought that written exams, homework, oral exams, project assignments, making presentations and portfolio assessment are respectively important in English teaching as assessment methods and activities, teachers stated that both process and product evaluation are necessary. In this respect, it can be said that similar results have been obtained with the ones from the present study.

Most of the teachers stated that they could build a relationship between the units and topics of the English course and the subjects of other courses. However, some of the teachers implied that they could not build a relationship with other courses even if they wanted to, since the subjects planned to be covered in the English lesson took place much earlier than the subjects of other lessons. Most of the teachers stated that since especially grammar subjects are taught in English lessons without being taught in Turkish lessons, they first explained the rules of the subject in Turkish and then switched to English. It may be expressed that this requires twice more workload for English teachers and prevents them from completing the program consisting of 40 units in a short period of 36 weeks, as well.

It is seen that Turkish, social studies and science courses come first among the lessons that teachers can build relationships with the English course. These are followed by music, mathematics, and arts courses, respectively. The fact that teachers can build a relationship between English lessons and the subjects of different lessons shows that they can apply an interdisciplinary approach in foreign
language education. In interdisciplinary instruction, the information and skills in different disciplines are brought together in a meaningful way, making the learning-teaching process effective and meaningful (Duman & Aybek, 2003; Yıldırım, 1996). For instance, when IELTP was observed, it is understood that a relationship could be built with social studies course with “country life” topic in unit 25 and “deep into history” topic in unit 33; with science course with “people and animals” topic in unit 8 and “discovering the space” topic in unit 36. However, although the unit subjects such as “games and sports”, “extreme sports”, “fine arts” are reconciled with the subjects of physical education, arts, and music courses, it is not possible to plan the synchronous progress of the subjects of these courses because these courses are not given in the classes where the intensive English language implementation is applied. Therefore, it may not be possible to say that a fully interdisciplinary instruction is conducted in the context of these units.

Most of the teachers indicated that they were able to find a suitable environment to accomplish the English lesson’s objectives. In Dilekli’s (2018) research, teachers generally had positive views about physical infrastructure, which supports the findings of this study. However, some teachers, even though they are a few in numbers, enunciated that they are not able to reach a suitable environment. Some of the teachers who stated that they are not able to reach or are partially able to find a suitable environment put forward reasons such as not having an internet connection at their schools (P7, P9, P23) and students’ not having coursebooks (P2, P3, P7, P9). Moreover, it is determined that none of the schools where the interviewed teachers worked had language laboratories. Some of the teachers uttered that not being given any English coursebooks by MoNE to be used in the intensive English language classes creates an important problem and they apply to open the electronic version of the coursebook on the smartboard or photocopying as a solution. A study by Kambur (2018) concluded that because of the lack of materials and technological infrastructure, crowded class size and traditional seating arrangement; the effective implementation of the program was prevented. In the research conducted by Özkan, Özdemir and Tavşancıl (2018), infrastructural problems such as technological inadequacies and the lack of materials emerged due to the lack of digital and printed materials that will enable students to practice in intensive English language classes. Likewise, in the research of Berkant et al. (2019), teachers complained about the late delivery of course materials, lack of materials and staff, and insufficiency of the physical environment.

It is understood that none of the teachers, who were interviewed, received in-service training pertaining to teaching intensive English language for 5th graders and the IELTP. Only a few of the teachers in one school explained that they were given a file inside which what to do was written and a one-hour program introduction was made. Most of the teachers stated that they suffered from not being provided such in-service training and they had problems due to the lack of preparation. However, a few teachers (P2, P7, P8) articulated that there is no need for in-service training related to the IELTP and that in-service training on language teaching to young learners covers this level. In this context, although the student characteristics are the same as in the in-service training on language teaching to young learners, intensive English language instruction is applied for the first time at the 5th grade level and differs from the English course curriculum of the 5th grade, where the intensive English language teaching is not applied.

Regarding the problems that teachers faced while teaching English in intensive English language 5th grade classes, they mostly complained about the crowded class sizes, unsuitableness of the curriculum for the student level, boredom of students due to the excessive class hours and very intense subjects in the program. These were respectively followed by problems such as the variety of students’ background knowledge, the absence of a coursebook, extreme number of objectives in the program, having inclusive students, grammar-focused program, etc. The reason for the difference in student readiness may be that all 5th grade students studying at the pilot schools are given intensive English language instruction without any choice. In the research of Berkant et al. (2019), it is seen that teachers went through many problems such as technical problems and the unsuitability of the objective, topic, and materials for the students’ level. In Özkan, Özdemir and Tavşancıl’s (2018) study, experts stated that the foreign language lessons’ content is dense in Turkey and vocabulary and grammar teaching are predominant. According to Scott and Ytreberg (1990), how good children are in
a foreign language does not depend on whether they learn grammar rules and very few of the pupils, even at the age of 10-11, will be able to cope with grammar as such. Considering that the students in the target object of the intensive English language implementation are also at this age group, integrating in-class and out-of-class activities related to teaching four language skills rather than grammar may have more positive results in terms of students’ cognitive levels.

**Recommendations**

In consequence of the acquired results of this research, the following can be recommended with regard to the implication of the IELTP:

1) The content should be eased by reducing the number of units and grammar subjects in the curriculum. Thus, it is thought that the time that is determined for the curriculum will be sufficient and the subjects covered in the lessons will become more permanent. In addition, more emphasis can be placed on speaking and listening skills, which students will benefit from in order to communicate, rather than heavy grammar subjects that challenge students cognitively.

2) Schools, where this practice will be carried out, should be strengthened in terms of physical structure and equipment and so the necessary infrastructure for implementation should be provided in advance. As an example, language classes and language laboratories, where an interactive whiteboard and internet access are made available beforehand and the class sizes are capable of conducting preparatory education effectively, can be prepared for this implementation.

3) In order to fill the deficiency of the coursebook, a common problem of many teachers, special coursebooks can be prepared for the classes where intensive English teaching will be conducted by the Board of Education and Discipline and those can be sent to schools in advance. In addition to the course books, those can be supported in terms of colourful and enjoyable materials appealing to the students’ age group such as various paintings, pictures, posters, flashcards, puppets, toys, storybooks, three-dimensional models, etc.

4) In the curriculum, especially the alternative assessment tools, assessment-evaluation tools and activities have been mentioned very generally and no examples regarding the activities have been presented. By eliminating these deficiencies in the curriculum, more detailed information about the testing situations can be given and sample assessment-evaluation activities can be included.

5) With reference to the result, the majority of the teachers did not examine the curriculum in detail; in-service training can be given in pilot schools where this practice is implemented especially to English teachers regarding this new implementation and new curriculum. In the meantime, it may also be suggested to give teachers seminars on program literacy.

6) Further studies regarding the IELTP can be conducted;
   - in Turkey's other provinces
   - by taking different stakeholders' views such as students, parents, school administrators, etc.
   - using quantitative research methods.

**Conflict of Interest Statement**
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A Study of Developing an Organizational Reputation Management Scale for Schools*

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Abstract

This study aims to develop a scale to measure the organizational reputation of especially private schools and foreign private schools in today's increasingly competitive environment. The study group of the research consists of 320 individuals who are 9th, 10th, 11th and 12th grade students receiving education in private and foreign private schools and teachers from different branches. In the development phase of the scale, exploratory and confirmatory factor analyses were conducted to ensure validity and reliability. As a result of validity and reliability studies, the Organizational Reputation Management Scale for Schools was obtained. The analysis result has revealed a scale structure that consists of 7 dimensions and 38 items. Accordingly, the dimensions to determine the organizational reputation of private schools are "Social Responsibility, Commitment to School, Relations with Alumni, School Environment, Leadership, School Management, and Financial Performance". It is expected that the scale to be used by researchers and private schools will significant contributions to the literature on organizational reputation management.

Keywords: Reputation Management, Organizational Reputation, Scale Development

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INTRODUCTION

The word reputation, like some other abstract words (love, quality, success, etc.), is a concept that is quite difficult to understand and define. The word reputation is etymologically derived from the word “reputen” in English and “reputer” in Old French and is based on the Latin word “reputare” which means, “to think about a topic”. Merriam-Webster's dictionary defines reputation as “The guess in a person's mind; a character attributed to a person, thing or action in terms of society in general” (Davies, Chun, Silva, & Roper, 2003; Marconi, 2001; Sherman, 1999). The Turkish Language Institution (TDK) expresses the word reputation as the equivalent of the words “being respected, being valuable or trustworthy, respectability, prestige”. Reputation is also used as the equivalent of the word “respect”, which is expressed as a perception of a person or an object formed over time by outsiders or a community.

Organizational Reputation

On the other hand, when the researches in the literature examined, it is observed no generally accepted definition of organizational reputation consequently, there are numerous definitions of organizational reputation and great differences in terms of meaning among these definitions. Due to multiple definitions and differences, some classifications of organizational reputation and the ambiguity about the concept were tried to be eliminated. Barnett, Jermier Lafferty (2006) stated that the publications on reputation management in 2001 were five times more than those between 1990-2000. Therefore they prepared a table that sum up the definitions of organizational reputation made in the last fifty years and discussed these definitions in three main groups: (1) Reputation as a state of awareness, (2) Reputation as an evaluation, (3) Reputation as an asset. Considering the definitions that of awareness, it It has been observed that the most common term is “perceptions”. Within this grouping, organizational reputation is expressed as “gathering perceptions”, “hidden perceptions”, “clear perceptions”, “universal perceptions”, “perceptual representations” and “common representations”. As organizational reputation within such a grouping includes awareness about the organization, it is considered as a kind of “representation of knowledge or emotions”. One of the most widely accepted definitions is that regards organizational reputation as an “evaluation”. These definitions regard organizational reputation as an assessment of the organization’s status in society. Accordingly, organizational reputation is expressed with the concepts of “judgment”, “estimation”, “evaluation” or “measurement”. “Opinions” and “beliefs” about an organization are also included in this grouping as they include subjective judgments in accordance with the nature of the concept of reputation. The third and last grouping is the approach that considers reputation as an asset for organizations and accepts reputation as “valuable” and “important” for organizations. In this grouping, the terms “source” or “intangible”, “financial or economic asset” are used regarding reputation. Approaches that define reputation as “awareness” or “evaluation” ignore that reputation means a real value for the organization. Many researchers have argued that such grouping about reputation is only an approach to consequences rather than the reputation itself. Moreover, when literature reviewed, it can be argued that reputation generally consists of two dimensions: (1) Stakeholders’ perception of an organization that can produce quality products and (2) Organizations’ perception of priority in the minds of stakeholders (Rindova, Williamson, & Antoaneta, 2005). In other words, the organizational reputation is affected by the interaction of each unit, department and employee in the organization with another stakeholder (Gotsi & Wilson, 2001). Scientific circles and most researchers argue that reputation is an important intangible asset that is rare, valuable, sustainable and difficult to imitate by others (Schwaiger, 2004). Organizational reputation is also defined as a collective structure that defines the total perceptions of multiple stakeholders about an organization’s performance. In addition, in the literature, organizational reputation management is accepted as a result of long-term evaluations about organizations together with incomplete information in the society (Lloyd & Mortimer, 2006). Although organizational reputation was initially conceptualized and measured one dimensionally (Anderson & Robertson, 1995; Doney & Cannon, 1997; Safo, 2009), it was addressed multi-dimensionally in later studies (Dowling, 2001; Fombrun, Gardberg & Bernett., 2000; Rose & Thomsen, 2004; Walsh, Beatty, & Shiu, 2009; Walsh & Wiedmann, 2004).
Measurement of Organizational Reputation

Especially since the 20th century, with a great interest in organizational reputation, a great increase has been observed in researches on this subject (Hasanbegovic, 2011; Mishina, Block, & Mannor, 2011). The current problems with reputation management are how to define reputation and reputation structures, including image and identity (Fombrun & van Riel, 1997; Chun, 2005) and how each should be measured. The debate on measuring reputation is profound, and whether the measurements will be formative or reflective must be considered (Helm, 2005). It is acknowledged that there has been a long-standing debate about the nature of the links between reputation and performance and what these links are (Fombrun, 1996). Some researchers in the literature state that what we measure shows who we actually are (Van Riel, Stroeker, & Maathuis, 1998). Considering the researches about the measurement of organizational reputation over the years, it would be appropriate to consider each measurement method separately, since there is no one standard and common method for measuring organizational reputation.

Some Organizational Reputation Measurement Methods

It is seen that there are different approaches and suggestions on the measurement of organizational reputation depending on the changing conditions over the years. Some of these measurement models and recommendations are as follows.

Media Measurements

Davies and Miles (1998) found in a research project that very few of the fourteen major organizations they studied measure their reputation. Media measurements involve evaluating organizations according to the column size, their coverage in the media or their advertising value equivalents, which are generally included in press reports. In terms of reputation management measurement, this situation can be interpreted as that most reputation management studies focus on media activities and some organizations think that being in the media is the closest and easiest way to reputation.

Fortune Magazine’s World’s Most Admired Organizations Study

Fortune is a global business magazine published by Time Inc.’s Fortune Money Group, specializing in the listings of global companies. Each year, it publishes a “Global 500” list that gathers factors such as earnings per share, balance sheet, and total return to investors to create a list of America’s most successful organizations. On the other hand, Fortune magazine announces the list of World’s Most Admired Organizations as the most reputable organizations. This listing is based on a survey called “America’s Most Admired Organizations” by Hay Group, going back to 1984 and has been conducted since 1997. Since 1995, the sampling frame has changed from America to World organizations.

Brand Value Scales

Brand value is the strength of a brand. What does the brand name add to the value of the organization? This situation can only be measured by looking at the differences between the true organizational value and the organizational balance sheet (Kerin & Sethuraman, 1998). Many reputation researchers try to relate brand value across the organization in order to measure certain factors that contribute to both. Keller and Aaker (1998) developed three dimensions: “organizational reliability”, “organizational expertise”, “reliability and probability” to establish connections with successful brands. Organizational reliability is discussed in relation to organizational reputation by Keller (2000). Caruana and Chircop (2000) developed an organizational reputation scale based on five criteria, expressed as Aaker’s (1997) “brand value”, to measure the reputation of a beverage company in Malta.
Comprehensive Measurements

For trademarks, this measurement model is based on measuring whether customers generally recognize organization names, in other words, an awareness of the organization that Keller (2000) sees as an important component of brand value. Participants in this measurement are taken from an online panel of more than one million people. The score obtained can range from 100 to -100 and is obtained by subtracting negative feedback from positive. Zero points equally mean positive and negative feedback. According to this measure, it means that an organization that customers are not aware of has no reputation, which cannot be considered as a very realistic approach.

Multidimensional Measurements

It is not possible to talk about a linear structure regarding reputation. For this reason, some researchers have proposed multidimensional measurements with semantic or Likert scales: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree. Other methods used include Bernstein’s (1984) spider web method, Fishbein and Ajzen’s (1975) multidimensional scaling model, and open-ended questions. Moreover, “Kelly Repertory Grid” developed by Kelly (1955) is another method applied in KRG. These methods are useful for identifying factors to be addressed in reputation measurements.

Reputation Quotient (RQ)

Fombrun et al. (2000) developed the reputation quotient measurement consisting of six dimensions and 20 items to measure internal and external stakeholder views. The first of these dimensions expresses emotional appeal, the degree of positive emotion and confidence inspired by the organization. Secondly, products and services express the perception of the value, quality, innovation and reliability of the products and services of the organization. The third dimension examines vision and leadership, a clear vision and strong leadership perceptions of the organization. Fourth, the workplace environment refers to the perception of how well the organization is managed, the working environment and the quality of its employees. Fifth, social and environmental responsibility expresses a good sense of citizenship in the organization’s relationships with society, employees and the environment. Finally, the financial performance dimension measures the profitability of the organization, market expectations and perceptions of organizational risks (Fombrun et al., 2000).

Reputation Institute “RepTrak System”

The Reputation Institute has been working on the dynamics of reputation since 1997. In 2005, the Reputation Institute introduced the RepTrak system to monitor and analyse organizational reputation. The RepTrak system can be applied internationally, adapted to different target audiences and used in quantitative-qualitative research. The RepTrak system has 7 dimensions and twenty-three features grouped around these dimensions (Van Riel & Fombrun, 2007). These dimensions and features are developed on the basis of respect, trust, feelings and admiration.

Organizational Personality Scales

Aaker (1997) developed a measure of five dimensions referred to as “brand personality” and this scale was used to measure the prominence of a brand among US organizations. Using the same personalization approach, Davies, Chun, Silva, and Roper (2001) developed the “Organizational Personality Scale” to simultaneously measure the reputation of an organization from both internal and external perspectives and to examine the gaps between the views of various stakeholders in an organization. These two measurement approaches are based on imagining the organization as a person and asking participants (both employees and customers) to evaluate the organization’s personality accordingly.
Harris-Fombrun “Reputation Quotient” (RQ)

The most popular and widely used metric for measuring organizational reputation is the measurement called RQ. A model named “Reputation Institute Reputation Quotient / RQ” was developed by “Harris Interactive” in 1998 to measure the perceptions of the sector and different stakeholders related to the organization. In this model, mainly the answers to such questions like the names of the organizations, whether they like these organizations or not, whether they respect the organizations were sought. According to the results of the research, it was determined that people’s views on organizations emerged in six dimensions (Fombrun & Foss, 2001). These dimensions are as follows: (1) emotional appeal, (2) products and services, (3) vision and leadership, (4) social and environmental responsibility, (5) workplace environment (6) financial performance.

Organizational Reputation Measurement Approaches

Another issue discussed in the literature regarding the measurement of organizational reputation apart from the above-mentioned methods is whether reputation measurement should be based on a practitioner or an academic perspective. It is observed that there have been basically two different approaches in the measurement of organizational reputation: the practitioner perspective and the academic perspective.

Organizational Reputation Measurement According to Practitioner Perspective

Practitioners are the first group to propose measures and methods of organizational reputation to assess perceptions about organizations. Practitioners have provided several methods for evaluating individuals’ perceptions of organizations. For example, Fortune magazine asked financial analysts and executives to rate organizations based on the following eight attributes, and developed the following survey: (1) financial soundness, (2) value in terms of a long-term investment, (3) wise use of corporate assets, (4) innovation, (5) ability to attract, develop and retain talented people, (6) product and service quality, (7) management quality, and (8) community and environmental responsibility (Sobol, Farelly, & Tapper, 1992). This survey format is still used today to determine the ranking of Fortune’s Most Admired Companies (MAC) in America. Another proposal was made by Corebrand, a consulting firm, and the “Organizational Brand Index” was developed to evaluate the impact of organizational branding on financial performance. The index provided important data to organizational managers showing how much organizational advertising is reflected in the investments made (Corebrand, 2005). The “Wall Street Journal” currently explores the perceptions about reputation, management quality and investment potential of hundreds of organizations. On the other hand, although methods developed by practitioners to measure organizational reputation provide benefits to evaluate organizational reputation, there are also some downsides. First, these methods take the organizational perceptions of only one stakeholder group, especially financial analysts and investors into account. Therefore, there is a possibility of biased results, as the perspectives of other stakeholders are not taken into account in the results obtained regarding the organizational reputation. Second, these methods have not been scientifically tested for validity and reliability. These negativities have led researchers to develop better methods to measure organizational reputation.

Organizational Reputation Measurement According to Academic Perspective

In today’s highly competitive global market, the effort to gain competitive advantage by using intangible assets as well as tangible assets has made measuring organizational reputation a kind of necessity (Van het Hof, 2012). From this point of view, reputation based on an organizational background and organizational culture that cannot be imitated due to its nature; stands out as the most effective and rooted intangible asset. This approach has increased academic interest in the concept of reputation and reputation measurement, and afterwards, an increase has been observed in research on the subject. Since the 1980s, interest in measuring reputation in the business world has continued to increase, especially in the “Most Admired Companies List” (MAC) of Fortune Magazine. Apart from the methods developed by practitioners to measure organizational reputation, academic studies for
measuring organizational reputation can generally be classified as: (1) one-sided general measures of organizational reputation and (2) multi-faceted specific organizational reputation measures. In one-sided general measurement studies, all stakeholders are asked general questions that include their perceptions of an organization’s overall reputation. For example, Wang, Kandampully and Shi (2006) present a general organizational reputation scale according to the following criteria: (1) perceptions about an organization based on general experiences, (2) perceptions towards other competitors, and (3) perceptions about the organization’s future. However, researchers who have studied the subject have stated that using a single general measure of organizational reputation will not reflect the general perceptions of stakeholders about an organization’s reputation. Furthermore, using a single item measurement during the measurement of organizational reputation may prevent the identification of specific factors that give positive or negative reputation to the organization. For this reason, it has been suggested to use multiple metrics to measure organizational reputation.

Some studies have been carried out on the measurement of organizational reputation in Turkey. Karaköse, (2006) developed a questionnaire to measure the perceptions of internal and external stakeholders in educational organizations regarding organizational reputation in his doctoral thesis titled “Perceptions of Internal and External Stakeholders in Educational Organizations Regarding Institutional Reputation”. However, the developed scale is not directly aimed at high school level, but has been developed in a way that can be applied at primary school level. Özpınar (2008) has developed a tool that can measure the organizational reputation in Turkey from the general public-consumer perspective in his PhD thesis called, “Corporate Reputation Measurement: Scale Development Study for Turkey”. This scale developed is mostly aimed at measuring the organizational reputation of commercial enterprises and does not provide a structure suitable for measurement in educational organizations. Dülger (2017) also developed a scale in order to determine the organizational reputation level of Antalya Private Envar Schools, designed specifically for that school, in his master’s thesis titled “Perception of Institutional Reputation in Private Schools: A Study on Stakeholders of Antalya Private Envar Schools” and the questions are limited to be specifically directed to the participants about Antalya Private Envar Schools. Another organizational reputation scale was developed in the master’s thesis titled “Administrator, Teacher and Parent Views on the Institutional Reputation of Private Primary Schools: Malatya Sample” by Karakaş (2019). The related scale was designed and developed in a structure that can be used at the level of private primary schools. On the other hand, when the literature on organizational reputation is examined, it is seen that there is no measurement tool that will directly measure the organizational reputation of high schools and especially private schools at the high school level.

METHOD

This study is a validity and reliability study designed to develop a scale to measure the organizational reputation of foreign private schools and other private schools at high school level.

Study Group

The research was carried out in different private high schools in Istanbul. Systematic sampling method was used in the sample selection of the study. Accordingly, except for the preparatory grade students, who are expected to have more awareness of the organizational reputation of the school, 9th, 10th, 11th and 12th grade students and teachers working in these schools from different branches who have no internships were included in the study.

Table 1. Descriptive Values of Participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>140</td>
<td>43.8</td>
</tr>
<tr>
<td>Female</td>
<td>180</td>
<td>56.2</td>
</tr>
<tr>
<td>Student</td>
<td>202</td>
<td>62.3</td>
</tr>
<tr>
<td>Teacher</td>
<td>118</td>
<td>37.7</td>
</tr>
<tr>
<td>Total</td>
<td>320</td>
<td>100.0</td>
</tr>
</tbody>
</table>
As seen in Table 1, a total of 320 people, including 140 (43.8%) men and 180 (56.2%) women, participated in the study during the scale development process. Again, 202 of the participants (62.3%) were students and 118 (37.7%) were teachers.

**Data Analysis**

SPSS 21 and SPSS AMOS programs were used to analyse the data of organizational reputation management scale for schools. Factor analysis was conducted to determine the construct validity of the scale. The internal consistency of the scale was tested using reliability coefficient. During the scale development process, exploratory factor analysis to determine the factor structure of the scale depending on the relationships between variables; confirmatory factor analysis to test model-data fit and relational hypotheses between variables were performed.

**Developing an organizational reputation management scale for schools**

The scale development process is formulated in different ways in the literature. De Vellis, (2003) classifies the process of developing the scale into four stages as “conducting a literature review on the subject”, “determining the format for the measurement method and creating an item/question bank accordingly”, “getting expert opinion” and “evaluating the scale with validity and reliability analysis after the draft application”. In accordance with this, in the process of developing the scale, an item bank was created based on a large-scale literature review on organizational reputation in accordance with the aims of the research. Then, a total of seventy-three (73) items were determined for the “Reputation Management Scale for Schools”, which includes six dimensions related to organizational reputation discussed in the study.

In the next stage, seventy-three (73) items were sent to experts who are experts in scale development and knowledgeable in the relevant literature, and opinions and evaluations of the questionnaire items were collected through an expert opinion form. Afterwards, the draft form created was applied to a group of 20 people. Likert type scale was used for the scale in scoring the items. For the “Organizational Reputation Management Scale for Schools” draft form, participants were asked to mark one of the expressions, “Strongly Disagree”, “Partially Agree”, “Quite Agree” and “Strongly Agree” that express their own situation in the most appropriate way while determining their opinions about the items in the pool. The application time of the scale was determined as approximately fifteen (15) to twenty (20) minutes. In the literature, it is recommended that the average response time of a questionnaire should not exceed thirty minutes, and that this period should be around fifteen (15) minutes in mail application (Aiken, 1997). Finally, after the necessary adjustments were made in line with the expert and participant opinions, the scale was finalized and the pre-application phase started. At this stage, a pre-application study of the scale was carried out in different private schools in Istanbul.

**FINDINGS AND COMMENTS**

**Exploratory factor analysis (EFA)**

Data obtained from 320 participants in total within the scope of the research were used in the exploratory factor analysis. This number corresponds to approximately five times the number of items suggested in the scale. As a general approach in the literature, it is stated that the recommended number of items or the number of observed variables should be approximately five times the sample size for the use of the study group factor analysis technique (Child, 2006). On the other hand, according to Kline (1994), although it is recommended to keep the item (variable) ratio as 10:1 for the sample size in the literature, it is stated that this ratio can be reduced, but the ratio should be at least 2:1. Principal component analysis to reveal the factor pattern of the “Organizational reputation management scale for schools”, and maximum variability (Varimax) as the rotation method among the orthogonal rotation methods for the evaluation of dimensionality were chosen. After the initial stage of the factor analysis, the priority eigenvalues were examined. Eigenvalues are used to calculate the
variance explained by the factors and to decide the number of factors. While factor analysis is conducted as a general approval in the literature, only factors with eigenvalues of 1 and above are accepted as stable.

In the exploratory factor analysis, regarding the common factor variance values (communalities), Seçer (2015) stated that the common variance value explained by each item should be at least 0.10, whereas Çokluk, Şekercioğlu, and Büyüköztürk (2012) stated that a decision should not be made to remove items based on the common variance results. In addition, Büyüköztürk (2003) states that it is a proper choice to have the factor load values of the items as 0.45 or higher, but in practice, this class value can be reduced to 0.30 for a small number of items. Accordingly, in the exploratory factor analysis, the difference between the factor load values of the same item in different factors was taken as at least 0.10. Field (2009), on the other hand, suggests that the factor load values should be greater than 0.364 for a sample size of 200, 0.298 for a sample size of 300, and 0.21 for a sample size of 600 in order to be considered significant.

For the validity analysis of the “organizational reputation management scale for schools”, KMO (Kaiser-Meyer-Olkin) coefficient and Bartlett values were examined first in order to evaluate the suitability of the data for factor analysis, then the principal component analysis was performed, and the vertical rotation operations were performed. The factorability of the “organizational reputation management scale for schools” was evaluated before proceeding with the evaluation of data reduction and potential factor structure solutions. For the final factor solution, the communality value was accepted as minimum .30 and it was decided not to include items below this value in the factor analysis process. According to the analysis results, it was seen that the common load values of the items varied between .54 and .88 and it was decided that there was no need to eliminate any item (Tabachnick & Fidell, 2007). In the factor analysis processes of the “Organizational reputation management scale for schools”, first of all, KMO and Bartlett values of sphericity were examined to evaluate the suitability of the data for factor analysis. For factorability, the KMO value must be greater than .60 and the Bartlett Sphericity test must be significant ($\chi^2 < .05$) (Worthington & Whittaker, 2006).

Table 2. KMO and Bartlett Sphericity Test Results

<table>
<thead>
<tr>
<th>Kaiser-Mayer-Olkin (KMO) Sampling Measurement Value Validity</th>
<th>.933</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett’ Test of Sphericity</td>
<td></td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>5476.662</td>
</tr>
<tr>
<td>sd</td>
<td>703</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>

As seen in Table 2, KMO value was found to be excellent (, 93). According to this value, the suitability of the data structure for factor analysis is excellent. It is seen that the Bartlett Sphericity test performed also gave significant results [$\chi^2 = 5476.66$, $p < .001$]. In line with this value, it was accepted that the data came from multivariate normal distribution.

After the Varimax vertical rotation technique analysis, the factor analysis was carried out until there were no items with the factor load value of the items below .30 and the load difference from two different factors below .10. As a result of the analyses made in this direction, the analysis was repeated continuously by removing the items one by one from the scale respectively, 44th, 35th, 63rd, 10th, 9th, 4th, 28th, 43rd, 25th, 36th, 18th, 29th, 22nd, 11th, 17th, 46th, 14th, 12th, 42nd, 75th, 74th, 40th, 64th, 60th, 20th and 68th. Following the 4 repetitions conducted, 38 items remained and as a result of the factor analysis performed with these 38 items, it was determined that 7 factors explained 58.077% of the total variance. The variance amounts explained for eigenvalues and dimensions are included in Table 3.
Table 3. Factor Eigenvalues of the Organizational Reputation Management Scale for Schools and the Amount of Variance Explained

<table>
<thead>
<tr>
<th>Factors</th>
<th>Total Variance Explained</th>
<th>Initial Eigenvalues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Variance %</td>
</tr>
<tr>
<td>1</td>
<td>12,102</td>
<td>31.847</td>
</tr>
<tr>
<td>2</td>
<td>2,779</td>
<td>7.314</td>
</tr>
<tr>
<td>3</td>
<td>2,040</td>
<td>5.364</td>
</tr>
<tr>
<td>4</td>
<td>1,642</td>
<td>4.320</td>
</tr>
<tr>
<td>5</td>
<td>1,305</td>
<td>3.434</td>
</tr>
<tr>
<td>6</td>
<td>1,146</td>
<td>3.014</td>
</tr>
<tr>
<td>7</td>
<td>1,055</td>
<td>2.774</td>
</tr>
</tbody>
</table>

As seen in Table 3, when the eigenvalue is taken as 1, a 7-factor structure emerges in line with the continuous analysis. When we look at the amount of variance explained by each factor, it can be determined that the variance percentages are as follows: 31.847% of the first factor, 7.314% of the second factor, 5.36% of the third factor, 4.32% of the fourth factor, 3.43% of the fifth factor, 3.01% of the sixth factor, and 2.77% of the seventh factor. Item loads of the factors are included in Table 4.

Table 4. Item Loads of Factors (Rotated Component Matrix)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td>m15</td>
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<td></td>
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<tr>
<td>m23</td>
<td>0.588</td>
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<tr>
<td>m13</td>
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<td>m31</td>
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<td>0.645</td>
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</tr>
</tbody>
</table>
According to Table 4, the first factor has 11 items (items 51, 55, 54, 52, 50, 57, 49, 53, 58, 48, 59) and the second factor has 6 items (items 64, 67, 65, 66, 26, 71), the third factor has 5 items (items 72, 70, 73, 69 and 62), the fourth factor has 5 items (items 24, 26, 30, 34, 27), the fifth factor has 5 items (items 3, 8, 6, 5, 7), the sixth factor consists of 4 items (items 19, 15, 23, 13) and the seventh factor consists of 3 items (items 33, 31, 32).

Items included in each factor were examined and sub-dimensions were named. In this context; the sub-dimensions of the factors were named as follows: the first factor as “social responsibility”, the second factor as “commitment to school”, the third factor as “relations with alumni”, the fourth factor as “school environment”, the fifth factor as “leadership”, the sixth factor as “school management” and the seventh factor as “financial performance”.

Internal consistency analysis

After determining the sub-dimensions, reliability analyses of each sub-dimension were made. Cronbach’s Alpha values calculated over the items included in each factor are given in Table 5.

Table 5. Reliability Values Obtained for Sub-Dimensions of the Organizational Reputation Management Scale for Schools

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cronbach’s Alfa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Responsibility</td>
<td>.941</td>
</tr>
<tr>
<td>Commitment to School</td>
<td>.940</td>
</tr>
<tr>
<td>Relations with Alumni</td>
<td>.945</td>
</tr>
<tr>
<td>School Environment</td>
<td>.943</td>
</tr>
<tr>
<td>Leadership</td>
<td>.947</td>
</tr>
<tr>
<td>School Management</td>
<td>.946</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>.947</td>
</tr>
<tr>
<td>Reputation Management Scale for Schools (Total)</td>
<td>.933</td>
</tr>
</tbody>
</table>

According to Table 5, it was seen that all reliability values were above the critical value of .70 and the reliability levels were high. Considering the reliability coefficients of the sub-dimensions, Cronbach’s Alpha value for the first sub-dimension was α=,941, for the second sub-dimension, it was α=,940, for the third sub-dimension, it was α=,945, for the fourth sub-dimension, it was α=,943, for the fifth sub-dimension, it was α=,947, for the sixth sub-dimensions, it was α=,946, for the seventh dimension, it was α=,947 and the total Cronbach’s Alpha value of the scale was calculated as α=,933. These results show that the scale has high values in terms of internal consistency.

Confirmatory factor analysis (CFA)

The sample size is a significant factor for the estimation method to give accurate results in confirmatory factor analysis, but there is no definite consensus about the accurate number of samples in the literature (Waltz, Strickland and Lenz, 2010). According to Kline (2005), the sample should have 10 times higher number of the items, or this number should not be less than 200. In order to ensure the construct validity of the designed “organizational reputation management scale for schools”, the scale was administered to a different sample group consisting of students and teachers studying and working in private schools in Istanbul, and confirmatory factor analysis (CFA) was carried out with 235 questionnaires. Descriptive values of the sample group are as follows:

Table 6. Descriptive Values of Confirmatory Factor Analysis Sample Group

<table>
<thead>
<tr>
<th>Participants</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>120</td>
<td>51,9</td>
</tr>
<tr>
<td>Female</td>
<td>115</td>
<td>48,1</td>
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<tr>
<td>Student</td>
<td>145</td>
<td>61,7</td>
</tr>
<tr>
<td>Teacher</td>
<td>90</td>
<td>38,3</td>
</tr>
<tr>
<td>Total</td>
<td>235</td>
<td>100,0</td>
</tr>
</tbody>
</table>
As seen in Table 6, the confirmatory factor analysis was carried out with a total of 235 participants, 120 of whom were men (51.9%) and 115 of whom were women (48.1%). 145 of the participants (61.7%) are students while 90 of them (38.3%) are teachers. Confirmatory factor analysis was carried out using the SPSS AMOS program. The results and values for the confirmatory factor analysis are as follows:

Table 7. Confirmatory Factor Analysis Fit Values and Fit Ranges

<table>
<thead>
<tr>
<th>Model Fit Criterion</th>
<th>Good Fit</th>
<th>Acceptable Fit</th>
<th>Research Fit Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2 / df$</td>
<td>$0 \leq \chi^2 / df \leq 2$</td>
<td>$2 \leq \chi^2 / df \leq 3$</td>
<td>$\chi^2 / df (1181.945/644= 1.835 &lt; 2$</td>
</tr>
<tr>
<td>IFI</td>
<td>$0.95 \leq$ IFI</td>
<td>$0.90 \leq$ IFI</td>
<td>IFI = 0.90 $\leq$ 0.93</td>
</tr>
<tr>
<td>CFI</td>
<td>$0.97 \leq$ CFI</td>
<td>$0.95 \leq$ CFI</td>
<td>CFI = 0.922 $\leq$ 0.95</td>
</tr>
<tr>
<td>RMSEA</td>
<td>RMSEA$\leq$0.05</td>
<td>RMSEA$\leq$0.08</td>
<td>RMSEA = 0.057 $\leq$ 0.08</td>
</tr>
<tr>
<td>GFI</td>
<td>$0.90 \leq$ GFI</td>
<td>$0.85 \leq$ GFI</td>
<td>GFI = 0.90 $\leq$ 0.916</td>
</tr>
<tr>
<td>RMR</td>
<td>0$&lt;$RMR $\leq$0.05</td>
<td>0$&lt;$RMR $\leq$0.08</td>
<td>RMR = 0$&lt;$0.074 $\leq$0.08</td>
</tr>
</tbody>
</table>


As seen in Table 7, according to the confirmatory factor analysis fit values, the model conforms to the predicted data in the literature. Accordingly, the validity of the “organizational reputation management scale for schools” attained by exploratory factor analysis was also confirmed by confirmatory factor analysis.

RESULTS AND SUGGESTIONS

In this research, a scale development study was carried out to determine the organizational reputation of private schools and foreign private schools at high school level. The developed scale was prepared as a 4-point Likert type scale and was expressed with the following statements: Strongly Disagree (1), Partially Agree (2), Quite Agree (3), Strongly Agree (4) to determine the suitability of the items to the participants.

The results of the exploratory and confirmatory factor analyses reveal that the scale has a structure of 7 dimensions and 38 items. Accordingly, the organizational reputation of private schools are “Social Responsibility, Commitment to School, Relations with Alumni, School Environment, Leadership, School Management and Financial Performance”. While the dimensions of “Leadership and School Management” were handled together in the scales previously developed by Dülger (2017) and Karakaş (2019), the related dimensions in this study were identified as “Leadership” and “School Management” as separate dimensions. Apart from this, it has been observed that the School Environment, Commitment to School, Social Responsibility and Financial Performance dimensions that emerged in the study are compatible with the scales developed by Dülger (2017) and Karakaş (2019). On the other hand, it is observed that the Service Quality dimension, which is common in the scales developed by Dülger (2017) and Karakaş (2019), did not appear as a dimension in the measurement of organizational reputation in this study, but the Relations with Alumni Dimension came to the fore instead of this dimension. When the significance of the achievements of graduate students and the relationship they establish with the school are considered about the establishment and stability of the organizational reputation of private schools, it can be argued that the Relations with Alumni is a dimension that should inevitably be taken into account in measuring the organizational reputation of private schools. On the other hand, this scale, which was developed to measure the organizational reputation of private schools and foreign private schools at high school level, was created in line with the organizational reputation perceptions of students and teachers. Different measurement tools can be developed to measure the organizational reputation of private schools by ensuring the participation of parents in further studies.

The use of the currently developed scale towards the organizational reputation of private schools and foreign private schools at the high school level by the private schools and private foreign schools in Turkey is thought to be possible.
The developed scale is expected to contribute to the private schools as well as the literature in terms of the measurement of the organizational reputation of private schools in today’s circumstances under which competition is increasing day by day and, accordingly, the practices to be administered regarding the organizational reputation management.

REFERENCES


Routledge.


Are Pre-Service Science Teachers Qualified Enough to Teach Human Reproductive System?

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Abstract

This study aims to reveal pre-service science teachers’ (PSTs) levels of knowledge about the human reproductive system and their professional competence perceptions. The study was conducted using the case method. A form consisting of 6 open-ended questions was developed and applied to PSTs. The sample was composed of 62 PSTs, who were 3rd and 4th-year students in the Science Teaching Department of a university. It was found that the majority of the participants had a superficial understanding of the human reproductive system and they had various alternative concepts about the subject. The students attributed their incomplete understanding of the subject to the fact that they did not learn the subject effectively because they did not make a regular revision of their lessons, because the subject was taught superficially, and they felt embarrassed while the subject was being taught to them. It can be said that social life and the way individuals look at the subject play an essential part in obtaining such results. Based on the results, it can be said that offering teachers training on the subject by experts can yield positive results in teaching the subject.

Keywords: Human Reproductive System, Pre-Service Science Teachers, Professional Competence, Knowledge

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INTRODUCTION

The reproductive system and the health of the system are important for living creatures in terms of the continuity and sustainability of life. Adolescence can be regarded as a period that should be considered primarily in subjects related to the reproductive system and the health of the system since it is the period when sexual behaviours begin to be shaped in the transition from childhood to adulthood. It is the period when the reproduction-related problems of women increase more rapidly than those of men, and various problems which emerge during this period take an important place in the life of young people who take a step towards adolescence. Furthermore, some problems experienced during the period originate from the youth’s lack of knowledge about the reproductive system and its health (Gölbaşı, 2002; Tosun, 1999; Sezgin, 2000).

Informing the youth about the reproductive system and the health of the system, offering them training, and their participation in the training can contribute to the solution of problems (Özcebe, 2000). Informing or training can be performed by integrating the relevant subjects into the courses at school, or it can be in the form of seminars held at certain intervals. Tosun (1999) argues that educational and consultancy services that respond to the problems of all segments of society will help to solve problems by identifying the priorities since the needs for reproductive health are diverse. A study conducted by Hadjichambis et al. (2015) with the participation of 7th graders (N: 946) suggested that students’ conceptual understanding and their motivation in biology classes would increase when taking into consideration the pre-test and post-test results of an application, which was conducted based on an inquiry about the subject of reproduction.

An examination of the curricula for physical sciences and science courses demonstrated that the gains related to the human reproductive system were available in the unit of “reproduction, growing up, and development in humans” in the 7th-grade coursebook and in the unit of “reproductive system and embryonic development” in the 11th-grade coursebook and that the adequate content was available in the coursebooks prepared according to those gains. However, the literature suggests that there are some problems in teaching the subject (see literature review).

It is important that students learn subjects related to the human reproductive system, which form the basis of sexual education, efficiently in formal education. Therefore, especially individuals who will provide education should be well equipped on the subject (Sungur, 1997). In other words, teachers, the most important components of formal education, should have adequate domain knowledge and professional skills to teach the subject. Otherwise, teachers who have inadequate content knowledge and/or have alternative concepts can transfer their misconceptions unconsciously to their students, and thus they can cause students to form concepts far from scientific truths (Yağbasan & Gülcihat, 2003; Kabapinar, 2007; Erdoğmuş, 2009; Kruger, et al., 1992; Kaptan & Korkmaz, 2000; Kapucu & Yıldırım, 2012; Kapucu & Çılgın, 2016; Görecek Baybars, 2018).

Considering that the university environment brings together the youth with different lifestyles and experiences, it can be said that the interaction between them will also be reflected in their attitudes and behaviors. The youth’s lack of knowledge about the reproductive system and the health of the system makes us think that the group in question can be at risk (Gölbaşı, 2002; Tosun, 1999). Furthermore, teachers’ and pre-service teachers’ perceptions of professional self-efficacy can also directly influence the learning of the subject. Therefore, whether teachers and pre-service teachers have concerns similar to those of students in teaching the subject should be revealed. Thus, the results to be obtained by this study concerning pre-service science teachers’ perceptions of professional self-efficacy and their levels of knowledge about the human reproductive system will fill the gap in the literature. It is also thought that identifying the problems of pre-service science teachers in learning the human reproductive system and professional self-efficacy will have stimulating effects on academicians so that they can take the necessary precautions. Thus, this study’s goal is to reveal pre-service science teachers’ levels of knowledge about the human reproductive system and their professional competence perceptions. Within this framework, the study seeks answers to the following questions:
1. What is pre-service science teachers’ level of knowledge about the human reproductive system?

2. What perceptions do they have of their professional competence in the human reproductive system?

**Literature Review**

A literature review indicates that students at differing levels of learning do not have adequate knowledge of the human reproductive system and have misconceptions in this respect (Yan Yip, 1998; Donati et al., 2000; Sydsjö et al., 2006). In a study conducted in Taiwan with the participation of primary school, secondary school, and high school students, it was found that only 12.9% of primary school students, 38.7% of secondary school students, and 54.4% of high school students could understand the meaning of reproduction exactly (Hsiung & Hsiung, 2003). A similar result was obtained in a study carried out with pre-service biology teachers. Kurt et al. (2013) revealed that pre-service teachers’ cognitive structures about the reproductive system were not adequate, their understanding was incomplete, and they had alternative concepts.

Moreover, it was demonstrated that the human reproductive system was one of the subjects, which was difficult for student understanding (Aşçı & Demircioğlu, 2004; Kurt & Temelli, 2011; Çimer, 2012). In a study classifying the subjects of biology according to difficulty index analysis, Özatlı (2006) found that the subject of reproduction was difficult to understand by 26.18% (20%<difficult). Likewise, in a study aiming to find subjects that 11th graders had difficulty while learning the biology course, Çimer revealed that reproduction in general and reproduction in humans were among the difficult subjects.

Another problem encountered in teaching the human reproductive system is the social effects in the subject’s nature. Koluaçık et al., (2010) claim that it is a taboo to talk about subjects such as reproduction, sexuality, and family planning in Turkey because it is a shame, a sin, and privacy. Therefore, individuals cannot state their problems in such matters explicitly. Another study confirming the finding was conducted by Haşıloğlu & Yaşçıoğlu (2017). The researchers performed the study to find what 6th graders felt, what problems they experienced, and what they thought while listening to their teachers who taught the subjects of reproduction, growing up, and development in humans. As a result, they found that most of the boys and girls wanted to listen to teachers of their sex teaching subjects related to reproduction and that students felt embarrassed, did not understand, or could not ask questions for the parts they did not understand when they listened to the subject from a teacher of the opposite sex because they were shameful subjects. Sydsjö et al. (2006) reported that most of the young people who joined the survey had learned subjects related to reproduction at school, from their friends, or the media. It has been stated in the literature that studies on this subject in Turkey are limited due to social impact (Kömürçü vd., 2014).

**METHODOLOGY**

In the current research, a case study was employed, which is a method that allows researchers to conduct an in-depth investigation of an event in a short time. The case to be examined may sometimes be a school, a person, or a group, and there is no concern about generalizing the results (Denscombe, 1998; Wellington, 2000; Çepni, 2010).

**Study Group**

The study sample was taken through criterion sampling, one of the purposeful sampling methods. In the criterion sampling method, the sample comprises individuals who meet the criteria set for sampling (Patton, 2014). The criterion set for pre-service science teachers in the study was having taken a course related to the human reproductive system during undergraduate education. Therefore, 3rd and 4th-year students who had taken the courses of General Biology 2 and Human Anatomy and
Physiology were determined to be appropriate for inclusion in the study. The study sample was composed of 62 pre-service science teachers (45 females and 7 males) who were 3rd and 4th-year students in the Science Teaching Department of a university in the Central Anatolian Region of Turkey.

**Data Collection**

A survey form consisting of open-ended questions was developed by the researcher in line with the purpose of the study. For the content validity of the survey questions, the opinions of two researchers who have doctorate in science education were taken. The survey contained six open-ended questions aiming to identify the participants’ levels of knowledge about the structure of the reproductive system and the anatomic location and tasks of its organs, how reproduction occurs, and how reproductive cells are formed. Moreover, there were also questions that aimed to identify whether the participants considered their knowledge of the subject adequate and whether they would find the process of teaching the subject disturbing, to identify their perceptions of self-efficacy. Pre-application with a similar small group, which is critical in identifying the problems in the draft form of open-ended questionnaires, is an important step in obtaining valid and reliable results (ASA, 1997; Mertens, 1998). For this reason, a preliminary trial was conducted on a small group of open-ended questions in sufficient time. As a result, minor corrections were made to make the questions more clear and understandable.

**Data Analysis**

Descriptive and content analysis were used together as an analysis method, since some of the survey questions were aimed at measuring the knowledge of pre-service teachers about the human reproductive system and some of them were aimed at determining their views on teaching the subject. While the 1st, 2nd, and 5th questions in the questionnaire were analyzed descriptively, the 3rd, 4th, and 6th questions were subjected to content analysis. While the answers given by the pre-service teachers in the descriptive analysis questions were directly frequencyd; In the questions for which content analysis was made, the answers of the students were examined beforehand and categories were created. It is seen that the answers given to the questions asked to measure knowledge or understanding are examined in advance and the answer categories are formed according to the quality of the answers given as a result of this examination. (Karataş et al, 2003, Kurt, 2010). In the content analysis process, the researchers, after evaluating and classifying the answers given by 6 students, corresponding to 10% of the participants, for each question in the questionnaire separately, came together and compared their categories, and after reaching a consensus, the first researcher continued to evaluate the remaining questionnaires. Below, as an example, the analysis process for Question 3 is explained.

In the third question, pre-service teachers were asked how reproductive cells are formed. Valid answers of the students including scientifically correct statements are “Sufficient”; Answers that include scientifically correct statements as well as misconceptions “contain a misconception”, answers that contain partially scientifically correct statements are “Insufficient”; Finally, those who did not make any explanation were categorized as “No Explanation”.

Besides in the analysis process, examples of quotations from the data expressed by the students in writing were also presented (for example see Table 6). The researcher spent a long time with the participants as they had their own class and students. Considering that the researcher is a part of the process, it can be said that there is no negative situation on the collected data in terms of validity. It is of great importance for the researcher to stay in the environment where he/she observes for a long time, for the data collected to be healthier and more realistic (Yıldırım ve Şimşek, 2013:300 p).

The real identities of the pre-service teachers participating in the study were kept confidential. The responses given by 15 participants to the survey questions were analyzed by the researcher and an
expert in science education independently. The codes and categories distinguished by the two researchers were compared, and the rate of agreement between them was found to be 78% (Miles & Huberman, 1994).

**FINDINGS**

This section presents the findings obtained within the framework of the study questions under the following sub-headings.

**Findings for Research Question One**

As seen from Table 1, which is about showing the human reproductive organs and their structures on a chart, there were no pre-service teachers who could show the locations of all male and female reproductive organs correctly. Accordingly, only 10% of the pre-service teachers could show the location of most of the organs correctly. According to Table 1, the rate of those who could show some of the male and female reproductive organs correctly was 34% and 44%, respectively. However, 13% could not show any of the organs on the chart.

<table>
<thead>
<tr>
<th>Demonstrating the anatomic locations of the organs</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. He/she can show all the male and female reproductive organs</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ii. He/she can show most of the male and female reproductive organs (8-10)</td>
<td>6</td>
<td>9.7</td>
</tr>
<tr>
<td>iii. He/she can show some of the male and female reproductive organs (4-7)</td>
<td>21</td>
<td>33.9</td>
</tr>
<tr>
<td>iv. He/she can show only a few of the male and female reproductive organs (1-3)</td>
<td>27</td>
<td>43.5</td>
</tr>
<tr>
<td>v. He/she can show none of the male and female reproductive organs (0)</td>
<td>8</td>
<td>12.9</td>
</tr>
</tbody>
</table>

It is seen from Table 2, which is about the tasks of the human reproductive organs, that there were no pre-service teachers who could show all the reproductive organs correctly and that only 19% of them could explain the tasks of some of the organs. Of the pre-service teachers participating in the study, 47% could explain the tasks of only a few of the organs, whereas 31% could not explain any of the tasks of the organs.

<table>
<thead>
<tr>
<th>The tasks of the reproductive organs</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. He/she can explain the tasks of all reproductive organs</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ii. He/she can explain the tasks of most of the reproductive organs</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>iii. He/she can explain the tasks of some of the reproductive organs</td>
<td>12</td>
<td>19.4</td>
</tr>
<tr>
<td>iv. He/she can explain the tasks of only a few of the reproductive organs</td>
<td>29</td>
<td>46.8</td>
</tr>
<tr>
<td>v. He/she cannot explain the tasks of the reproductive organs</td>
<td>19</td>
<td>30.6</td>
</tr>
</tbody>
</table>

According to Table 3, which is about how reproductive cells are formed, the rate of the pre-service teachers who could adequately explain the formation of reproductive cells was 15%, while the rate of those who could explain it inadequately was 42%. The rate of the pre-service teachers who gave answers containing misconceptions was 24%. On the other hand, 16% could not explain the formation of reproductive cells.
Table 3. Pre-service Science Teachers’ Levels of Knowledge about the Formation of Reproductive Cells

<table>
<thead>
<tr>
<th>Explanation about the formation of reproductive cells</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Explanation about the formation of reproductive cells is adequate.</td>
<td>9</td>
<td>14.5</td>
</tr>
<tr>
<td>ii. Explanation about the formation of reproductive cells is inadequate.</td>
<td>26</td>
<td>41.9</td>
</tr>
<tr>
<td>iii. Explanation about the formation of reproductive cells contains misconceptions.</td>
<td>15</td>
<td>24.2</td>
</tr>
<tr>
<td>iv. No explanation on the formation of reproductive cells is provided.</td>
<td>10</td>
<td>16.1</td>
</tr>
</tbody>
</table>

According to Table 4 about how reproduction occurs in humans, 5% of the pre-service teachers could make an adequate explanation, whereas 63%, a high percentage of them, could not provide an adequate explanation. The rate of answers containing misconceptions about how reproduction occurs was 29%. On the other hand, 3% provided no explanation about the subject.

Table 4. Pre-service Science Teachers’ Levels of Knowledge about Reproduction

<table>
<thead>
<tr>
<th>How reproduction occurs</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Explanation of how reproduction occurs is adequate</td>
<td>3</td>
<td>4.8</td>
</tr>
<tr>
<td>ii. Explanation of how reproduction occurs contains misconceptions</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>iii. Explanation of how reproduction occurs is inadequate</td>
<td>39</td>
<td>62.9</td>
</tr>
<tr>
<td>iv. No explanation about how reproduction occurs is provided</td>
<td>2</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Findings for Research Question Two

Upon examining whether the pre-service teachers had adequate knowledge of the reproductive system, it was observed that the majority of them (62.9%) thought that they had inadequate knowledge of the subject, as can be seen from Table 5. They described the reasons for feeling inadequate in the subject as having difficulty in answering questions, the lack of the detailed knowledge of the subject, not revising what they had learned, superficial teaching of the subject, hesitating to ask questions about what they did not understand due to feeling embarrassed, the failure to learn the subject effectively, and the lack of interest in the subject.

It is observed from Table 5 that only a small number of the pre-service teachers thought that they had adequate knowledge of the subject. They explained the reasons for their adequate knowledge of the subject as making a revision, being curious about the subject, and listening to the teacher carefully while he/she was teaching the subject.

Although there were pre-service who thought that they had partially adequate knowledge of the subject, they did not make any explanations about the reasons for this.

Table 5. Pre-service Science Teachers’ Perceptions of Their Levels of Content Knowledge About the Human Reproductive System

<table>
<thead>
<tr>
<th>Having adequate knowledge of the reproductive system</th>
<th>n</th>
<th>%</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those who think that they have adequate knowledge of the reproductive system</td>
<td>7</td>
<td>11.3</td>
<td>Revising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Listening to the teacher carefully</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Being curious</td>
</tr>
<tr>
<td>Those who do not think that they have adequate knowledge of the reproductive system</td>
<td>39</td>
<td>62.9</td>
<td>The failure to answer questions/having difficulty in answering questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The lack of detailed knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not revising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Superficial teaching of the subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Feeling embarrassed while the subject is being taught</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hesitating to ask questions about what is not understood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not having an interest in the subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The failure to learn the subject effectively</td>
</tr>
<tr>
<td>Those who think that they have partially adequate knowledge of the reproductive system</td>
<td>11</td>
<td>17.7</td>
<td>No explanation</td>
</tr>
<tr>
<td>Those who give no answers</td>
<td>5</td>
<td>8.1</td>
<td>-</td>
</tr>
</tbody>
</table>
As is seen from Table 6, the rate of the pre-service teachers who thought that they could teach the subject to their students without hesitation was 65%. They explained the reasons for this as the fact that it was an important subject that students needed to know, that no problems would arise if they were knowledgeable about the subject, that students were younger than them, that they needed to teach the subject as teachers, and that it was an ordinary and natural event. However, the rate of those who thought that they could not teach the subject so easily was 35%. They explained the reasons for this as the fact that students would joke about the subject, that students would consider the subject shameful, and that they would feel embarrassed.

Alternative concepts, such as “insemination occurs in the uterus,” “it occurs by fertilizing the ovary,” “egg cells are produced in the fallow tubes, and they are formed in the mother’s womb,” “sperm and egg cells are formed through mitotic division, sperm is a male reproductive organ,” were the ones that were stated by a higher number of pre-service teachers (25%, 22%, and 20%, respectively). Despite being fewer (6%), the other alternative concepts are shown in Table 7.

Table 6. Pre-service Science Teachers’ Perceptions of Their Self-efficacy in Teaching the Human Reproductive System

<table>
<thead>
<tr>
<th>Being able to teach the reproductive system to students without hesitation</th>
<th>n</th>
<th>%</th>
<th>Reasons (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those who think that they can teach the reproductive system without hesitation</td>
<td>42</td>
<td>65</td>
<td>No explanation (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Because students are younger than me (5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Because I will teach the subject superficially/I will not go into details (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Students already know the subject (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I will not have problems if I make preparation beforehand (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>It is an ordinary and natural event (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I need to teach it because I am a teacher (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The subject is important, and students need to know it (10)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Problems will not arise if I am knowledgeable about the subject (7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I do not feel embarrassed (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I am knowledgeable enough (3)</td>
</tr>
<tr>
<td>Those who do not think that they can teach the reproductive system without hesitation</td>
<td>20</td>
<td>35</td>
<td>I think that students will joke about the subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I think that students will find the subject shameful</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I think I will feel embarrassed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>It is not a subject that I can teach so easily</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I do not like the subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I have inadequate knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I think of assigning it as homework</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I am not sure</td>
</tr>
</tbody>
</table>

Table 7. Pre-service Teachers’ Alternative Concepts About the Reproductive System

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Categories</th>
<th>Alternative concepts</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproduction</td>
<td>Way of producing</td>
<td>It occurs with the connection of textures</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It occurs through meiosis after insemination</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>It occurs with the combination of egg cells and sperm cells</td>
<td></td>
</tr>
<tr>
<td>Egg cells</td>
<td>Definition</td>
<td>Female reproductive organ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Place of production</td>
<td>It occurs in the mother’s womb</td>
<td>22.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is produced in the fallow tubes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process of production</td>
<td>It occurs with the differentiation of oogenesis cells</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>It occurs with mitotic division</td>
<td></td>
</tr>
</tbody>
</table>
CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

In this study, it was found that most of the pre-service science teachers could not show the anatomic location of the structures and organs of the human reproductive system correctly. Furthermore, it was determined that they had a superficial understanding of the tasks of those structures and organs and most of them failed to give the expected answers to the questions asked.

Concerning how reproduction occurs and how reproductive cells are formed, most of them made inadequate explanations and gave incorrect answers. Likewise, in a study conducted with pre-service biology teachers, Kurt, et al. (2013) also found that pre-service teachers’ cognitive structures about the reproductive system were not at the desired level, that they had an incomplete understanding of the subject and had alternative concepts. Thus, the alternative concepts found in this study and the ones reported in the literature can be compiled, and a Likert-type scale can be developed accordingly. Whether participants have alternative concepts can be determined using such a scale with larger samples.

Most of the pre-service teachers did not think that they had adequate knowledge of the human reproductive system. It is seen from Table 5 that the number of the participants who thought that their knowledge of the subject was inadequate was high. According to the pre-service teachers, their inadequate knowledge originated from not revising what they had learned, superficial teaching of the subject, and the failure to learn effectively due to feeling embarrassed while they were taught the subject. The result was significant in that it was consistent with the other data collected using the survey. Alternative concepts, such as “insemination occurs in the uterus,” “it occurs with the insemination of the ovaries by sperm,” “egg cells are produced in the fallow tubes,” “it occurs with the mitotic division of sperm cells and egg cells,” and “sperm is the male reproductive organ,” created by the pre-service teachers showed that they could not learn the subject effectively due to the reasons they had stated (see Table 7). Considering that the issue is also related to sexual education, it would not be right to expect students to learn the subject only in physical sciences classes at school. The majority of the participants in the studies conducted with the youth stated that they did not have adequate sexual education and that their knowledge of reproduction was inadequate. Moreover, it was found in those studies that the youth had alternative concepts (Duman et al., 2015; Güçlü, Elem & Unutkan, 2015; Sydsjö et al., 2006; Yan Yip, 1998). Koluçu, et al. (2010) also state that students have incomplete knowledge about the health of reproduction. Thus, it can be said that laying more emphasis on sexual education and offering them education given by experts can yield better results. Supporting this, a study conducted with pre-service teachers who were first-year students in a faculty of education revealed that 89% of the students wished to receive education from doctors and nurses (Kaya, et al., 2007). Such education is thought to facilitate an understanding of the subject of the reproductive system in the physical sciences course. In this context, more space should be devoted to such subjects in student and teacher education programs. Students learn the reproductive system formally for the
first time in the 8th grade. Considering that the process of secondary school education is the period when students enter into adolescence in Turkey, it is the appropriate time for sexual education. A doctoral thesis in the literature argues that the youth under the age of 15 need more guidance and should be directed to become informed (Emodi, 1981). Another study emphasizes the need for repeating education at certain intervals, employing different techniques of education, asking for students’ needs and ideas in this respect, offering education by male and female experts, and considering privacy important (Koluacıık, et al., 2010). The study also mentions deficiencies in students’ knowledge about the health of reproduction. In a study conducted with the participation of secondary school students, Haşıloğlu & Yağcıoğlu (2017) concluded that most of the students would prefer teachers of their sex to teach such subjects because they felt embarrassed since they were shameful subjects and that they could not ask questions about what they did not understand for the same reason.

It was found that the majority of the pre-service science teachers thought that they could teach the subject of the human reproductive system to their students without hesitation. Furthermore, it would not be wrong to say that the situation will not be as they think during their practice teaching or in their professional life. It was also revealed that some of the pre-service teachers did not think that they could teach the subject to students so easily, and they stated the reasons for this as feeling embarrassed while teaching the subject, being concerned about being ridiculed by students, and the fact that students might consider the subject shameful. Social life and the perspectives of society can be said to play roles in obtaining such a result. It is stated in the literature that subjects such as reproduction, sexuality, and family planning are taboo subjects in Turkey. Therefore, individuals cannot state their demands and problems in such matters openly (Koluacıık, et al., 2010). Based on this result, the main reasons for pre-service teachers’ concerns about teaching the subject could be investigated, the necessary support could be received from experts to solve the problem, and the subject could be made more comprehensible by designing activities suggested by experts. Research on the activities in which different methods and techniques are used argues that using different teaching and learning methods is more effective in promoting students’ achievement and motivation (Aşçı & Demircioğlu, 2004; Kaya, 2002; Kurt & Temelli, 2011; Türkuzan, 2004; Kurtuoğlu, 2007; Hadjichambis, 2015). Education on sexual health provides information on individuals’ emotional configuration and contributes to the formation of their reactions, which will facilitate their adjustment to different life conditions. Moreover, such education also enables young people to develop positive attitudes towards sexuality and helps them to make rational and responsible choices in the context of sexual behavior (Bulut, 2006; 24-25p). Such education on sexual health is necessary and important for social life. In studies conducted on university students, it was determined that most of the students did not receive any service or training on sexual/reproductive health. For this reason, it is recommended that healthcare professionals organize educational programs for university students (Dağ et al., 2012; Karabulutlu & Kılıç, 2011; Pınar et al., 2009; Aksoy, Ayhan- Баşer & Cankurtaran, 2021).

REFERENCES


Investigation of Pre-service Science Teachers’ Attitudes towards Laboratory Skills and Chemistry Laboratory Anxieties According to Selected Variables

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Abstract

The aim of this study was to determine the attitudes towards laboratory skills and chemistry laboratory anxieties of pre-service science teachers who were currently registered to general chemistry laboratory course and who had taken this course previously. To evaluate candidates’ attitudes and anxieties in line with this purpose, they were examined in terms of gender, year of study, and the type of high school. The sample of the study consisted of 202 candidates studying in the 1st, 3rd, and 4th years of the Science Education Department of a state university in Ankara. A survey research model was used, and the Attitude Scale towards Laboratory Skills and the Chemistry Laboratory Anxiety Scale were applied. It was determined that candidates’ attitudes were generally scored as “agree” and their anxieties were generally scored as “disagree” in terms of average scores. It was also determined that there was a statistically significant difference in the attitudes and anxieties in terms of gender in favor of males. It was determined that there was no statistically significant difference between attitudes and anxieties in terms of year of study and type of high school. A moderate, negatively significant correlation was found between the average attitude and anxiety scores.

Keywords: Attitude Towards Laboratory Skills, Chemistry Laboratory Anxiety, Gender, Year of Study, Type of High School Graduated From

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INTRODUCTION

In the science curriculum in Turkey, it is aimed to shape individuals who research and question, can solve problems, are self-confident, are able to communicate effectively, and learn lifelong. One of the important features of science is that it requires learning by doing and experiencing. In this respect, laboratories that provide a bridge between daily life and scientific knowledge have an important place (MEB, 2018). Science educators have suggested that learning using laboratory activities has many benefits and they have emphasized that laboratories have a central and distinctive role in science education (Hofstein & Lunetta, 1982). Laboratories are environments that enable students to work individually or in groups, where students are taught by creating or being shown science phenomena, concretizing the questions formed in the mind as a result of observation or abstract perceptions, and developing cognitive, affective, and psychomotor skills (Ceylan, Güzel Yüce & Koç, 2019; Yılmaz & Morgil, 1999). Science courses taught through experiments enable students to become better equipped in terms of knowledge and skills (Lunetta, 1998; Tamir, 1991).

In addition, one of the goals of science education is to ensure that students acquire affective domain behaviors (Ekici & Hevedanlı, 2010). Affective factors such as motivation, attitude, and anxiety are very important in making people aware (Alkan & Koyuncu, 2017). Attitude is a positive or negative emotion about a person, object, or subject (Koballa & Glynn, 2007, p. 78). Students’ interest in the subject in the laboratory environment and doing experiments fondly and willingly improve their attitudes towards the laboratory and their interest in the lesson. Students’ attitudes towards the laboratory may vary depending on many factors such as previous knowledge and experience, learning method, teacher, laboratory environment, communication and teamwork, and the materials and safety information provided in the laboratory. Another affective variable addressed in the present work is anxiety. Anxiety is a variable that negatively affects learning, and it is a situation in which the individual cannot form a clear behavioral pattern to change a threatening situation (Power & Dalgleish, 1997). According to Bowen (1999), there are five categories that help explain laboratory anxiety: i) working with chemicals, ii) using and experimenting with laboratory equipment, iii) collecting data, iv) collaborating with other students, and v) time management in the laboratory. Laboratory anxiety causes students to feel stressed and uncomfortable while working in the laboratory (Eddy, 2000). It is important for students to learn about glass materials, tools, and chemicals used during laboratory studies and to have knowledge about safety information in terms of gaining laboratory skills.

In a study conducted by Ceylan et al. (2019), it was determined that the majority of pre-service teachers focused on learning goals in practice and did not include the purpose of the affective domain. If an individual lacks knowledge and skills, the related feelings and values may negatively affect the permanence and effectiveness of learning (Senemoğlu, 1989). When a student who is not interested in science classes enters the laboratory environment, he or she may develop anxiety with the effect of different stimuli (Azizoğlu & Uzuntiryaki, 2006).

A lack of emphasis in the literature on laboratory practices in universities where teachers have studied (Ayyacı & Küçük, 2005; Balbağ & Anılan, 2014) is the reason why laboratory applications are not applied sufficiently in primary and secondary education institutions. Reasons such as not taking related courses are stated. However, prospective science teachers need to learn by doing and living, both during their university education and throughout their teaching careers. Therefore, the laboratory courses that teacher candidates take during their university education create opportunities for learning by doing and living in real environments as predicted by constructivism theory and they play an important role in future success. In addition, affective dimensions such as attitude and anxiety affect students’ success and performance in the laboratory (Bowen, 1999). Considering that attitudes affect the process and success of the lesson, it should be ensured that individuals develop a positive attitude towards the laboratory and laboratory skills first (Alkan & Erdem, 2012).

In this context, knowing the extent and source of students’ concerns about the laboratory will be effective in determining the ways to relieve that anxiety and direct the students back to the
laboratory. For this reason, it is thought that reducing stress in laboratory conditions and developing a positive attitude towards laboratory skills will make a significant contribution to the science education literature in order to train individuals and qualified science teachers as targeted by the Turkish Ministry of National Education.

Aim

The aim of this study is to determine the attitudes of teacher candidates studying in the Science Education Department towards laboratory skills and their chemistry laboratory anxieties. To evaluate candidates’ attitudes and anxieties in line with this main purpose, they were examined in terms of gender, year of study, and the type of high school that they graduated from. Accordingly, answers to the following questions were sought:

1. How are pre-service teachers’ attitudes towards laboratory skills and levels of chemistry laboratory anxiety distributed?

2. Do pre-service teachers’ attitudes towards laboratory skills differ significantly in terms of gender, year of study, or the type of high school that they graduated from?

3. Do pre-service teachers’ levels of chemistry laboratory anxiety differ significantly in terms of gender, year of study, or the type of high school that they graduated from?

4. Is there a significant relationship between pre-service teachers’ attitudes towards laboratory skills and their level of anxiety in the chemistry laboratory?

METHOD

Sample Group

The study was carried out with 202 teacher candidates studying in the Science Education Department of a state university in Ankara in the spring semester of the 2017-2018 academic year and the fall semester of the 2018-2019 academic year. These individuals were pre-service science teachers who were currently registered to general chemistry laboratory course in the 1st year of their studies and who had taken this course previously (currently 3rd and 4th year candidates). An easily accessible sampling method was preferred in the selection of samples. Information on the descriptive features of the participants is given below.

Table 1. Distribution of Pre-Service Science Teachers by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>179</td>
<td>88.6</td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>11.4</td>
</tr>
</tbody>
</table>

As seen in Table 1, 88.6% of the participants were female and 11.4% were male.

Table 2. Distribution of Pre-Service Science Teachers by Year of Study

<table>
<thead>
<tr>
<th>Year of study</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>71</td>
<td>35.1</td>
</tr>
<tr>
<td>3rd</td>
<td>78</td>
<td>38.6</td>
</tr>
<tr>
<td>4th</td>
<td>53</td>
<td>26.2</td>
</tr>
</tbody>
</table>

As seen in Table 2, 35.1% of the participants were in the 1st year of the academic program, 38.6% were in the 3rd year, and 26.2% were in the 4th year.
Table 3. Distribution of Pre-Service Science Teachers by the Type of High School that They Graduated From

<table>
<thead>
<tr>
<th>High school type</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatolian high school</td>
<td>130</td>
<td>64.4</td>
</tr>
<tr>
<td>Science high school</td>
<td>16</td>
<td>7.9</td>
</tr>
<tr>
<td>General high school</td>
<td>11</td>
<td>5.4</td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>22.3</td>
</tr>
</tbody>
</table>

As seen in Table 3, 64.4% of the participants graduated from an Anatolian high school, 7.9% from a science high school, 5.4% from a general high school, and 22.3% from other types of high schools.

Research Pattern

In this study, a survey research model, as a descriptive research type, was used. In such cases, researchers deal with a large group of people to address a particular issue or problem. They ask a series of related questions to find the answers (Fraenkel, Wallen & Hyun, 2012, p. 393). In this study, the survey model was used to examine prospective teachers’ attitudes towards laboratory skills and chemistry laboratory anxieties according to the variables of gender, year of study, and the type of high school that participants had graduated from.

Data Collection Tools

Quantitative data collection tools were used in the study.

*Attitude Scale towards Laboratory Skills (ASLS)*

The Attitude Scale towards Laboratory Skills, developed by Alkan and Erdem (2012), was prepared in a five-point Likert-type format (I strongly agree, agree, indecisive, disagree, and strongly disagree) and it consists of 25 items. Points given for positively scored items are Strongly disagree = 1, Disagree = 2, Indecisive = 3, Agree = 4, and Strongly agree = 5, while points are given to negatively scored items in the reverse order. Accordingly, the maximum score that can be obtained from the overall scale is 125 and the minimum score is 25. As a result of the validity studies of the scale, a structure with four factors was determined. Factor 1 is recognizing materials and chemicals (14 items), factor 2 is considering feedback (four items), factor 3 is communication in the laboratory (three items), and factor 4 is feeling ready (four items). The four-factor structure of the scale explains 54.34% of the total variance. As a result of reliability analysis, while the Cronbach alpha reliability coefficient of the scale was .91, the Cronbach alpha reliability coefficients of the four factors were .916, .774, .809, and 0.643, respectively.

Looking at the reliability values of the scale for this study, the Cronbach alpha reliability coefficient for the overall scale was .88, for equipment and chemicals recognition it was .89, for feedback consideration it was .74, for communication in the laboratory it was .75, and for the factor of feeling ready it was .66.

*Chemistry Laboratory Anxiety Scale (CLAS)*

The Chemistry Laboratory Anxiety Scale, developed by Bowen (1999) and adapted to Turkish by Azizoğlu and Uzuntiryaki (2006), was prepared in a five-point Likert-type format (I strongly agree, agree, am indecisive, disagree, and strongly disagree) and it consists of 20 items. The scores given to the positively scored items (supporting anxiety) are Strongly disagree = 1, Disagree = 2, Indecisive = 3, Agree = 4, and Strongly agree = 5, while negatively scored items (not supporting anxiety) are scored in reverse order. Accordingly, the maximum score that can be obtained from the overall scale is 100 and the minimum score is 20. As a result of the validity studies of the scale, a structure with four factors was determined. Factor 1 is using laboratory tools and chemicals (six items), factor 2 is
working with other students (four items), factor 3 is collecting data (six items), and factor 4 is using laboratory time (four items). The four-factor structure of the scale explains 66.714% of the total variance. As a result of the reliability analysis, the Cronbach alpha reliability coefficients of the four factors of the scale were .88, .87, .86, and .87 respectively.

Looking at the reliability values of the scale for this study, the Cronbach alpha reliability coefficient for the overall scale was .92. For the use of laboratory equipment and chemicals, it was .84, while it was .83 for the factor of working with other students, .80 for the data collection factor, and .80 for the factor of using laboratory time.

Data Analysis

The collected data were analyzed with a quantitative approach according to the four sub-problems prepared in line with the main purpose of the study.

Before the quantitative analysis of the data, it was checked whether the data obtained from the ASLS and CLAS were normally distributed. In a normal distribution curve, the principal arithmetic mean, mode, and median values overlap and correspond to the midpoint of the horizontal line of the bell curve. The skewness and kurtosis values are 0 (Taşpınar, 2017, p. 32). Equality of central tendency measurements indicates normal distribution. If the mean is greater than the median, it indicates right skewness, and if it is smaller, it indicates left skewness. The fact that the mean, mode, and median values are close to each other is considered an indicator that the distribution does not deviate too far from normality (Büyüköztürk, Çokluk, & Köklü, 2017, p. 59). In other words, the closer these values are to each other, the more the distribution exhibits characteristics of normal distribution (Can, 2014, p. 82). However, if the skewness and kurtosis values are within certain rates (Taşpınar, 2017, p. 33), it is decided that the distribution is normal. The fact that the Z value calculated by dividing the skewness and kurtosis values by their standard errors was within the ±1.96 limits indicated that the distribution was normal at a 0.05 confidence level (Can, 2014, p. 85; Taşpınar, 2017, p. 33). The analysis of the sub-problems, based on the control of normal distribution of the data as a descriptive method, was performed according to Z scores with arithmetic mean, mode, and median values. SPSS 22.0 was used in evaluating the distribution of the candidates’ scores for the overall scales and in the analysis of the distribution of these scores by gender, year of study, and type of high school that participants graduated from. For the data of all sub-problems of the study, except for the comparison of attitudes towards laboratory skills and the gender variable, it was determined that the Z scores of central tendency measurements were equal or close to each other and within the limits of ±1.96. Values related to Z scores are presented in Table 4.

Table 4. Z Score Values of Attitude towards Laboratory Skills and Chemistry Laboratory Anxiety Score Averages According to Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Skewness</th>
<th>Standard Error of Skewness</th>
<th>Skewness Z value</th>
<th>Kurtosis</th>
<th>Standard Error of Kurtosis</th>
<th>Kurtosis Z value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-.004</td>
<td>.182</td>
<td>-.022</td>
<td>-.016</td>
<td>.361</td>
<td>-.044</td>
</tr>
<tr>
<td>Male</td>
<td>1.190</td>
<td>.481</td>
<td>2.474*</td>
<td>.256</td>
<td>.935</td>
<td>.273</td>
</tr>
<tr>
<td>Year of study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>.278</td>
<td>.285</td>
<td>.975</td>
<td>.471</td>
<td>.563</td>
<td>.836</td>
</tr>
<tr>
<td>3</td>
<td>-.002</td>
<td>.272</td>
<td>-.003</td>
<td>.652</td>
<td>.538</td>
<td>1.211</td>
</tr>
<tr>
<td>4</td>
<td>-.191</td>
<td>.327</td>
<td>-.584</td>
<td>-.484</td>
<td>.644</td>
<td>-.751</td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatolian</td>
<td>.026</td>
<td>.212</td>
<td>.122</td>
<td>.339</td>
<td>.422</td>
<td>.803</td>
</tr>
<tr>
<td>Science</td>
<td>.096</td>
<td>.564</td>
<td>.170</td>
<td>.350</td>
<td>1.091</td>
<td>.320</td>
</tr>
<tr>
<td>General</td>
<td>.351</td>
<td>.661</td>
<td>.531</td>
<td>-.827</td>
<td>1.279</td>
<td>-.646</td>
</tr>
<tr>
<td>Other</td>
<td>-.059</td>
<td>.354</td>
<td>-.166</td>
<td>.221</td>
<td>.695</td>
<td>.317</td>
</tr>
<tr>
<td>ASLS (overall scale)</td>
<td>.050</td>
<td>.171</td>
<td>.292</td>
<td>.147</td>
<td>.341</td>
<td>.431</td>
</tr>
</tbody>
</table>
CLAS

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>.040</th>
<th>.182</th>
<th>.219</th>
<th>-.033</th>
<th>.361</th>
<th>-.091</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>-.137</td>
<td>.481</td>
<td>-.284</td>
<td>-.318</td>
<td>.935</td>
<td>-.340</td>
<td></td>
</tr>
<tr>
<td>Year of study</td>
<td>1</td>
<td>.112</td>
<td>.285</td>
<td>.392</td>
<td>-.490</td>
<td>.563</td>
<td>-.870</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>.153</td>
<td>.272</td>
<td>.562</td>
<td>.487</td>
<td>.538</td>
<td>.905</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>-.270</td>
<td>.327</td>
<td>-.825</td>
<td>.087</td>
<td>.644</td>
<td>1.350</td>
</tr>
<tr>
<td>High</td>
<td>Anatolian</td>
<td>-.060</td>
<td>.212</td>
<td>-.283</td>
<td>-.003</td>
<td>.422</td>
<td>-.007</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>.552</td>
<td>.661</td>
<td>.835</td>
<td>-.273</td>
<td>1.279</td>
<td>-.213</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.502</td>
<td>.554</td>
<td>.835</td>
<td>-.273</td>
<td>1.279</td>
<td>-.213</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>.069</td>
<td>.354</td>
<td>.194</td>
<td>.224</td>
<td>.695</td>
<td>.322</td>
</tr>
<tr>
<td>CLAS (overall scale)</td>
<td>.020</td>
<td>.171</td>
<td>.116</td>
<td>.053</td>
<td>.341</td>
<td>-.155</td>
<td></td>
</tr>
</tbody>
</table>

*Skewness Z=2.474 value does not show normal distribution.

The data with normal distribution were analyzed with the independent groups t-test, single factor analysis of variance (ANOVA), and the Pearson correlation test, while non-normally distributed data were analyzed using the Mann-Whitney U test, one of the nonparametric tests. In addition, analyses of frequency (f) and percentage (%) were performed for descriptive statistics. The results were evaluated and interpreted at the 0.05 significance level.

For the analysis of data obtained from the ASLS and CLAS, in the calculation of the interval width of the scales, the formula of “sequence width/number of groups to be made” (Tekin, 1993) was taken into consideration, and the main arithmetic mean weights in the evaluation of the findings are given below.

<table>
<thead>
<tr>
<th>For ASLS</th>
<th>For CLAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00–1.80=Strongly disagree</td>
<td>1.00–1.80=Strongly disagree</td>
</tr>
<tr>
<td>1.81–2.60=Disagree</td>
<td>1.81–2.60=Disagree</td>
</tr>
<tr>
<td>2.61–3.40=Indecisive</td>
<td>2.61–3.40=Indecisive</td>
</tr>
<tr>
<td>3.41–4.20=Agree</td>
<td>3.41–4.20=Agree</td>
</tr>
<tr>
<td>4.21–5.00=Strongly agree</td>
<td>4.21–5.00=Strongly agree</td>
</tr>
</tbody>
</table>

Effect size is a useful statistical value in determining the size of the difference between two average scores (Taşpınar, 2017, p. 65). In this context, the effect size was calculated according to Cohen’s d for the variables with a statistically significant difference between them.

RESULTS

The findings obtained as a result of determining the attitudes of teacher candidates towards laboratory skills and chemistry laboratory anxieties and examining the distribution of these variables according to the variables of gender, year of study, and the type of high school that participants graduated from are as follows.

1. How are pre-service teachers’ attitudes towards laboratory skills and levels of chemistry laboratory anxiety distributed?

Distributions of the descriptive statistics of pre-service teachers’ attitudes towards laboratory skills and chemistry laboratory anxiety scores are shown in Table 5.
When Table 5 is examined, the highest score obtained by the candidates from the overall ASLS is 4.84 and the lowest is 2.90. In addition, the mean score is 3.79, the median value is 3.80, and the standard deviation is .399. The skewness coefficient calculated for the distribution is .050 and the kurtosis coefficient is .147. On the other hand, when the distribution of scores for the four factors is examined, the lowest score for the 1st factor is 2.29 and the highest score is 5.00. The average score is 2.00, the median value is 2.00, and the standard deviation is .543. The skewness coefficient calculated for the distribution is -.142 and the kurtosis coefficient is .781. For the 2nd factor, the lowest score is 2.50 and the highest score is 5.00. The average score is 2.20, the median value is 2.00, and the standard deviation is .750. The skewness coefficient calculated for the distribution is -.114 and the kurtosis coefficient is 2.051. Finally, for the 4th factor, the lowest score is 1.00 and the highest score is 4.00. The average score is 2.00, the median value is 2.00, and the standard deviation is .546. The skewness coefficient calculated for the distribution is -.053.

When Table 5 is further examined, the highest score obtained by the candidates from the overall CLAS is 3.46 and the lowest is 1.00. In addition, the mean score is 2.22, the median value is 2.00, and the standard deviation is .546. The skewness coefficient calculated for the distribution is .020 and the kurtosis coefficient is -.053. On the other hand, when the distribution of scores for the four factors is examined, the lowest score for the 1st factor is 1.00 and the highest score is 4.33. The average score is 2.36, the median value is 2.33, and the standard deviation is .737. The skewness coefficient calculated for the distribution is .159 and the kurtosis coefficient is -.165. For the 2nd factor, the lowest score is 1.00 and the highest score is 4.00. The average score is 2.05, the median value is 2.00, and the standard deviation is .727. The skewness coefficient calculated for the distribution is .644 and the kurtosis coefficient is .114. For the 3rd factor, the lowest score is 1.00 and the highest score is 3.83. The average score is 2.20, the median value is 2.16, and the standard deviation is .601. The skewness coefficient calculated for the distribution is .253 and the kurtosis coefficient is -.017. Finally, for the 4th factor, the lowest score is 1.00 and the highest score is 4.75. The average score is 2.27, the median value is 2.03, and the standard deviation is .750. The skewness coefficient calculated for the distribution is .385 and the kurtosis coefficient is -.053.

It was determined that the chemistry laboratory anxieties of the pre-service teachers in terms of average scores for all factors and the overall scale were in the “disagree” range.

<table>
<thead>
<tr>
<th>Table 5. Distribution of Descriptive Statistics of Pre-Service Teachers’ Attitudes towards Laboratory Skills and Chemistry Laboratory Anxiety Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variables</strong></td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>ASLS</strong></td>
</tr>
<tr>
<td>1st factor</td>
</tr>
<tr>
<td>2nd factor</td>
</tr>
<tr>
<td>3rd factor</td>
</tr>
<tr>
<td>4th factor</td>
</tr>
<tr>
<td><strong>ASLS</strong> (overall scale)</td>
</tr>
<tr>
<td><strong>CLAS</strong></td>
</tr>
<tr>
<td>1st factor</td>
</tr>
<tr>
<td>2nd factor</td>
</tr>
<tr>
<td>3rd factor</td>
</tr>
<tr>
<td>4th factor</td>
</tr>
<tr>
<td><strong>CLAS</strong> (overall scale)</td>
</tr>
</tbody>
</table>
2. Do pre-service teachers’ attitudes towards laboratory skills differ significantly in terms of gender, year of study, or the type of high school that they graduated from?

For pre-service teachers’ attitudes towards laboratory skills, the Mann-Whitney U test was used to compare significance in terms of gender, while one-way ANOVA was used for comparisons according to year of study and the type of high school that participants graduated from. The results are given in Table 6 and Table 7.

Table 6. Mann-Whitney U Test Results for the Gender Variable in Pre-Service Teachers’ Attitudes towards Laboratory Skills

<table>
<thead>
<tr>
<th>Variable</th>
<th>ASLS score distributions (overall scale)</th>
<th>N</th>
<th>Rank average</th>
<th>Rank sum</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>179</td>
<td>97.91</td>
<td>17525.50</td>
<td>1415.50</td>
<td>.015*</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>23</td>
<td>129.46</td>
<td>2977.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

When Table 6 is examined, it is determined that the candidates’ attitudes towards laboratory skills differed significantly in terms of gender (U=1415.500, p<.05). Considering the average rank, it is seen that the attitudes of male candidates were more positive than those of female candidates.

Table 7. One-way ANOVA Results of Pre-Service Teachers’ Attitudes towards Laboratory Skills for the Variables of Year of Study and the Type of High School That They Graduated From

<table>
<thead>
<tr>
<th>Variables</th>
<th>ASLS score distributions (overall scale)</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>71</td>
<td>3.79</td>
<td>.401</td>
<td></td>
<td>.059</td>
<td>.049*</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>78</td>
<td>3.77</td>
<td>.371</td>
<td>199</td>
<td>.196</td>
<td>.822</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>53</td>
<td>3.81</td>
<td>.439</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatolian</td>
<td></td>
<td>130</td>
<td>3.80</td>
<td>.399</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td>16</td>
<td>3.72</td>
<td>.380</td>
<td>198</td>
<td>.168</td>
<td>.918</td>
</tr>
<tr>
<td>General</td>
<td></td>
<td>11</td>
<td>3.80</td>
<td>.515</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>45</td>
<td>3.78</td>
<td>.386</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the average scores of the overall ASLS are examined in terms of year of study and high school type in Table 7, it is determined that the scores show close distribution and there is no statistically significant difference. Furthermore, scores fall within the range of “agree.”

3. Do pre-service teachers’ levels of chemistry laboratory anxiety differ significantly in terms of gender, year of study, or the type of high school that they graduated from?

For pre-service teachers’ chemistry laboratory anxiety scores, the independent groups t-test was used to determine significance in terms of gender, while one-way ANOVA was used in comparisons regarding significance in terms of year of study and type of high school. Results are given in Table 8 and Table 9.

Table 8. Independent Groups T-Test Results for the Gender Variable in Pre-Service Teachers’ Chemistry Laboratory Anxiety Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>CLAS score distributions (overall scale)</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>Effect (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>179</td>
<td>2.25</td>
<td>.543</td>
<td>200</td>
<td>.059</td>
<td>.049*</td>
<td>0.44</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>23</td>
<td>2.01</td>
<td>.541</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 8, when the average CLAS scores (overall scale) are analyzed in terms of gender, it is seen that the scores of female pre-service teachers are X (female)=2.25 and the scores of male pre-service teachers are X (male)=2.01. It was determined that the score ranges of the candidates were at the level of “disagree.” It was also determined that the participants’ score ranges do not agree in terms...
of gender. There is a statistically significant difference between female and male participants and this difference is in favor of male participants. In line with these findings, it can be said that male pre-service teachers’ anxieties about chemistry laboratories are lower than those of female pre-service teachers. In addition, it can be said that the significant difference between the average anxiety scores of male and female participants about the laboratory has a moderate effect (d=0.44).

Table 9. One-way ANOVA Results for Pre-Service Teachers’ Chemistry Laboratory Anxiety Scores For the Variables of Year of Study and Type of High School That They Graduated From

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>71</td>
<td>2.23</td>
<td>.549</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>78</td>
<td>2.20</td>
<td>.533</td>
<td>199</td>
<td>.126</td>
<td>.881</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>2.25</td>
<td>.572</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatolian</td>
<td>130</td>
<td>2.22</td>
<td>.525</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>16</td>
<td>2.28</td>
<td>.733</td>
<td>198</td>
<td>.099</td>
<td>.960</td>
</tr>
<tr>
<td>General</td>
<td>11</td>
<td>2.23</td>
<td>.642</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>2.20</td>
<td>.526</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the average CLAS scores (overall scale) are examined in terms of year of study and high school variables in Table 9, it is determined that the scores show a close distribution and there is no statistically significant difference. The ranges of the scores are at the level of “disagree.”

4. Is there a significant relationship between pre-service teachers’ attitudes towards laboratory skills and their levels of anxiety in the chemistry laboratory?

In order to determine whether there is a meaningful relationship between pre-service teachers’ average ASLS and CLAS scores (overall scale), Pearson correlation analysis was performed and the results are given in Table 10.

Table 10. Correlation Values Between Pre-Service Teachers’ Average ASLS and CLAS Scores

<table>
<thead>
<tr>
<th>Variables</th>
<th>ASLS</th>
<th>CLAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASLS</td>
<td>Pearson correlation (r)</td>
<td>- .580</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) (p)</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>202</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables</th>
<th>ASLS</th>
<th>CLAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS</td>
<td>Pearson correlation (r)</td>
<td>- .580</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) (p)</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>202</td>
</tr>
</tbody>
</table>

**p<.001, N: Number of students

The correlation coefficient (r), which is used to determine the amount of relationship between two variables is defined to be of high level if it is between .70-1.00; medium level if it is between .70-.30 and low level if it is between .30-.00 (Büyüköztürk et al., 2017, p. 87). When Table 10 is examined, a moderate, negatively significant correlation (r=-.580, p<.001) is seen between the candidates’ average ASLS and CLAS scores. This negative relationship between the variables indicates that as the attitudes towards laboratory skills become more positive/more negative, anxieties about the chemistry laboratory decrease/increase. This confirms the expected results.

**DISCUSSION**

In this study, the attitudes towards laboratory skills and chemistry laboratory anxieties of teacher candidates studying in the Science Education Department were determined and examined in terms of gender, year of study, and the type of high school that the participants graduated from.

When the findings of the study regarding the scores for attitudes towards laboratory skills were examined, it was determined that the pre-service teachers’ attitudes towards laboratory skills in
terms of the 1st and 3rd factors of the scale and the average scores of the overall scale were in the range of “agree”. On the other hand, it was determined that the mean scores for the 4th factor were in the “indecisive” range. The mean scores of the 2nd factor (X = 4.20), although they were in the “agree” range, showed a tendency towards the “strongly agree” interval.

These results show that teacher candidates’ attitudes towards laboratory skills are generally positive. This finding is similar to those of other studies in the literature (Dilber, Sönmez, Doğan & Sezek, 2006; Henderleiter & Pringle, 1999; Karatay, Doğan & Şahin, 2014). In studies conducted according to experimental designs on the scores for the laboratory skills attitudes of pre-service teachers in different departments of universities, the results are also consistent with our results (Alkan & Erdem, 2013; Bilen-Kaya, 2012). In line with the results of this study, it can be said that teacher candidates are generally positive towards laboratory activities and related situations and they are aware of their goals and needs. With these results, it is noteworthy that the candidates were hesitant about feeling ready for laboratory activities. In this factor, there are items concerning the knowledge of chemical substances and their dangerous effects during the individual studies of teacher candidates. These items also contain their sufficiency of knowledge on identifying chemical substances and necessary manual skills of realizing experiments (Alkan & Erdem, 2012). The psychological perceptions that individuals create in their minds about actions or situations can be defined as feeling ready for a task. This shapes the behaviors related to the work to be done, causing the individual to act accordingly. When this situation is generalized to the laboratory environment, it is seen that teacher candidates can easily apply the knowledge and skills that they will obtain from all experiences related to the laboratory in other lessons. In short, this can be called the readiness of individuals for laboratory activities. Laboratory studies are usually carried out in groups. It can be said that factors such as not making an equal distribution of tasks during group work, undertaking the work with just one person, and lack of communication between groups may be effective in preventing development in this factor. Indeed, Reynders, Suh, Cole and Sansom (2019) found that teamwork and communication are the most common skills used as evidence for behavioral change. According to these researchers, teamwork and process management skills have a role in planning and conducting experiments. If team roles are to be required in the lab environment in which a group will work, the roles should be clearly defined in terms of the specific tasks to be performed (Ott, Kephart, Stolle-McAllister & LaCourse, 2018). For this reason, it is important to follow individuals closely during such applications and to ensure their equal participation in the process. In short, their learning should be followed. This may contribute to the reduction of negative effects on the 4th factor. However, individuals should also have considerable experience in matters such as the use of chemicals and the selection of appropriate chemicals for experiments. In order to turn this skill into a positive benefit, environments that encourage individual studies can be created, information about laboratory applications can be given both in theory and practice, and it can be ensured that students experience the experiments to be done beforehand. As Alkan (2012) stated, university students manage their activities in the process of conducting an experiment themselves, which results in having the necessary equipment for future studies and feeling ready in this regard.

When the findings regarding the chemistry laboratory anxiety scores were examined in this study, it was found that the pre-service teachers’ average scores for all factors and the overall scale were in the “disagree” range for chemistry laboratory anxieties. These results show that the pre-service teachers’ anxieties about the chemistry laboratory are generally low. It can be said that the situations that these teacher candidates generally encounter in the chemistry laboratory do not cause much anxiety for them, and they have developed some strategies in terms of overcoming difficulties.

It was furthermore determined that the candidates responded in the “disagree” range in terms of using laboratory tools and chemicals, working with other students, collecting data, and using laboratory time. It is important to know the emotional components of learning and performance in the laboratory environment, one of which is anxiety. Reducing the anxieties that may arise in laboratory environments can improve complex laboratory problem-solving skills (Bowen, 1999). Anxiety is an affective state that shows the person’s discomfort from the situation that he or she is in. The chemistry lab offers opportunities to learn skills beyond specific chemistry domain knowledge, such as how to
use scientific tools appropriately, how to collect and analyze data, and how to work in a group (Reynders et al., 2019). It is common for students to feel anxious about what needs to be done in such a setting, and it is important for them to take steps that will support their cognitive and psychomotor skills, to develop a sense of value in their work, and to do their work willingly. When individuals value or enjoy something, their attitude towards it improves, and this, of course, contributes to the development of other skills. It is a natural result that their worries decrease with improved attitude. The results of this study support these explanations. According to Kaya and Çetin (2012), students should not only be supported in designing experiments and making observations in laboratory environments, but also in developing a more positive attitude and decreasing their anxiety.

In the literature, it is seen that studies conducted with teacher candidates on this subject have involved experimental designs (Alkan, 2012; Alkan & Koçak, 2015; Can, 2013; Erçan, 2014; Eröktener, 2010; Güven, Çam & Sülün, 2015; Seçkin & Yılmaz, 2014; Ural, 2016) and have also been performed according to relational/general survey models (Anılan, Görgülü & Balbağ, 2009; Kaya & Çetin, 2012; Kurbanoğlu & Akin, 2010; Rummey, Spagnoli & Clemons, 2017; Sharpe, 2012; VeyISOglo, 2013). In studies in the literature, the relationship between chemistry laboratory anxiety behaviors and other behavioral dimensions such as self-efficacy, attitude, and achievement was investigated. Studies showed that individuals who have positive feelings about the laboratory have low laboratory anxiety. The reasons for this are the increase in the experience that they gain during laboratory courses (Eröktener, 2010; Rummey et al., 2017), the negative relationship between self-efficacy and anxiety as stated by Bandura according to social learning theory (Kurbanoğlu & Akin, 2010) and the laboratory applications in which the students participated actively (Ural, 2016). Kurbanoğlu and Akin (2010) stated that self-efficacy has an indirect effect of reducing chemistry laboratory anxiety through attitudes towards chemistry courses. The explanations stated above may similarly explain the results of the present study. Ünal and Kılıç (2016) stated in their study that university students’ anxiety about the use of chemicals in the laboratory was less than that measured for the use of equipment and achievement, evaluation, and sensory dimensions. However, they stated that anxiety about this issue still affected students. As a result, it is important to conduct interventions to reduce chemistry laboratory anxiety and to determine the factors that may cause students’ anxiety in laboratory environments while preparing effective laboratory content (Rummey et al., 2017).

When the results of the teacher candidates’ attitude and anxiety scores in terms of the gender variable are examined, it is seen that the attitudes of the male candidates are better and their anxieties are lower than those of the female candidates. According to the results obtained from both scales, it was determined that there is a statistically significant difference between male and female candidates in favor of male candidates. While there are studies in the literature that are compatible with the present chemistry laboratory anxiety results (Akgün, Gönen & Aydın, 2007; Çakmak & Hevedanlı, 2005) and chemistry course attitude results (Cheung, 2009; Kurbanoğlu, 2014), findings about teacher candidates’ chemistry laboratory anxieties in favor of females (Anılan, Görgülü & Balbağ, 2009) and results that do not differ according to gender (Karatay et al., 2014; Kaya & Çetin, 2012; Kurbanoğlu, 2014; VeyISOglo, 2013) can also be seen.

According to our results, when the variables of anxiety and attitude are evaluated together, it can be said that male teacher candidates’ feelings and thoughts about the chemistry laboratory are more positive than those of female candidates. When this situation is evaluated within the framework of the learning environment of the chemistry laboratory, it can be explained by the fact that males may be better able to control themselves in issues such as the use of equipment, selection of chemicals, and safety. In contrast to our results, it is possible to mention literature results that are more positive about females’ perceptions of the classroom environment in the chemistry lab (Quek, Wong & Fraser, 2002) and science labs in general (Wong & Fraser, 1997). The literature also suggests that females express their self-confidence about techniques and skills in chemistry laboratories more easily and make more positive statements (Henderleiter & Pringle, 1999) compared to males. In light of these results, learning environments, course contents, and students’ prior knowledge and past experiences may guide their feelings and thoughts about the chemistry laboratory and may also cause gender differences. Chemistry laboratory experiments involve the use of chemicals by nature, and sufficient
knowledge of their correct and safe use should be ensured. From this point of view, in order for students to work individually in the laboratory, knowledge about chemical substances, their dangerous effects, the necessary manual skills for using them, and the knowledge of naming substances must have been successfully obtained via prior education. This may contribute to the reduction of gender differences in the chemistry laboratory environment.

On the other hand, when the results of the ASLS were examined in terms of year of study and type of high school, it was found that the scores showed a close distribution and there were no statistically significant differences, with score ranges being at the level of “agree.” It was determined that the overall scores of the CLAS also showed close distribution with no statistically significant differences, and the score ranges were at the level of “disagree.” These results show that pre-service teachers’ attitudes towards laboratory skills and their anxieties about chemistry laboratories are similar in terms of the variables of year of study and their previous type of education level (high school) during their university education. In terms of both variables, it can be said that the candidates have positive attitudes and low anxiety. It is thought that evaluating the attitude and anxiety of teacher candidates in terms of the type of high school that they graduated from can give information about the activities carried out in the chemistry laboratories of different types of high schools in Turkey, as well as the general feelings about the current and future laboratory activities in university education. In the literature, it is seen that the findings of studies examining students’ chemistry laboratory anxiety in terms of year of study (Kaya & Çetin, 2012, VeyISOgLU, 2013) and high school type (VeyISOgLU, 2013) are similar to our results. Within the scope of these findings, it is thought-provoking that there is no significant difference in either sensory state, especially for the high school type variable. Among the types of high schools that provide education at the secondary level in Turkey, science high schools follow a different curriculum than others. According to the Ministry of National Education’s Regulation on Science High Schools (1999), “In science high schools, lesson schedules and education programs approved by the Ministry are applied. In science programs, emphasis is placed on laboratory activities carried out in the chemistry laboratories of different types of high schools in Turkey.”

In addition, science teaching programs consist of very rich instructional program materials such as detailed teachers’ guides, supplementary publications, instructive films, specially prepared laboratory tools, student experiment guides and auxiliary books, tests, and other assessment tools. Science lessons are mostly taught by experimental methods (Turgut, 1990). From this point of view, it is expected that graduates of science high schools will have good knowledge and skills thanks to laboratory lessons. However, GünbAYı, YücedAĞ and EmiR YüceL (2015), among authors who have conducted relevant studies in recent years, found that science high school students were not sufficiently prepared to participate in scientific activities and that they complained about not using laboratories. One of the major problems of science high schools has been stated as moving away from an understanding of education that is based on research and experimentation and that produces science. On the other hand, it is possible to note study findings in which graduates of science high schools have more positive attitudes towards chemistry lessons and lower anxiety towards the chemistry laboratory compared to graduates of other high school types (KurbANOgLU, 2014).

A moderate, negatively significant correlation (r = -.580, p < .001) was found between these pre-service teachers’ mean ASLS and CLAS scores. The negative relationship between these variables was an expected result. In the literature, there are studies investigating the relationship between chemistry laboratory anxiety and attitudes towards chemistry lessons (ErcAN, 2014; KurbANOgLU & AkIN, 2010; Kurbanoglu, 2014). On the other hand, there are limited studies on attitudes towards laboratory skills and anxiety in the chemistry laboratory, which were examined in the present work (Alkan, 2012; Alkan & Erdem, 2013). The results of those studies are in line with our own results. However, a negative relationship was found in studies examining the attitude towards chemistry laboratories and chemistry laboratory anxiety states (Ural, 2016; VeyISOgLU, 2013). Laboratories are places where theoretical knowledge learned in a course is applied in practice. It can be said that in terms of development and follow-up of knowledge and skills, the laboratory and theoretical courses are related. In line with these explanations, it is thought that students can reflect their attitudes towards chemistry courses in their attitudes towards laboratory skills. In this context, when the relevant
literature results are examined, the existence of a negatively significant relationship between the students’ scores for chemistry laboratory anxiety and attitude towards chemistry courses can be considered compatible with our results.

In conclusion, in order for students to learn chemistry topics permanently, it is important that subjects be supported by related experiments and that students gain first-hand experience. Chemistry is a discipline that requires students to gain knowledge and skills related to the subjects, as it is based on observation and experimentation and it activates all senses. Especially in learning environments where experiment support is provided, comprehension will be facilitated and thus the enthusiasm and interest in learning will increase (Ayrancı, 1991). Laboratories should be enriched with equipment of adequate numbers and quality, and attention should be paid to regulations that take into account environments that may cause anxiety among students (Ünal & Kılıç, 2016).

CONCLUSION

As a result of the research, it was determined that pre-service teachers’ attitudes towards laboratory skills were generally scored as “agree” and their chemistry laboratory anxieties were generally scored as “disagree” in terms of average scores for the overall scales. Laboratory activities are organized in order to reach science learning outcomes. It is of utmost importance to recognize that affective variables, such as anxiety, affect learning and performance in laboratory situations (Bowen, 1999). When the laboratory is considered as a complement to science teaching, it is also necessary to determine the laboratory anxiety of the students. When a student who is not worried about science courses enters the laboratory environment, he/she may develop anxiety by the influence of different stimuli (Azizoğlu & Uzuntiryaki, 2006). Knowing the size and the origin of the anxiety will be instrumental in directing the students to the laboratory. For this reason, the identification of chemistry laboratory anxiety of students is gaining importance.

Attitude is very important among the factors that affect the knowledge and skills of students at all educational levels (Bennett, Green, Rollnick & White, 2000). Attitude is an acquired internal condition that affects a person's choice of individual activities against events and various situations (Senemoğlu, 2000). As a result of the research, a moderate, negatively significant correlation was found between the average attitude and anxiety scores of these teacher candidates. For this reason, developing positive attitudes towards learning environment and decreasing anxiety are important subjects.

RECOMMENDATIONS

In line with the results obtained from this study, the following recommendations may be made:

• By designing an experimental research model, pre-service teachers’ attitudes towards laboratory skills and chemistry laboratory anxieties can be analyzed comparatively.

• By collecting information about other variables that affect attitude and anxiety variables, the relationship among them can be investigated or their effects on each other can be examined.

• The variables of attitude and anxiety towards the chemistry laboratory skills of students in different departments of universities with the same content of chemistry laboratory courses can be analyzed comparatively.

• By designing a qualitative research approach, in-depth information about teacher candidates’ attitudes towards laboratory skills and chemistry laboratory anxieties can be obtained.
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The Effect of Story Wheel Method on Creative Writing Skills, Story Elements and Word Numbers

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Abstract

The purpose of this research is to examine the effect of story wheel method on creative writing skills, story elements information and word number. The research was designed as an experimental model. It consisted of seven weeks, including pre and post tests. The research group consisted of 13 third grade students attending at a school in Siirt during the 2019-2020 academic year. The data collected using a story wheel material which was developed by researchers and Creative Writing Rubric (Ozturk, 2007). In the study, at the stage of obtaining the pre-test data, the students were asked to write a story according to their wishes and the number of words they used in this story, the significance level of the texts and which story elements they included were noted. During the post-test process, students were asked to write a story according to their wishes and the same procedures were carried out at this stage. Paired sample t-test was conducted in SPSS to investigate the relationship between story wheel method and creative writing skills. Descriptive statistics were used to analyze the data on story elements and word numbers. The findings show that story wheel method has a positive effect on students’ creative writing skills, story elements information and word numbers.

Keywords: Story Wheel, Creative Writing Skills, Story Elements

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INTRODUCTION

Writing is one of the most precious parts of a language for enabling students to express their ideas and feelings freely. It is considered to be a complex and lengthy process that involves writing, planning, reviewing, and reassessing, a skill that contribute to individuals in all kinds of academic activities in order to explain ideas and bring them together by forming a meaningful sentence appropriately (Arıcı ve Uğan, 2013; Bala, 2017; Richards and Schmidt, 2002). The reasons why writing is a skill gained over such a long period of time is that it requires knowledge, accumulation, equipment and experience (Özkan, 2016).

The development of writing skills gives the individual many advantages in his or her life. Some of these advantages are development of memory and making information more permanent, ability to express yourself comfortably, to encourage the individual to communicate, to develop thinking skills and to gain the ability to present logical and convincing arguments (Akbayır, 2011; Chapel, 2011; Akt. Klimova, 2014).

Pawliczak (2015) states that creative writing practices are the most effective way to develop writing skills. Creative writing skill is described as a skill that offers students the opportunity to understand and explore the value and functions of writing and contributes to the development of students’ reading and writing skills (Essex, 1996; Shanahan, 2006; Shatil, Share ve Levin, 2000; Tompkins, 1982; Akt. Barbot, Tan, Randi, Donato ve Grigorenko, 2012). Creative writing skill is an accomplishment which is outside of the generally accepted values by most of the people, it is rare and beyond the cliche and it is only accomplished by those who come up with different ideas by using their imagination (Küçük, 2007). Although creative writing is a skill specific to the individual, it is limited for individuals who do not have this skill because it is a skill that requires being a good reader. Therefore, it is necessary to ensure that individuals think differently in order to develop creative writing skills. In addition, they should be encouraged to write unique texts and develop problem-solving skills on topics they have not encountered before, and they should be encouraged to read on different subjects to develop their creative writing skills (Diakidoy ve Kanari, 1999; Winterson, 2012; Akt. Akkaya, 2014). It has been observed that individuals with advanced creative writing skills have a higher level of language acquisitions such as grammar and vocabulary compared to other individuals (Smith, 2013). The vocabulary possessed by individuals can be defined as knowing the meanings of the written and oral words. This definition implies the conceptual knowledge of the word beyond the simple definitions of words in the dictionary (Snow, Griffin ve Burns, 2005). Knowing more words allows us to understand what we read and listen better. It also enables us to express ourselves better in speaking and writing (Heng, 2011). When some studies in different regions are examined, it has been observed that the narrative and informative texts written by individuals with sufficient vocabulary in the 5th, 8th and 11th grades are higher in quality (Grobe, 1981; Akt. Olinghouse ve Wilson, 2013). In addition, Olinghouse and Leaird (2009) stated in their study that vocabulary diversity has an important role on the meaningful story writing skill at the second and fourth grade levels. Moreover, Karakoç and Köse (2017) state that vocabulary plays a key role in ensuring active use of language in writing.

When the relevant literature was examined, it was observed that individuals with creative writing skills also have skills such as other writing skills, the ability to have sufficient vocabulary and writing stories of higher quality in terms of meaning. The aim of this study is to determine whether the story wheel developed by the researchers has an increase in the creative writing skills of elementary school 3rd grade students, their use of story elements and the number of words they use while writing the story.
METHODOLOGY

Research Model

This research in which the effect of the story wheel method on understanding the elements of a story and creative writing skill was studied was designed using a pre-test and post-test experimental design without control group as a quantitative research. In this design, the effectiveness of the experimental intervention made is tested with a single group. The measurements for the dependent variable of the participants of research are tested before and after the application as pre-test and post-test by using the same measuring device with the same participants (Büyüköztürk, Çakmak, Akgün, Karadeniz ve Demirel, 2012). The experimental process of the research is given below.

Table 1. Experimental process of research

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test</th>
<th>Intervention</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>O1</td>
<td>X</td>
<td>O2</td>
</tr>
<tr>
<td></td>
<td>An original story example</td>
<td>Story examples written in five weeks with the story wheel</td>
<td>An original story example</td>
</tr>
</tbody>
</table>

Population and Sample

The population of the study consists of primary school 3rd grade students studying in the city center of Siirt in the 2019-2020 academic year, and the sample consists of 13 third grade students who were selected among these students using the convenience sampling. Convenience sampling is a sampling method based on choosing a situation that is close to the researcher and easy to access (Yıldırım ve Şimşek, 2013). The reason for using convenience sampling in the research is to quickly access the closest data due to the lockdown.

Data Collection Tools

In the research, the story wheel material which was developed by the researchers and the Creative Writing Rubric developed by Öztürk (2007) were used during the collection of data.

Story Wheel

The story wheel is a tool designed to overlap from small to large, with all the story elements in a story. It was developed by researchers to provide students with comprehensive knowledge of story elements and improve their creative writing skills. In this measuring tool, the innermost circle is the part where the readers determine the main character and supporting characters that they want to include in the story, the second circle is the scene and setting indicating where the story takes place, the third circle is the part how the problem starts, the fourth circle is the part what is the problem in the story, the fifth circle is the way to solve the problem and the sixth circle is the part where the result is included. Two classroom teachers and two experts helped during the development of this wheel. The story wheel is shown in Figure 1.
In this study, "Creative Writing Rubric" developed by Öztürk (2007) was used to evaluate students' creative writing skills. This rubric consists of eight sub-dimensions. These dimensions are originality, fluency of thoughts, flexibility of thoughts, vocabulary, sentence structure, organization and style and grammatical accuracy. In this rubric, each sub-dimension can be scored from one to five points. A student can get between 8 and 40 points from the rubric. This rubric was used to evaluate free writing texts written by students. By using this tool, data about the levels of students' creative writing skills were obtained. In this study, the style and grammatical accuracy dimensions were excluded on the grounds that it is not suitable for the research. For this reason, the lowest score that students can get from the rubric is 6 and the highest score is 30.

Data Analysis

SPSS package program was used for data analysis. The normality test was conducted to determine whether the data obtained in the study were normally distributed. When the number of data is below 30 Shapiro-Wilk test is considered appropriate, and in cases where it is above, Kolmogorov-Smirnov test is appropriate (Ak, 2008; Akt. Can, 2016). The Shapiro-Wilk normality test was used because the sample size included in the study was 13 people. When the findings obtained after the normality test were examined, it was observed that the data showed a normal distribution. Therefore, the pre-test, intervention program process and post-test data obtained from the research were analyzed by dependent variables t-test. In addition, descriptive statistics were used to display data on word numbers and story elements.

Intervention

The story wheels developed by the researchers to be used in this study were delivered to the mentor teacher and the teacher was informed about how to use the wheels. The wheels are designed in such a way that students can spin them. During the application, the students were asked to spin the wheels and create their stories about words that the sign was placed on. The intervention process of the study took seven weeks in total, including pre-test and post-test. The words on the wheels were mixed thoroughly before each application, thus the possibility of students writing stories again with the same words was eliminated. In each practice, the students were given thirty minutes to write the story after the wheels stopped. Story wheel material and some of the application examples are presented below.
In this section, students' knowledge levels about story elements, change in creative writing skills, increase in word numbers and their opinions about the story wheel were included.
Pre-test and Post-test Data for Word Numbers and Story Elements

Before teaching with the story wheel, the students were asked to write a story on any topic they wanted, and these stories were analyzed according to word count and story elements. After the pre-test and post-test applications, the data obtained about the story elements and how many words they wrote in the texts are presented below.

Table 2. Pre-test and post-test data on word numbers

<table>
<thead>
<tr>
<th>Students</th>
<th>Word Numbers pre-test results</th>
<th>Word numbers post-test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>76</td>
<td>117</td>
</tr>
<tr>
<td>S2</td>
<td>35</td>
<td>132</td>
</tr>
<tr>
<td>S3</td>
<td>104</td>
<td>110</td>
</tr>
<tr>
<td>S4</td>
<td>24</td>
<td>186</td>
</tr>
<tr>
<td>S5</td>
<td>71</td>
<td>144</td>
</tr>
<tr>
<td>S6</td>
<td>109</td>
<td>271</td>
</tr>
<tr>
<td>S7</td>
<td>84</td>
<td>332</td>
</tr>
<tr>
<td>S8</td>
<td>56</td>
<td>145</td>
</tr>
<tr>
<td>S9</td>
<td>50</td>
<td>93</td>
</tr>
<tr>
<td>S10</td>
<td>76</td>
<td>60</td>
</tr>
<tr>
<td>S11</td>
<td>23</td>
<td>103</td>
</tr>
<tr>
<td>S12</td>
<td>46</td>
<td>98</td>
</tr>
<tr>
<td>S13</td>
<td>34</td>
<td>51</td>
</tr>
</tbody>
</table>

When the pre-test and post-test data for the number of words obtained from the study were examined, it was seen that the stories written by the students for the pre-test application were between 23 words and 109 words. It was observed that the stories they wrote for the post-test application were between 51 words and 332 words. It was determined that there was only a decrease in the post-test data of S10 among the students. The reason for this decrease is that this student wrote a known story at first in the post-test text. The student, who was warned by the researcher, deleted the text he wrote and started to create an original text. Because the time given to him to write the story was shortened, he could not finish the story and had to deliver a story with few words. When the pre-test and post-test results of other students were examined, it was observed that all students wrote longer stories in the post-test applications.

Table 3. Pre-test and post-test data on story elements

<table>
<thead>
<tr>
<th>Story elements pre-test results</th>
<th>Story elements post-test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters</td>
<td>Settings</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>S1</td>
<td>+</td>
</tr>
<tr>
<td>S2</td>
<td>+</td>
</tr>
<tr>
<td>S3</td>
<td>+</td>
</tr>
<tr>
<td>S4</td>
<td>+</td>
</tr>
<tr>
<td>S5</td>
<td>+</td>
</tr>
<tr>
<td>S6</td>
<td>+</td>
</tr>
<tr>
<td>S7</td>
<td>+</td>
</tr>
<tr>
<td>S8</td>
<td>+</td>
</tr>
<tr>
<td>S9</td>
<td>+</td>
</tr>
</tbody>
</table>
As a result of the pre-test, it was observed that almost all of the students included the characters in their stories, only four students mentioned the setting, three students mentioned the fact what started the problem in their stories, only two students mentioned the ways to solve the existing problem and the number of students who included a conclusion part to the story was four. In the pre-test phase, it was observed that some students could specify only the characters from the story elements. This finding shows that they have some problems with story elements. When the post-test data obtained from the students were examined, it was observed that the majority of the students included almost all story elements.

**Pre-test and Post-test for Creative Writing Skills**

Before teaching with the story wheel, the students were asked to write a story on any topic they wanted, and these stories were analyzed according to Creative Writing Rubric. After the pre-test and post-test applications, the data obtained about the creative writing skills are presented below.

**Table 4. Pre-test and post-test resultsof creative writing skills**

<table>
<thead>
<tr>
<th>Students</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>S2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>S3</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>S4</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>S5</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>S6</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>S7</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>S8</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>S9</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>S10</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>S11</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>S12</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>S13</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

When the pre-test results obtained from the students were scored through the creative writing scale, it was observed that the students got very low scores. While only a few students could get 2 points in some sub-dimensions, all students got 1 point in the originality dimension of the ideas. When the post-test data were examined, it was observed that the students improved, and only one student got the same score as the pre-test score. To determine whether these data show a significant difference, dependent variables t-test was conducted. The results of this test are given in Table 5.
Table 5. Creative writing skills t-test results

<table>
<thead>
<tr>
<th>Creative writing skills</th>
<th>N</th>
<th>X</th>
<th>S</th>
<th>df</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>13</td>
<td>6.76</td>
<td>1.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>13</td>
<td>11</td>
<td>4.1</td>
<td>12</td>
<td>-3.85</td>
<td>0.002</td>
</tr>
</tbody>
</table>

As a result of the analysis, it was observed that the story wheel method provides a significant increase in students' creative writing skills, \( t(12) = -3.85, p<.05 \). While the creative writing average score of the students was \( X = 6.76 \) before the research, the average score obtained after the applications with the story wheel increased to \( X = 11 \).

Students’ Views on the Story Wheel

Some of the student views on the story wheel are presented below.

S1. Writing stories using story wheels was better. Because it was a lot of fun. It would be nice if there were more characters in the wheel

S2. Story wheels have developed our imagination. So we wrote better stories. It was a good activity for us.

S4. That was so fun. It improved our story writing skills. It would be nice if there were more characters in the wheel. It would be better if the wheel was bigger.

S6. It improved my writing skill. I wish the story wheel was bigger. I wish we could write more stories with story wheel.

S7. It would be nice if there were more different places / settings. I improved my reading and writing skills with story wheel.

S9. Writing stories with story wheel was a little tiring for me. It was a little difficult to write new stories.

S10. I improved my writing with story wheel. We could decide together how it would be shaped.

S11. I wish we could have made the story wheel ourselves. So the story wheels could be the size we wanted.

CONCLUSION, DISCUSSION AND SUGGESTIONS

This research was conducted to help primary school 3rd grade students to develop their creative writing skills, to gain familiarity with story elements and to increase the number of words they include in their stories. When the results of the study were examined, it was observed that the story wheel method improved creative writing skills. It is necessary to ensure that individuals think differently in order to develop creative writing skills. In addition, they should be encouraged to write unique texts and develop problem-solving skills on topics they have not encountered before, and they should be encouraged to read on different subjects to develop their creative writing skills (Diakidoy ve Kanari, 1999; Winterson, 2012; Akt. Akkaya, 2014). The story wheel which was developed in this study prevented having a rotary structure in itself and thus students were prevented from writing stories with words that exist in their minds or words that they are familiar with. The words on the wheel are in fixed position. First, the students were asked to spin the wheel. After the wheel stopped, they were asked to create a meaningful story using the words in front of them. In this way, students were encouraged to write unique texts that enable them to think differently on topics other than their interests. In addition, students stated that writing activities became much more enjoyable. Mahendra and Rosa (2014) state that the story wheel provides a fun environment for students who are reluctant
to write because of its fun nature. Also, the story wheel helps students to be more creative in combining and developing stories in written form. This finding support the results of the research.

As a result of the research, it was observed that the story wheels which were given to the students during the application process, raise the students' awareness of paying attention to the story elements and increase the number of words in their stories. Mahendra and Rosa (2014) also state that the story wheel provides them with many interesting story element options.

The fact that story wheel applications contributed to students' creative writing skills indirectly had a positive effect on their vocabulary. Smith (2013) observed that individuals with advanced creative writing skills have higher language acquisitions such as grammar and vocabulary than other individuals. Craik and Lockhart (1972) states that creative writing is effective at all levels of language development, especially grammar, vocabulary, phonology, and speech (Akt. Tok ve Kandemir, 2014). In the study, the development of students' vocabulary has increased the number of words in the stories they wrote. Knowing more words allows us to understand what we read and listen better. It also enables us to express ourselves better in speaking and writing (Heng, 2011). Olinghouse and Leaird (2009) stated that having a rich vocabulary has a significant effect on meaningful and creative story writing skill at the second and fourth grade levels. If a story is long, this does not mean that the story is rich in meaning. However, when the results are examined, it can be said that stories written using more words are also meaningful stories, as the students' vocabulary increased and their creative writing skills improved. As a result, the story wheel method has a positive effect on creative writing skills and also it can be said the story wheel method has an effect on word numbers and story elements information indirectly. So this method can be used to improve students' creative writing skills.

Since this research was carried out during the pandemic process, it was not possible to increase the sample size. More useful research can be provided by using larger sample groups and improved story wheels.

Keywords that are considered to be important in these courses can be determined among the acquisitions determined for courses such as mathematics, science or social studies, and story wheels can be created about these words. In this way, students can improve their vocabulary for some important concepts in these lessons. In addition, it is thought that these lessons will become more fun for students with the story wheel method.

REFERENCES


Perceptions and Beliefs of the Teachers of Kindergarten and the First Primary Stage for Employing Digital Technologies in the Education Process in Jordan

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Abstract

This study aims to explore the reality of employing digital technologies in the education of kindergarten children and the primary stage. It also aims to determine the views and perceptions of children towards these technologies and how to deal with them. The study also aims to determine the perceptions of kindergarten teachers and the primary stage towards employing digital technologies in children's education. This study included two approaches: the qualitative to reveal the reality and perceptions of employing digital technologies through conducting interviews and recording observations, and the second one quantitative by preparing a scale to measure teachers' perceptions towards employing digital technologies in children's education (PBDT), which consists of (62) paragraphs measuring (6) Various aspects. The sample consists of (64) children from kindergarten and primary stage, from both the government and private sectors. As for the sample of teachers, it reached (99) teachers from kindergarten and primary stage teachers from both the government and private sectors. The study concludes that the majority of children use digital technologies, and this use is done under the supervision of parents; (YouTube) is the most used application, electronic games are the most topics that employ digital technologies, then religious studies and music. The study also shows that children prefer traditional games, story-telling from a mother or teacher, and studying through books instead of using digital technologies. The study also shows that teachers' perceptions of employing digital technologies are moderate. Besides, the number of years of experience, the teaching stage, and the level of knowledge of digital technologies are all factors that do not affect teachers' perceptions towards employing digital technologies.

Keywords: Perceptions, Teacher Beliefs, Kindergarten, Primary Stage, Digital Technologies

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INTRODUCTION

Human beings are in rapid evolution and change. The rhythm of our current lives is so fast that we should react quickly to these changes. With the use of computers, communication technology, and digital technology, we have reached a point of no return, meaning that we are moving rapidly and continuously to further development, employment, and use of this technology and can no longer go backward. This situation places a heavy burden on education and educators in dealing with the issues of teaching and learning in an era of rapid change, many developments, innovations. The goals and means of education have changed, and the goals of education have evolved. Access to knowledge is no longer a goal sought by the teacher and the student due to the smooth and easy access provided by technology. More critical and influential goals have emerged on the horizon.

The learner today needs more than just to acquire knowledge, he needs to manage and process this knowledge, to scrutinize it, and to judge its validity and credibility. The learner needs ways to access information and to acquire skills in dealing with modern technological means. He also needs a set of skills that enable him to play this role, such as thinking skill/decision making/problem solving/self-learning/continuous learning (Aljaberi, 2010). The shift to digital technology and the rapid spread of non-global ICT change our daily lives and behaviors in different age groups. It also represented a change in childhood. As children's interests, games, and ways of receiving information change, digital technology has provided them with greater access to information, useful play, and hobbies and skills development (UNICEF, 2017). In the twenty-first century, linking the employment and use of digital technologies and changing the performance or behavior of children has become commonplace for parents or teachers. They are often linking these technologies with the activities of children in leisure (Owate, Afolabi, & Akanwa, 2017). Digital technologies have invaded our children's lives, learning them under the weight of the digital world, and the acceleration that it imposes on them so that psychologists have recently called this age the digital childhood. Children spend too much time on smartphones and tablets, also, so they become addicted. (Aljaberi, 2012; Prensky, 2001). (Papadakis, Kalogiannakis and Zaranis, 2016) emphasize that many studies have supported digital technologies and their role in creating a useful, attractive, and innovative learning environment for children. Their study highlights the positive relationship between the use of digital technologies and the development of mathematical thinking in early childhood. There are also several studies on the impact of children's use of digital technologies that have shown that there are many advantages and benefits for children who trained to use these technologies, including by enhancing their knowledge and social capabilities. Other studies have shown that there are many disadvantages to children's growth if they be addicted, (Aljaberi, 2012; Prensky, 2001). (Papadakis, Kalogiannakis and Zaranis, 2016) emphasize that many studies have supported digital technologies and their role in creating a useful, attractive, and innovative learning environment for children. Their study highlights the positive relationship between the use of digital technologies and the development of mathematical thinking in early childhood. There are also several studies on the impact of children's use of digital technologies that have shown that there are many advantages and benefits for children who trained to use these technologies, including by enhancing their knowledge and social capabilities. Other studies have shown that there are many disadvantages to children's growth if they become accustomed to the use of technology, including the difficulty of focusing while studying. Digital technologies have had a significant impact on children. Their children are fascinated by these technologies, unable to live without them, and today's children have difficulty imagining a beautiful life without such elements as video games, the Internet, the smartphone, and iodine devices. (Aldhafeeri, Palaiologon, and Folorunsho, 2016) argue that early-childhood and education scientists are still discussing the introduction of digital technologies in the education process, particularly in the area of childhood education that suits this stage and where game-based education through digital technology is still in its beginning. Whether it is good or bad, society must adapt to the fact that these technologies will continue to evolve, and are essential to children's and society's lives. Innovation will not stop at a specific limit. (Nsr, 2018) emphasizes the active role of communication and information technology in the learning process and the significant impact on the content and design of the curricula and educational activities that depend on the employment of computers, the Internet such as drawing programs, listening to music, listening to stories and re-recording them, and employing Computer networks, electronic games, mobile phones, and educational software. (Mahmoud, 2018) asserts that children under two and a half years can learn more from live interaction than from TV or video. The use of some smartphone applications and software such as spoken eBooks has contributed to the child’s learning from 2 1/2 to 5 years of speaking correctly and with a good reason. Computer technology has shown to help develop the classroom learning process as it makes the learning process more participatory by providing new ways to explain complex concepts and critical thinking. (Zabatiero, Strakar, Mantilla, Edward & Danby, 2018) emphasize that the use of digital technologies in the childhood learning process affects the health and social and
emotional development. (Manessis, 2013) shows that children learn by exploring the world around them by carrying out many activities designed as a toy.

The process of educating children at this stage requires ways to integrate children into play and action-based learning and focus on the use of senses, activity, and pleasure. This reality can be addressed by introducing digital technologies into the environment in which children learn and using them appropriately so that learning becomes fun, useful, and achieves their goals (Wardle, 2000). (Coue & Chen, 2010) assert that children can use the drawing program by selecting the pen from the toolbox, free drawing, and choosing the topological shapes such as circle, line, square, etc. in building a particular picture. Also, choosing letters, synthesizing words, changing colors, and combining them with the ability to cancel any part easily; this opens up new horizons in learning and integrate children into learning teaching process.

Among the applications mentioned by (Veenstra, Van Geert, & Van der Meulen, 2010) for digital techniques is teaching children to listen to stories and re-record them where the child can make particular drawings and scribbles that represent a specific fact or story and then re-hear it. So this enables the teacher to communicate with the child to explain what he has done, record this novel, know the child's way of thinking and desires, support his abilities and push him to create, develop his verbal and non-verbal skills. (Berson and Berson, 2010) emphasize that children working with digital technologies enhances their mental abilities and their creativity, allows the world to expand around them, and enables them to enter social environments beyond time and space. On the other hand, it emphasizes that the consequences and potential effects of technological developments on children cannot be overlooked. It is necessary to evaluate the role of these technologies as an educational tool and focus on the educational effects and ethical issues related to their use. Numerous research undertaken in the past few years recommends the employment and use of digital technologies as a supporting tool in early childhood education (Papadakis, Kalogiannakis and Zaranis, 2016; Nikolopoulos & Glamaas, 2015). On the other hand, (Wardle, 2008) mentions that If digital technologies are employed indefinitely and thoughtfully, it may affect the developmental needs of children. These needs are not appropriate for these technologies, such as physical games, exploring and adapting to the surrounding environment and society, discovering nature, art, dance, music, specific social skills, moral values, and other things are ignored.

(Manessis, 2013) stresses that the attitudes, perceptions, beliefs, and feelings toward the importance of digital toys in kindergartens are considered as indicators for inserting and integrating digital games into kindergartens and determing if it is successful or not. (Mercer, 2014) stressed the importance of supporting teachers to have a clear idea of how, why, and what technology can be used in the learning environment, and stressed the criteria and recommendations for regulating the process of employing these techniques and stressed that the lower the use in stage 2.5, the better it is for the child. (Manessis, 2013) also emphasizes teachers' beliefs about computer technology and their role in learning and developing early childhood children, and that children without the support of their teachers will not be able to learn and grow on their own, even if they employ these techniques themselves. He also stressed the importance of good digital gaming design in improving children's learning and cognitive development. The spread of technology in recent years has led to the emergence of a new generation of stories, digital stories, which combine computer-based technologies with narrative art. Digital stories have proved useful in the educational process, and are suitable for visual and auditory learners, adding fun and excitement and growing the ability to solve problems. It is ideal for different age groups and can be used in most fields of study (Rahimi & Yadollahi, 2017). (Blackwell, Lauricella & Wardella, 2014) believe that supporting the use of digital technology, learning experiences, and teacher-qualification technology are all requirements for having the teacher's self-confidence in the application and employment of digital technologies. And therefore, there is a definite trend to engage them in the learning process actively. (Niederhauser & Stoddart, 2001) emphasize that digital technologies cannot change educational practices unless teachers adopt them, and through the strength of the influence of teachers can influence students' learning. (Mantilla & Edwards, 2019) reported that digital technologies are an essential part of children's lives today and that determining how digital technologies are used and employed by children is very important for a
healthy life, to stay safe, to learn, to communicate, and to live. There is an ongoing debate about how and how? digital technologies can be introduced into children's lives, especially after these technologies have spread and entered their lives (Verenikina and Kervin, 2011). (Mahmoud, 2018) asserts the negative use of mobile for children is pre-school and its bad effect on their social and emotional development. It affects their psychological interaction with their peers, as well as distracting the child's attention and leading to their addiction, isolation from the real and social world surrounding them, and their integration into a virtual fantasy world. (Mahmoud, 2018) confirms that parents' addiction to technology contributes to making their children addicted to technology. On the other hand, (Al-Jabari, 2011) also stressed that moderate e-gaming has positive effects on children's higher-order thinking skills as well as the development of kinesthetic skills between hands and eye. It also raises motivation, learns profit, and wins values, accepts loss and perseverance. There is an ongoing debate about how digital technologies can be introduced into children's lives, especially after these technologies have spread and entered their lives (Verenikina and Kervin, 2011). We should not forget and stress the teacher's role in making digital technology work in education, as (Reeves, Gunter, and Lacey, 2017) emphasize. However, mobile, internet and other digital technologies contribute to student learning and addressing educational inequality, provided that teachers spend more time planning how to integrate these technologies, emphasize children's content, and choose the right application for them. (Josh, Pan, Murakami, and Narayanan, 2010) assert the need for training of early childhood teachers in integrating and using computers in the classroom.

The importance of the study

Young children aged two years and over are now using computers, the Internet, and digital technologies. Since this age range is critical in terms of their social, emotional, cognitive, and physical development, it is essential to ensure that these techniques they use are appropriate for their development and positively affect their growth.

Young children are surrounded by technology in their homes, in their school, and the community around them. Computer and information technology is used in several special applications; it used in the field of discovery, modeling, and forms in the representation of abstract concepts, selection of the appropriate learning style, and the development of the needs, trends, and abilities of children. This study aims to reveal the reality of digital application in kindergartens and the primary stage in Jordan, as well as to reveal perceptions.

Literature review

Studies that research children’s use of digital applications and how to use them

A study by (Sapsaglam, 2018) aims to examine awareness and use of social networks in kindergarten; A sample of 140 children, including 20 children aged 3 and 40 children aged 4 and 80 children aged 5, were selected, interviewed and used cards with images of social networking applications. The study results conclude that the majority of students confirmed their knowledge of networking applications and confirmed their attempt to use them. These apps are from parent phones, and results show YouTube was the most commonly used app, with kids using it to watch cartoon programs. (Kjallander, 2014) however, clarifies that our knowledge of pre-kindergarten children and how they share and interact with digital tablets is low, so his study aims to see how children construct meaning and how they play with different digital applications. The results showed different and varied situations showing how pre-school students are working with educational designs and how they transformed them into learning games.

Studies on the impact of digital technology on achievement and achievement

A study by (Reeves, Gunter, and Lacey, 2017) aims to identify how mobile devices are integrated into kindergartens and their impact on academic learning. The study employed two groups, one of them a non-iPad officer and the other using iPad in their learning – the study concluded that the
phonological warfare and mathematics achievement were better in the group that employed iPad in education. Hence, the study confirmed that integrating mobile devices into teaching certain subjects increases student learning. A study conducted by (Papadakis, Kalogiannakis and Zaranis, 2016) to investigate and compare the impact of the use of computers and tablets on the development of the mathematical efficiency of early childhood children and used that experimental method and selected two groups, which employed computers in one study group. The study concluded that the use of the dashboard contributed significantly to the development of children's mathematical abilities. In a study by (Bassem and Abdul Rahman, 2018) that examined mothers' awareness of the negative effects of using smartphones on children aged 2 to 9 years, the researchers measure the impacts and effects of a smartphone using different aspects such as social, health and behavioral. The results indicated that smartphones had negative effects on social, health, and behavioral issues. A study by (Abdel Al-Najjar, 2014) investigates the effectiveness of an e-learning program in developing computer skills for kindergarten children. The results of the study showed that electronic games are useful in developing computer skills for kindergarten children and that they stimulate and motivate children to learn. Research by (Rahimi & Yadollahi, 2017) looked at the impact of online digital stories on the development of literacy skills for English learners as a foreign language. Forty-two trainees participated in the study, distributed in two groups. The pilot group trained to write using an online platform. The control group trained from the offline content production program. The literacy skills of the two groups evaluated at the end of the experiment and the results of the study revealed that the literacy skills of the group that produced stories with an Internet platform improved compared to the control group that worked with an offline program. A study by (Ibrahim, 2011) aimed to reveal the effectiveness of e-learning games on the acquisition of primary fifth-grade students at the base schools in Khartoum. The researcher has followed the experimental approach. The study tools were an educational program based on games and a pre- and post-student test prepared. The most relevant results of the study showed: Significant differences between the average student scores for the control and experimental groups in the post-test for the experimental group. There are no statistically significant differences between the average student scores for the control and experimental groups in the understanding level.

Studies on parents' and teachers' opinions and perceptions of digital technology employment

In a study by Nikolopoulou & Glaamas, (2015) to investigate the beliefs of child teachers about the employment of ICT in early childhood learning in Greece as a useful tool of education, the results have shown that the fewer years of experience, the more self-efficacy in using the computer. ICT was seen as more than a play tool. It could be used for learning as a model in education and could, therefore, be incorporated into the curriculum and employed in the teacher's teaching practices. A study conducted by (Alhafifeeri, Palaiologon & Folorusho, 2016) examines the views of education teachers in Kuwait toward the use of digital technologies in their lives, and its employment in classroom applications. The sample number reaches (195) teachers. The study concluded that teachers are using digital technologies efficiently in their personal lives. Also, while digital technologies are available in all classes in Kuwait, teachers are still hesitant to incorporate these technologies into their teaching practices. Bentley et al., (2016) confirmed that parents have positive perceptions of digital use by their children. The majority of parents allow their children to use digital technologies for their work to discharge their responsibilities and perform household duties. The study found that most parents have rules and limitations on how their children use the phone. One question frequently asked is about the suitability of using digital technologies by the primary stage and kindergarten children in learning and teaching. Besides, how well teachers understand the role of these technologies in children's learning and education. Several studies have undertaken to answer this question. A study by Manessis, (2013) aimed to investigate student attitudes toward digital games in education. The study concluded that students showed a high degree of self-confidence in the use of digital games in learning. The year of Study factor, the level of day-to-day computer use, previous experience in computer games, and past qualifying courses were among the most important factors that affect the attitudes toward computer technology.
A study by Erdogan, Johnson, Dong & Qiu, (2019) determined parents' opinions, preferences, and beliefs in four countries, the United States, Turkey, China, and Korea, toward using digital technologies and electronic games to educate Kindergarten children between the ages of 4-6 years. The results showed that the parents realized that a great deal of learning attributed to digital games and technologies, provided that they adequately prepared. And the use of these techniques carried out under the supervision of parents and teachers. Van Scoter, J., Ellis, D., & Railsback, J. (2001) confirmed that most studies results show that information technology is not suitable for children up to 3 years of age. Because, this phase, based on life experiences that require family social interaction, as well as the capabilities needed to deal with digital technologies, are weak for children. In practice, computer introduction and generalization technology must begin after the age of three. A study by Blackwell, Lauricella & Wardella, (2014) based on path modeling aimed to investigate the relationship between internal and external factors that affect the application of early childhood digital technologies. The study showed that the children's teachers' attitudes toward the value of technology in helping students learn were significantly affected by the use of technology, followed by confidence and support in the use of these techniques. The results indicated that the more the teacher's experience, the more negative their attitudes are. Ihmeideh & Alkhawaldeh, (2017) study examined the perceptions of kindergarten teachers and parents about the contribution of digital technologies to the development of children's culture in Jordanian education. The results conclude that the use of digital technology had a positive impact on children's culture. Parents' perceptions of digital technologies have also been more positive than teachers' perceptions. A study by Ntuli & Kyei-Blankson, (2010) found that child-teacher is aware of appropriate techniques for children's development and education, but there is a lack and general weakness in integrating this technology and considering it as an integral part of the teaching and learning process. A study by Zaranis & Oikonomis, '2016) identifies factors influencing the educators' attitudes toward the digital technologies that can be used in the process of education. The findings have emphasized the importance of Kindergarten and primary teachers' attitudes toward digital technology as they affect how these technologies are used in the classroom and their impact on children's learning. Ntuli, (2017) emphasizes the importance of communicating with teachers to establish standards for assessing the effectiveness of digital technologies. Therefore, it becomes possible to reflect this on the preparation of early childhood teachers.

A study by Josh, Pan, Murakami, and Narayanan, (2010) examines the beliefs and attitudes of kindergarten teachers toward the role computers play in educating young children. This study was applied in the United States of America and Japan. The study concluded that there is a difference in beliefs and attitudes between American teachers and Japanese teachers; where Americans teachers have more positive attitudes, Japanese teachers, on the other hand, have been more conservative. The teachers' competence with computers is not related to their attitudes and beliefs towards the computer and its role in educating children. There are ongoing discussions and debates about how and when digital technologies can be introduced into children's lives, especially after these technologies have spread and entered their lives (Verenikina and Kervin, 2011).

**METHODOLOGY**

**Study Questions**

1. What is the reality of using and employing digital technologies in schools and kindergartens in Jordan?

2. What are the perceptions and beliefs of kindergarten and the early primary stage teachers toward the role of digital technologies in teaching, learning, and developing children?

3. Do teachers' perceptions and beliefs about the role of digital technologies and their impact on child development vary with the teaching sector (governmental/private) and each of the teachers’ years of experience and their knowledge level of digital applications?
Procedural definitions

Perceptions and beliefs of digital employment in education: Views or perceptions about the impact of digital technology on children's education are measured by teachers’ response to the conceptual and belief scale paragraphs used for this study.

Study Tools

Perceptions and Beliefs of Digital Technology (PBDT)

To measure teachers' perceptions and beliefs regarding the role of digital technologies in the development and learning of children, the researcher designed a scale. The (PBDT) scale consists of (62) items. These items were graded on five-point Likert-scale that measures the role of digital technologies in the following aspects: Physical and health, mental and cognitive, personal and emotional, social, religious value, and esthetic. Besides, the teachers’ attitudes toward applying digital technologies in the education process. The researcher designed the scale items after referring to the literature related to the subject, some paragraphs have a positive direction, and others have a negative trend. The reliability coefficient (Cronbach Alpha) has been calculated using a sample group of 30 teachers. The reliability value for (PBDT) scale was (0.92).

Notes and observations were used, in addition to interviews to reveal the use of digital technologies in kindergartens and primary schools.

Study Design

The study included two quantitative approaches, the first to identify teachers' perceptions and attitudes regarding the role of digital technologies in the development and learning of children, a perception scale was prepared for that. The second is a qualitative approach to determine the reality of using digital applications and technology in the learning process, observation of how digital technologies were employed. Besides, the researcher conducts interviews with children to reveal their perceptions and beliefs about the role of digital technologies in the education process.

Study procedures

Study members selected as an available sample from government and private schools in an area close to the university.

– A scale of teachers' perceptions and beliefs applied to government and private kindergarten teachers.

A scale of teachers' perceptions and beliefs applied to government and private primary stage teachers.

– Positive items of the (PBDT) scale are given the points (5, 4, 3, 2, 1) If the teachers' responses are (I agree strongly, agree, neutral, disagree, disagree strongly). Also, the points (1, 2, 3, 4, 5) were given to negative items of the scale if the teacher's response is opposite to what is described above. The test score range between (62- 310). Also it was converted to percentages. The percent above 73.3% set to represent high perception and positive attitudes. The score between 46.8-73.2 to express neutral or moderate perceptions and attitudes. Finally, percentages below 46.6 represent negative or low perceptions and beliefs. Monitoring the Digital technologies applied in some classrooms and the teacher responses were noted. Interviews with children from Kindergarten and primary stage were conducted. Their answers are written, and the content of these interviews was analyzed.

The study took about two months from the start of the study tools design until the application finished.
Study sample

(99) teachers from kindergartens, primary schools enrolled in this study, those teachers are from the government and private sectors. The number of teachers from government schools is (20) with percent (20.2%). The number of teachers from private schools and kindergartens is (79) with percent (79%). The percentage of teachers with less than three years of teaching experience is (13.1%), (3-5) years of teaching experience (20.2%), 6-10 with percent (32.3%), and more than ten years of experience (34.3%).

However, the level of digital application use is determined by the number of hours the teacher spends in employing digital technologies. If the number of hours is more than (20) hours a week, the average use is high. It is moderate if the average usage is between (10-20) hours a week, but if the number of hours is (less than 10) hours a week, it is considered a low usage level. According to that, the number of teachers using digital technologies and consider their usage as high are (25) teachers with the percent (25.3%). The number of teachers using digital technologies and consider their usage as moderate is (65) with the percent (65.7%). Finally, the number of teachers with a low level of usage or week level is (9) with the percent (9.1%). The number of children participating in the study was (64) from kindergarten and primary schools. The number of children from government kindergartens is (11) reached a percentage of (17.2%). The number of children from the kindergarten stage in the private sector is (12) at a percent of (18.8%). The number of children from the primary stage of the government sector is (7) by (10.9%). The number of children from the primary stage of the private sector is (34) students (53.1%).

RESULTS

Results related to answer the first question- What is the reality of using digital technologies by students at the primary stage and kindergartens, whether governmental or private. (64) Students were interviewed, and student responses were classified into several aspects.

The following observations were recorded in the student interviews:

To answer the question: Do you use digital technologies? When and how often?

Most students answered that parents determine the number of hours their children spend using digital technologies. This determination further increased as the student progresses in the school stage, where parents agree to allow children in kindergarten to use the digital techniques more than children in the primary stage. This is to focus on children fulfilling their duties, achievement, and progress in the study and these basic stage requirements. Also, the primary stage is more important and formal than kindergarten. Besides, the use of digital technologies by children is carried out under the supervision of parents, as most children have pointed out. Parents are the only ones who determine the applications used and time; this is the opinion of children, whether from the government sector or the private sector.

To answer the question: Do you prefer traditional or e-games?

Children have responded that they prefer traditional, peer-based gameplay more than electronic games. They prefer to spend their free time in traditional play, and if parents don’t allow them to leave home to play with peers, and do not have new games at home, they resort to electronic games. The percentage of children who prefer traditional games (53.1%) versus (46.9%) prefer electronic games. Do you prefer learning using books or electronic applications?

Children prefer learning from books and do not prefer learning through digital applications

Would you prefer to listen to stories that are told by electronic applications, by teachers or by mothers?
Children prefer storytelling by teachers and mothers, not by applications available on digital technologies. It is also noted that male students from government schools, if they were directed to digital technology, preferred the digital game. In contrast, female students preferred digital applications to use in language and education.

To answer the question, do you spend your free time playing games?

(29.9%) of the children answered “Yes”. As for the children who answered “sometimes” they reached (29.7%), while the percentage of those who answered “No” was (48.4%)

Children responded to the question, "Do you think it is necessary to learn and employ digital technologies in your learning process"? (78.1%) replied “Yes,” whereas (21.9%) answered “No”.

When asked about the most important digital roles in the education process, students replied that the most important of these roles are searching for information, storing and organizing data, and the ease of communication. As for the existence of regular computer class, the percentage of schools whose programs include a computer class reached (17.2%), compared to (82.8%) of the schools whose schedule does not include a course for computer material.

For quantitative information, students were asked about digital applications that were restricted by interviews, and students responded to these applications. Table 1 showing digital applications and student percentages that answered “yes” or “no” or “sometimes” to the use and employment of these technologies as well as the number of times they used weekly:

<table>
<thead>
<tr>
<th>Application</th>
<th>No</th>
<th>Sometimes</th>
<th>Yes</th>
<th>1-time</th>
<th>2-3</th>
<th>&gt;3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>70.3%</td>
<td>15.6%</td>
<td>14.1%</td>
<td>54.7%</td>
<td>21.9%</td>
<td>23.4%</td>
</tr>
<tr>
<td>Snapchat</td>
<td>75%</td>
<td>4.7%</td>
<td>20.3%</td>
<td>48.4%</td>
<td>34.4%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Instagram</td>
<td>76.6%</td>
<td>10.9%</td>
<td>12.5%</td>
<td>50%</td>
<td>39.1%</td>
<td>10.9%</td>
</tr>
<tr>
<td>What’s up</td>
<td>46.9%</td>
<td>14.1%</td>
<td>39.1%</td>
<td>39.1%</td>
<td>26.6%</td>
<td>34.4%</td>
</tr>
<tr>
<td>Twitters</td>
<td>82.8%</td>
<td>4.7%</td>
<td>12.5%</td>
<td>56.3%</td>
<td>37.5%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Courseware</td>
<td>42.2%</td>
<td>9.4%</td>
<td>48.4%</td>
<td>39.1%</td>
<td>23.4%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Careem program.</td>
<td>71.9%</td>
<td>4.7%</td>
<td>23.4%</td>
<td>53.1%</td>
<td>29.7%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>32.8%</td>
<td>14.1%</td>
<td>53.1%</td>
<td>25%</td>
<td>40.6%</td>
<td>34.4%</td>
</tr>
<tr>
<td>Digital toys</td>
<td>28.1%</td>
<td>6.3%</td>
<td>65.6%</td>
<td>21.9%</td>
<td>20.3%</td>
<td>57.5%</td>
</tr>
<tr>
<td>iPads</td>
<td>35.9%</td>
<td>3.1%</td>
<td>60.9%</td>
<td>31.3%</td>
<td>9.4%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Mobiles</td>
<td>43.8%</td>
<td>21.9%</td>
<td>34.4%</td>
<td>39.1%</td>
<td>14.1%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Smart boards</td>
<td>28.1%</td>
<td>35.9%</td>
<td>35.9%</td>
<td>29.7%</td>
<td>9.4%</td>
<td>60.9%</td>
</tr>
</tbody>
</table>

Results on the most widely used digital applications by children show that YouTube is the most commonly used by all students, followed by Digital Camera, Smart Board, followed by iPad, and then Courseware and Mobiles.

The order by frequency of use of digital applications shows that YouTube gets the first, then Smart Board followed by iPad.

To answer the question: "what are the topics students employ digital technologies on?" the percentage of students' usage was calculated. Table 2 shows these results.

<table>
<thead>
<tr>
<th>Usage</th>
<th>Languages</th>
<th>Mathematics</th>
<th>Science</th>
<th>Music</th>
<th>Religions</th>
<th>Playing</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>46.9%</td>
<td>50%</td>
<td>51.6%</td>
<td>48.4%</td>
<td>46.9%</td>
<td>31.3%</td>
</tr>
<tr>
<td>sometimes</td>
<td>37.5%</td>
<td>7.8%</td>
<td>6.3%</td>
<td>6.3%</td>
<td>6.3%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Yes</td>
<td>15.6%</td>
<td>42.2%</td>
<td>42.2%</td>
<td>45.3%</td>
<td>46.9%</td>
<td>60.9%</td>
</tr>
</tbody>
</table>
The subjects in which digital applications applied were mostly higher are electronic games with the percent (68.7%), followed by learning religion by (53.2%) and then languages by (53.1%). Then comes music learning (51.6%), mathematics, and finally science. These percentages were calculated by adding the percent of the responses, “Yes”, and “sometimes”.

To answer question 2: What are the perceptions and beliefs of kindergarten and first primary teachers toward the role of digital technologies in the education and development of children?

The scale of teachers’ perceptions of employing digital techniques in children's education (PBDT) has been applied. The percentages and means have been calculated on the scale as a whole and its various aspects. Perceptions are classified as low if the average performance percentage on the scale is less than 46.7, and the perception is medium if the percentage is between 46.8-73.2, and classified as high if it is between 73.2-100. Based on this classification, the results indicated that the number of teachers who have low perceptions towards employing digital technologies in teaching children was six teachers with the percentage (6.1%), while the number of those who are classified as moderate reached 75 at (76.8%). The number of teachers whose perceptions were high was 17, with a percentage of (17.2%). Given these findings, we can say that the majority of the teachers were moderate in their perceptions about the use of digital technology.

To find out the teachers perceptions' in the different aspects of the scale, the means and the standard deviations are calculated. Also, the value of (F) for the response of the teachers to the seven aspects of the questionnaires is calculated. Table 3 shows these findings.

| Table 3. means and standard deviations for teachers’ responses to the PBDT scale. |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                | Healthy body    | Mental & cognitive | Personal & emotional | Social | Religious & value | Aesthetic | General Attitudes | Total |
| Mean                           | 73.4            | 70               | 67               | 64.5   | 66.3            | 66.3      | 62.9            | 62.89          |
| S.D                            | 16.8            | 13.2             | 15.8             | 14     | 20              | 18.9      | 9.2             | 9.23           |
| F                              | 4.913           | Sig              | 0.000            |        |                 |           |                 |                 |

It is noted from Table3 that there are statistically significant differences between the different aspects of teachers’ perception toward the use of digital technologies in children's education. To determine these differences, the "Scheffe’s method" for after-effects comparisons is used. Results have shown differences between the physical and social aspects of health and physical aspects. In other words, the use of digital technologies increases children's health culture and awareness and physical growth more than its social aspect.

The results also showed a difference between the health and physical aspect when compared to the general attitudes of employing digital technologies for the benefit of the health and physical aspect. This reflects the perceptions of teachers towards the use of digital technologies in learning and education, and it is reflected positively in the field of health, health culture and matters related to growth and health.

To answer question 3: Do teachers' perceptions and beliefs about the role of digital technologies and their impact on child development vary with the teaching sector (governmental/private) and each of the teachers’ years of experience and their knowledge level of digital technologies?

Statistical (T) was used to determine whether the perceptions of government sector teachers differ from those of the private sector, and the results showed that the average performance of teachers on the scale in the government sector was 63, with a standard deviation (8.54), and the average performance of private sector teachers on the perception scale was 64.9. The calculated value (T) showed that these differences were not statistically significant.
To see the impact of both the teachers’ service years, and the application level on perceptions toward the application of digital technologies, the means, standard deviations, and value of (F) were calculated. Table 4 shows these results.

<table>
<thead>
<tr>
<th>Mean/ S.D &amp; F values</th>
<th>No of years</th>
<th>Using Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-3</td>
<td>3-5</td>
</tr>
<tr>
<td>Mean</td>
<td>65.9</td>
<td>64.5</td>
</tr>
<tr>
<td>S.D</td>
<td>11</td>
<td>12.1</td>
</tr>
<tr>
<td>F</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td>0.33</td>
<td></td>
</tr>
</tbody>
</table>

We note from Table 4 that the differences between the mean perceptions of teachers on the variables, the number of service years, and the level of using digital technologies are not significant.

**DISCUSSION**

Formal education in Jordan begins at the age of 6 years. The kindergarten stage is considered an optional stage. In 2019, the Ministry of Education decided to consider the kindergarten stage as a mandatory stage. According to that, the ministry began opening government kindergartens after it was limited to the private sector.

Kindergartens in Jordan aim to prepare children for the primary stage by providing children with skills and expertise and to prepare them for entry to the primary stage.

The facilities of the public primary schools differ from the private ones, as these schools include various digital technologies and are employed effectively. We find a smart board in every kindergarten in the private school, but this is rare in government schools and kindergartens, and if any, its employment is modest, so children rely heavily on their families to employ digital technologies. The results of this study concluded that the majority of students use digital techniques. This use is determined by the parents. This identification is higher in the primary stage because this stage is important in preparing the child for formal education, academic achievement, and the completion of homework. This is inline with what was stated in the studies of (Erdogan, Johnson, Dong and Qiu, 2019) and (Bentley, Tuner, and Jago, 2016). They emphasized that the majority of parents allow their children to use digital technologies, and at the same time, parents set rules for their children and determine their optimal use for them. The results also showed that children prefer traditional games compared to electronic games in addition to that they prefer that mothers and teachers tell them stories instead of using digital applications for that.

The result was different from the study results of (Heider and Jalongo, 2014), which confirmed the growing demand for children for electronic games and the use of digital technologies in telling stories. This difference can be explained by the desire of children and their preference for traditional games compared to those digital, as well as their preferring traditional story telling through the mother or teacher instead of digital applications. This may due to the widespread use to digital technologies that led to children feeling bored. This stage characterized by movement and activity, children want to integrate into real play with peers outside the home, which is common and supported by Jordanian culture. Children innate in nature, tend to communicate with real physical individuals, which are important development needs, as mentioned (Wardle, 2008).

The study also showed that male children prefer to use electronic games; in return, females prefer to employ digital technologies in language and learning, and this is also due to gender, whose roles support the prevailing community culture.
The results also showed that children prefer learning with books and do not prefer learning through digital applications and that if they are to choose between the traditional method of learning that is based on books and the process based on digital techniques, they prefer the traditional way.

The results also showed that the most used application by children is YouTube, where all children use it, followed by the Digital Camera and then the SmartBoard, which is mostly employed in the classroom.

As for the topics most used for digital applications and more used by children these are electronic games, since many educational materials are prepared and based on play. The study of religion and music are among the topics that mainly employ digital technologies.

As for the results that dealt with the perceptions and beliefs of the kindergarten and the primary stage teachers towards employing digital applications in education, the results indicated that the perceptions of teachers were moderate. This result is consistent with what was mentioned in the study by (Aldhafeeri, Palaiologou, and Folorunsho, 2016) and the study (Ihmeideh and Alkhawideh, 2017), which showed that teachers' perceptions and beliefs are moderate towards employing digital technologies in education. Meanwhile, these results are due to teachers having some fear and distrust at the employment level required for techniques in teaching. It was considering what stated in the results that most teachers' beliefs and perceptions that digital technologies are more beneficial to students in the health, physical and social aspects, as well as in the cognitive aspects. This result is consistent with the results of a study by (Manessis, 2013) which showed that teachers have self-confidence and conviction in their ability to employ digital games in education. Teachers understand the importance of employing digital technologies acceptably, but these perceptions need to be changed to become more positive about using digital technologies in education in the best and most effective way. Simultaneously, the qualification of teachers and preparing themtechnologically to support the educational process. Besides that, these results in line with what was reported by (Blackwell, Lauricella and Wartella, 2014) and with what was stated in (Erdogan, Johnson, Dong and Qiu, 2019) is study which assert that to succeed in the process of employing digital technologies the teachers must be trained and prepared appropriately. Besides that, these technologies should be employed under the supervision of teachers and parents. Also, this is confirmed by what was stated in the study (Zaranis and Okonomidis, 2016) of the importance of children's teachers having positive attitudes towards employing digital technologies in the education process to reflect positively on children's learning.

Ntuli, (2017), Mercer, ( 2014), Manessis, ( 2013), Blackwell, Lauricella and Wartella, (2014) as and Niederhauser, Stoddart, (2001) emphasize the importance of communicating with teachers and integrating them into the process of setting evaluation criteria for the effectiveness of digital technologies, so that teachers can adequately employ these technologies. The results emphasized the importance of teacher preparation and highlighted the positive direction adopted by the teacher and how this reflects and affects students, and this is in line with the results of the study by Reeves, Gunter and Lacey, (2017) in emphasizing the teacher's role in working towards the success of employing digital technologies in education. Meanwhile, this should be done with proper planning of how to integrate these technologies and to choose the appropriate content.

The results showed that there is no statistically significant effect for the number of years of experience, as well as the stage of study (kindergarten and primary), the level of knowledge, and familiarity with digital applications as variables on teachers' perceptions towards employing digital technologies in children's education. This result is not consistent with what is stated in the study by (Nikolopoulou and Gialamas, 2015), which emphasized that increasing years of experience and self-efficacy affect changing teachers' perceptions towards digital technologies and considering them more than just a tool for playing. Furthermore, it emphasizes the role of these technologies in learning and considering them a basic model in Learning.

Likewise, this result does not fit with what was mentioned in a (Manessis, 2013) study. It showed that the degree of confidence, the number of experience years, the level of daily computer use,
experience in computer games, and previous qualifying courses are all influencing factors in raising the attitudes towards computer technologies. Meanwhile, the results of this study, along with the study of (Blackwell, Lauricella, and Wartella, 2014) confirmed that when the teacher's experience increases, his attitudes become more negative. These results can be explained by the fact that less experienced teachers are more flexible and more used to digital technologies than teachers who are accustomed to traditional methods of teaching. Besides, the perceptions of teachers in this study were moderate. Perhaps the reason is the presence of caution and fear of employing these techniques in education because of the prevailing culture that restricts the employment of these technologies and linking them to play only and not as a useful tool in education.

CONCLUSION AND RECOMMENDATION

The employment of digital technologies by primary kindergarten children is mainly based on the direction and consent of parents and home policy, and parents are developing laws that regulate how children use digital technologies, both in terms of setting time or in choosing appropriate applications. Also, children tend to play traditionally and learn by traditionally using books and storytelling despite employing these techniques. Therefore, this reflects the urgent need for more effective methods in applying these techniques in the process of teaching this generation and designing educational materials in an attractive way that raises children's motivation to employ these technologies and enjoy learning through them.

Also, the employment of digital technologies in kindergarten and the primary stage was modest. The teachers' perceptions and beliefs towards employing these technologies in children's education were average, which confirms the importance of preparing the teacher properly and acquiring the necessary technical competencies to become a teacher capable of preparing teaching tasks in an era that requires Significant employment of digital technologies.

This study recommends the development of a comprehensive plan to change teachers' attitudes to become more positive so that this will be reflected in children's learning in different subjects and areas. Also, Working to draw the attention of parents, teachers, concerned parties, and institutions interested in child-rearing to put essential plans and programs to integrate these technologies in the curricula and children's lives in a proper way.

Also, to establish interpersonal skills with digital technologies to match the capabilities of the digital generation. Besides that, to direct more attention towards producing electronic games and programs that suit children's learning stages and emphasizing learning based on digital games.

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Teachers’ Attitudes toward Turkey Education Informatics Network during the Distance Education Period in the Covid-19 Pandemic

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Abstract

In this research, teachers’ attitudes toward Turkey Education Informatics Network (EIN) during the distance education period in the Covid-19 Pandemic are examined. The participants of the study, which was carried out in the descriptive survey model, consisting of 789 teachers, most of whom are primary school teachers, who provide distance education in the Covid-19 pandemic. "Educational Informatics Network Attitude Scale" was used as a data collection tool in the study. As a result of the research, it is seen that most of the teachers use EIN and the EIN Live Lesson application, and they access EIN mostly with their personal computers and smartphones. However, teachers stated that they used messaging applications effectively in the distance education process. Besides, when the attitudes of teachers towards EIN were examined according to the levels they worked at, it was seen that secondary school teachers showed a more positive attitude towards EIN than primary and high school teachers, and they found EIN more necessary. When the attitudes of teachers towards EIN were examined according to their branches, it was seen that foreign language teachers showed a more positive attitude towards EIN compared to primary school teachers and teachers in other branches, and found EIN more necessary. It has been observed that young and junior teachers have increased positive attitudes towards EIN and they think EIN is necessary. The results of the research show that teachers use the EIN. However, there was not enough opinion among teachers about the applicability of EIN.

Keywords: Education Informatics Network, EIN, Covid-19, Pandemic, Distance Education

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INTRODUCTION

The use of information technologies in education has become important in many teaching and learning environments. Many countries in the world have allocated large shares from public budgets and made large investments to use information and communication technologies in education effectively and efficiently. Governments have strengthened the computer, interactive whiteboard, and Internet infrastructure of the schools. Many countries such as South Korea, Singapore, Italy, Portugal, Japan, Brazil, Turkey can be mentioned mainly among these countries (Avvisati et al., 2013; Infocomm Media Development Authority, 2006; MONE, 2021-e; Sakowski and Towolli, 2016). States have established web education platforms, besides infrastructure investments, for students and teachers to benefit from information and communication technologies at the highest level. "Edunet", www.edunet.net, in South Korea, "Wikiwijs" www.wikiwijs.nl, in the Netherlands, "Geekie", www.geekie.com.br in Brazil, "The Greek School Network (GSN)" www.sch.gr in Greece, “Open Educational Resources (OER)", www.oercommons.org in the United States of America, “KlasCement " , www.klascement.net in Belgium, “Linkkiapaja", www.linkkiapaja.edu.fi in Finland, and "EIN" www.eba.gov.tr in Turkey can be counted among these (Kapıdere and Çetinkaya, 2017; Kimmo, 2017; MONE, 2021-e; Saklan and Ünal, 2018). Thanks to these educational platforms, teachers can collect a lot of data about students' learning processes. Nowdays, teachers need to process these various data gathered from educational technologies (Schifter et al., 2014; Xhakaj et al., 2016). Teachers can make learning more effective and efficient by evaluating students' learning processes and learning outcomes, in the light of these data (Ez-zouaia et al., 2020; Molenaar & Knoop-van Campen, 2018). In Turkey, positive effects of EIN on students' success, students' learning, student retention, and motivation have been revealed by many studies (Öner, 2017). Besides, educational platforms can support the professional development of teachers in the decision-making process regarding their teaching processes by showing the data they obtain in tables, graphics, and figures (Michaeli et al.2020). During the Covid-19 pandemic process, teachers had to continue their professional development to cope with many new challenges. The distance education process is a discipline in itself. Many teachers are inexperienced in carrying out the learning process only with distance education without face-to-face education. They have had to keep up with new technologies and new applications. Mainly, virtual classroom applications and learning management systems are among these. However, managing the physical, economical, and psychological problems brought by the Covid-19 pandemic has made the teacher's job quite difficult.

Covid-19 (NCov - Novel Coronavirus), which appeared in China in December 2019, soon spread to the world (Chen et al., 2020; Hui et al., 2020). For this reason, a pandemic was declared by the World Health Organization (WHO) in March 2020 (World Health Organization, 2021). As part of the measures to be taken against the epidemic, it has also been recommended by WHO to close the schools temporarily. Considering their own circumstances, countries have implemented physical distancing and work from home measures, and close the schools temporarily to reduce the incidence of new infections and deaths (Anderson et al., 2020; Mahase, 2020). According to Anadolu Agency, the novel coronavirus has hampered education in 184 countries for over 1.5 billion students - 87% of students across the globe. While many countries shut down schools in a bid to counter the outbreak (Kasap, 2020). To reduce the spread of the epidemic, and be able to effectively fight the virus in Turkey, schools at all levels have been closed temporarily by the Ministry of National Education (MONE) as of March 23, 2020 (MONE, 2020-b). In this process, MEB has implemented many applications to manage the distance education process. Turkey has been one of the two countries, along with China, that has implemented the first distance education at the national level during the Covid-19 pandemic period, (Kasap, 2020; MONE, 2020-c). To offer equal opportunities to all students that spread out on wide geography in Turkey, MONE and Turkey Radio and Television Corporation (TRT) has established three new TV channel, called EBA(EIN) TV, with cooperation, to provide distance education in primary school, secondary school, and high school levels. Lecture video for 8914 hours was prepared as a broadcast between 23 March and 27 November 2020 (MONE, 2021-f). Besides, EIN, which is a part of the Movement of Enhancing Opportunities and Improving Technology (FATİH) Project, which was initiated in 2010 and supports formal education, has
strengthened and developed its infrastructure in a way to serve all distance education to spread it to all teachers and students (MONE, 2021-e). EIN, which was visited over 17 billion times from the beginning date of distance learning in Turkey, March 23, 2020, which has started with the announcement of Covid-19 pandemics, until January 22, 2021, has become the 1st. most visited website in the world in 2020, in the education category. Approximately 12.5 million students and approximately 1 million teachers actively used EIN between 21 September 2020 (beginning of the 1st semester) - 22 January 2021 (end of the 1st semester). Besides, more than 40 million EIN Live Lessons have been used over EIN until January 23, along with other live lessons, and approximately 155 million live lessons have been carried out (MONE, 2021-d).

The EIN website was first opened in 2012 with its test version (Pala et al., 2017). EIN, founded and managed by MONE, is a free and reliable web education platform that is accessible by everyone. EIN, which is designed for the use of all stakeholders in education, especially for teachers and students, can enrich the teaching with various contents, reflect the informatics culture to education, contribute to the lessons with its rich and continuously developing archive, and support education to give a direction by bringing all teachers together at a common point (Sönmez et al., 2020). EIN has more than 1700 lessons taught in schools and over 40,000 rich, reliable, and interactive content, more than 5000 books, and more than 240,000 questions (MONE, 2021-d). In its final form, EIN consists of student, teacher, and parent dimensions to manage the learning process actively and participantly. While the teacher plans and manages the education processes of the students, students can also carry out their learning processes through EIN without being restricted by the process managed by their teachers. Thus, EIN offers a time-independent, location-independent educational experience that can be realized according to the student's learning speed, which is the essence of distance education. Parents can participate through EIN to learn about all these processes and to increase the family's participation in the education of the student. Students on EIN can find the contents for all of their courses, do exercises and exams related to their courses, access reliable sources about the subjects they need about their courses, and store all their work as a portfolio. In EIN, which is a social education platform, teachers and students can interact with each other, each student and teacher can share a message, and discuss, votes from their wall areas (MONE, 2021-d).

With the distance education process that was started suddenly with the closing of the schools all over the world after the announcement of the Covid-19 pandemic, worries about illness, the anxiety for not being able to support the students, becoming unemployed or not being able to receive salary arose for teachers working in private schools. Although the International Labor Organization (ILO) (2020) estimates the education sector as one of the least affected sectors in the pandemic, it is estimated that many people will have psychological disorders such as depression, post-traumatic stress, irritability, anxiety disorder at the end of this process (WEF, 2020). The government in Turkey has banned layoffs in the private sector to address these concerns. It gave partial work allowance to private school teachers who have lost business. There was no restriction on the salaries of teachers working in the public sector (Official Gazette of the Republic of Turkey, 2020). Reimers & Schleicher (2020) asked a total of 330 education workers and stakeholders from 98 countries about their attitudes towards priority intervention areas related to education during this crisis period when schools were closed. 84% of the participants stated that it is very important to ensure the continuity of the learning process of students during this time. Two other options, which were considered quite important by the participants, were providing professional support to teachers (77.9%) and ensuring teachers' well-being (77.6%). Practices such as monitoring and supporting the physical and mental health of teachers under stress and providing education on the psychosocial effects of this crisis need to be implemented (United Nations Educational, Scientific and Cultural Organization [UNICEF], 2020).

**PURPOSE**

There are a limited number of studies that examine teachers' use of EIN and provide data diversity (Gezer & Durdu, 2020). This study aims to determine the attitude of teachers, who passed distance education as compulsory during the Covidien-19 process, towards EIN, which is actively used in Turkey. Most of the educational institutions of the country are state schools (state school:
54,715, private school: 13,870). 942,936 teachers are working in public schools (MONE, 2020-a). All of these schools are centrally managed by the MONE. During the Covid-19 pandemic process, MONE closed schools and decided to distance education after the announcement of the pandemic worldwide. The backbone of the distance education process is formed by EIN, which was established and served as a support for face-to-face education. In this process, to learn how EIN is perceived by teachers and how it is used, answers to the following questions were sought;

(1) Do teachers' attitudes towards EIN differ significantly according to their gender?
(2) Do teachers' attitudes towards EIN differ significantly according to the levels they serve?
(3) Do teachers' attitudes towards EIN differ significantly according to their graduation degree?
(4) Do teachers' attitudes towards EIN differ significantly according to their branches?
(5) Do teachers' attitudes towards EIN differ significantly according to their places of work?
(6) Is there a relationship between the teachers' attitudes towards EIN and their ages?
(7) Is there a relationship between teachers' attitudes towards EIN and their seniority?

**METHOD**

**Research Model**

The research was carried out in the descriptive survey model because it defined the teachers' opinions in the study group as they were. Descriptive surveys are studies that are conducted on large groups, in which the opinions and attitudes of the individuals in the group about a phenomenon and an event are taken, and the facts and events are tried to be described (Karakaya, 2012). This research method is used to describe the structure of objects, societies, organizations as well as the mechanism of events (Cohen et al., 2007). The event, individual, or object that are subject to research is tried to be defined in its conditions and as it is. No effort is made to change or influence them in any way (Karasar, 2012). Generally, in survey studies, researchers are concerned with how the views and characteristics are distributed in terms of individuals in the sample rather than the reasons (Fraenkel & Wallen, 2006). In this direction, the attitudes of teachers participating in the study towards EIN were analyzed according to the gender, age, seniority, level, education level, branch, and place of duty variables.

**Study group**

The study group of the research consists of 789 teachers. All of the participants work in public schools, most of them work in Ankara (n=553 70%), 236 (30%), and in 51 different provinces, who work in primary schools (n=368 47%), secondary schools (n=316 40%) and high schools (n=105 13%), and most of them are primary school teachers (n=321 41%). The research was conducted in the second semester of the 2019-2020 academic year. The study group was determined with a convenience sampling method, by taking the time and appropriate conditions into account. Participants' personal information was not taken and their participation in the study was confirmed with a consent form. Also, a code is provided for those who want to leave the research later.

**Data collection tools**

In the research, the "Education Informatics Network Attitude Scale" developed by Uğurlu & Gürsoy (2018) was used as a data collection tool. The scale consists of 30 items and includes 2 factors (necessity of EIN and applicability of EIN). The Cronbach Alpha internal consistency coefficient of
the scale was calculated as .950. The internal consistency of the factors; The requirement of EIN is .961, and the applicability of EIN is .712. These results show that the scale is valid and reliable for evaluating teachers' attitudes towards EIN. In the evaluation of the scale items, 5-point Likert type options were used.

**Data collection process and data analysis**

The data in the study were collected from teachers who are working at primary, secondary, and high school levels, and who provide distance education due to the Covid-19 pandemic, at the end of the second semester of the 2019-2020 academic year. The scale, which was used as a data collection tool in the data collection process, was transformed into a digital form and was applied as web-based by sending it to the e-mail addresses or mobile phones of the teachers in the study group. The data obtained were analyzed using the SPSS 26 statistical package program. Normal distribution values were examined to decide which test type to use in the analysis of the data. It was observed that the data showed normal distribution, and the skewness and kurtosis values were between +1 and -1 (Hair et al. 2013) (Skewness: -.295; Kurtosis: 257; Min:54; Max:138). For this reason, parametric tests were used in the data analysis process in the research. Data were analyzed by using descriptive statistics (percentage, frequency, arithmetic mean, standard deviation), independent samples t-test, and one-way analysis of variance (ANOVA). Tukey test was used to determine between which groups have the statistically significant difference and significance was calculated based on p <.05. Besides, Pearson Correlation analysis was conducted to reveal the relationship between age with attitude and seniority with attitude. Although there are different classifications in the literature to explain the relationship level, it is generally interpreted as there are (.00-.30) weak, (.31-.49) medium, (.50-.69) strong, (.70-.100) very strong relationships. (Tavşancıl, 2006).

**Research ethics**

The permission for the use of the scale, which was used as a data collection tool in the research, was obtained from Uğurlu & Gürsoy (2018) via e-mail. Besides, the ethical approval of the study was obtained from Ankara Yıldırım Beyazıt University Rectorate Ethics Committee Coordinator on 19.06.2020 with an 84892257-604.01.02-E.18221 numbered letter. Participants of the study, who read and approved the pre-approval form, were included in the study. Participants' personal information has not been collected. A code is provided for participants who want to quit the research later on. Ethical responsibilities were fulfilled in the research and a study group was formed based on volunteerism.

**RESULTS**

Descriptive statistics on the use of distance education tools by the teachers participating in the study during the Covid-19 pandemic are presented in Table 1.

<table>
<thead>
<tr>
<th>Tool Description</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am using EIN.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>680</td>
<td>86,2</td>
</tr>
<tr>
<td>No</td>
<td>109</td>
<td>13,8</td>
</tr>
<tr>
<td>I am using EIN Live Lesson.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>443</td>
<td>56,1</td>
</tr>
<tr>
<td>No</td>
<td>346</td>
<td>43,9</td>
</tr>
<tr>
<td>I use other educational sites.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>161</td>
<td>20,4</td>
</tr>
<tr>
<td>No</td>
<td>628</td>
<td>79,6</td>
</tr>
<tr>
<td>I use other live lesson apps.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>195</td>
<td>24,7</td>
</tr>
<tr>
<td>No</td>
<td>594</td>
<td>75,3</td>
</tr>
<tr>
<td>I use social media.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>198</td>
<td>25,1</td>
</tr>
<tr>
<td>No</td>
<td>591</td>
<td>74,9</td>
</tr>
</tbody>
</table>
I use messaging apps.  
Yes  661  83.8  
No  128  16.2  

My tool for accessing EIN is  
Personal Computer  
Yes  626  79.3  
No  163  20.7  
Smartphone  
Yes  531  67.3  
No  258  32.7  
Tablet PC  
Yes  78  9.9  
No  711  90.1  

Graph 1. Percentage of teachers' use of distance education tools in the Covid-19 pandemic

When Table 1 and Graph 1 is examined, it is seen that the majority of teachers used EIN (86.2%) and EIN Live Lesson (56.1%) in the distance education process during the Covid-19 pandemic. On the other hand, it is seen that a small number of teachers use other educational sites (20.4%), other live lesson applications (24.7%), and social media applications (25.1%). It is seen that many teachers (83.8%) use messaging applications. It is observed that teachers mostly use their personal computers (79.3%) and smartphones (67.3%) to access EIN, and it is observed that a small number of teachers (9.9%) use tablet computers.

The sub-factor and general averages and standard deviation values of the answers given by the pre-service teachers participating in the study, to the education informatics network attitude scale are shown in Table 2.

Table 2. Findings on scale sub-factors and general averages

<table>
<thead>
<tr>
<th>Sub-factor</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>X</th>
<th>Sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1- The necessity of EIN</td>
<td>789</td>
<td>2.23</td>
<td>4.26</td>
<td>3.68</td>
<td>0.917</td>
</tr>
<tr>
<td>F2- Applicability of EIN</td>
<td>789</td>
<td>2.21</td>
<td>4.13</td>
<td>3.05</td>
<td>0.974</td>
</tr>
<tr>
<td>Total</td>
<td>789</td>
<td>2.21</td>
<td>4.26</td>
<td>3.51</td>
<td>0.932</td>
</tr>
</tbody>
</table>

As seen in Table 2, the averages of the sub-factors of the scale vary between 3.05 and 3.68. It is seen that the arithmetic means of the EIN requirement factor of the scale is X=3.68 and the answers given to the items are at the “I agree to” level. In this case, it is understood that EIN is considered necessary by teachers. Among the sub-factors of the research, the lowest average value is in the feasibility factor of EIN (X=3.05). Teachers did not find EIN applicable. The general average of the scale was found as X=3.51 and it was understood that the answers given to the items were at the level of agreement. Teachers showed a positive attitude towards EIN.
It is seen that 549 (69.6%) of the teachers participating in the study are female and 240 (30.4%) are male. Whether there is a significant difference between the attitudes of the teachers who participated in the study towards EIN according to the gender variable is presented in Table 3.

Table 3. T-test results of teachers’ attitudes towards EIN, according to gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>X</th>
<th>S</th>
<th>Sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1- The necessity of EIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>549</td>
<td>24.31</td>
<td>2.48</td>
<td>787</td>
<td>.905</td>
<td>.366</td>
</tr>
<tr>
<td>Male</td>
<td>240</td>
<td>24.48</td>
<td>2.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>789</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2- Applicability of EIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>549</td>
<td>81.33</td>
<td>13.47</td>
<td>787</td>
<td>1.546</td>
<td>.123</td>
</tr>
<tr>
<td>Male</td>
<td>240</td>
<td>79.73</td>
<td>13.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>789</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>789</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<.05

When Table 3 is examined, there is no significant difference according to gender for both general teachers’ attitudes towards EIN (p=.179, p<.05), the necessity of EIN sub-factor (p=.366, p<.05), and the applicability of EIN sub-factor (p=.123, p<.05). When the arithmetic means of the teachers' answers are examined, it is seen that the general averages of men (x=104.21) and women (x=105.63) are close to each other.

368 (46.6%) of the teachers participating in the study are working at the primary school level, 316 (40.1%) at the secondary school level, and 105 (13.3%) at the high school level. Whether there is a significant difference between the attitudes of the teachers participating in the study towards EIN, according to the levels they work at is presented in Table 4.

Table 4. Variance analysis results of teachers' attitudes towards EIN according to levels

<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>Sd.</th>
<th>Mean of squares</th>
<th>F</th>
<th>Sig.</th>
<th>Significant Difference (Tukey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1- The necessity of EIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.848</td>
<td>138.903</td>
<td>1424.222</td>
<td>8.059</td>
<td>.000* Primary School and Secondary school</td>
</tr>
<tr>
<td>Within Groups</td>
<td>141.751</td>
<td>786</td>
<td>176.722</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>144.592</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2- Applicability of EIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>0.365</td>
<td>4.923</td>
<td>.182</td>
<td>.029</td>
<td>.971 -</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4.923</td>
<td>786</td>
<td>6.264</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.288</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.288</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

Descriptive statistics of Table 4

<table>
<thead>
<tr>
<th>Levels</th>
<th>N</th>
<th>X</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1- The necessity of EIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td>368</td>
<td>79.22</td>
<td>13.73</td>
</tr>
<tr>
<td>Secondary School</td>
<td>316</td>
<td>83.16</td>
<td>12.76</td>
</tr>
<tr>
<td>High School</td>
<td>105</td>
<td>79.54</td>
<td>13.33</td>
</tr>
<tr>
<td>F2- Applicability of EIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td>368</td>
<td>24.34</td>
<td>2.38</td>
</tr>
<tr>
<td>Secondary School</td>
<td>316</td>
<td>24.38</td>
<td>2.63</td>
</tr>
<tr>
<td>High School</td>
<td>105</td>
<td>24.38</td>
<td>2.54</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>103.55</td>
<td>13.78</td>
</tr>
<tr>
<td>Secondary School</td>
<td>316</td>
<td>107.54</td>
<td>13.32</td>
</tr>
<tr>
<td>High School</td>
<td>105</td>
<td>103.92</td>
<td>13.59</td>
</tr>
</tbody>
</table>
According to Table 4, it is seen that there is a significant difference between the teachers' attitudes towards EIN according to the levels they work at (p = .000, p < .05). According to the results of the Tukey test conducted to determine between which groups this difference exists, it was determined that there is a significant difference between primary school and secondary school, and secondary school and high school. When the arithmetic means of the teachers' answers are examined, it is understood that in both comparisons, this difference is in favor of secondary school (primary school $\bar{x}$=103.55; secondary school $\bar{x}$=107.54; high school $\bar{x}$=103.92). When the attitudes of teachers for the sub-factors of the scale are examined, it is seen that there is a significant difference according to the levels in the sub-factor of the necessity of EIN (p= .000, p < .05), and there is no significant difference according to the levels in the applicability sub-factor of EIN. According to the results of the Tukey test conducted to determine which groups the difference in the sub-factor of EIN requirement sub-factor, it was determined that there is a significant difference between primary and secondary school, and secondary school and high school. When the arithmetic means of the teachers' answers are examined, it is understood that in both comparisons, this difference is in favor of secondary school (primary school $\bar{x}$=79.22; secondary school $\bar{x}$=83.16; high school $\bar{x}$=79.54).

21 (2.7%) of the teachers participating in the study have an associate degree, 663 (84%) have undergraduate, and 105 (13.3%) have a master's degree. Whether there is a significant difference between the attitudes of the teachers who participated in the study towards EIN according to their graduation degree is presented in Table 5.

| Table 5. Variance analysis results of teachers 'attitudes towards EIN according to teachers' graduation degree |
|--------------------------------------------------|------------------|------------------|------|--------|--------------------------|
| Sum of Squares                                | Sd.               | Means of Squares | F    | Sig. p | Significant Difference   |
| F1- The necessity of EIN                      | Between Groups    | 98,153           | 2    | .272   | .762                     |
|                                              | Within Groups     | 141.653          | 786  | 180.221|                          |
|                                              | Total             | 141.751          | 788  |        |                          |
| F2- Applicability of EIN                      | Between Groups    | 0.661            | 2    | .053   | .949                     |
|                                              | Within Groups     | 4.923            | 786  | 6.264  |                          |
|                                              | Total             | 4.923            | 788  |        |                          |
| Total                                        | Between Groups    | 94.084           | 2    | .251   | .778                     |
|                                              | Within Groups     | 147.562          | 786  | 187.738|                          |
|                                              | Total             | 147.656          | 788  |        |                          |

Descriptive statistics of Table 5

<table>
<thead>
<tr>
<th>Graduation</th>
<th>N</th>
<th>X</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1- The necessity of EIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Degree</td>
<td>21</td>
<td>82.95</td>
<td>9.86</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>663</td>
<td>80.80</td>
<td>13.57</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>105</td>
<td>80.66</td>
<td>13.07</td>
</tr>
<tr>
<td>F2- Applicability of EIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate</td>
<td>21</td>
<td>24.29</td>
<td>1.79</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>663</td>
<td>24.37</td>
<td>2.53</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>105</td>
<td>24.30</td>
<td>2.48</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate</td>
<td>21</td>
<td>107.24</td>
<td>10.42</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>663</td>
<td>105.18</td>
<td>13.86</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>105</td>
<td>104.95</td>
<td>13.24</td>
</tr>
</tbody>
</table>

When Table 5 is examined, there are no significant difference in teachers' attitudes towards EIN in both general (p= .778, p < .05), in the necessity of ESA sub-factor (p= .762, p < .05) and in the applicability sub-factor of EIN (p= .949, p < .05) according to their graduation degree. When the arithmetic means of the teachers' answers are examined, it is seen that the averages of an associate degree ($\bar{x}$=107.24), undergraduate degree ($\bar{x}$=105.18), and graduate degree ($\bar{x}$=104.95) are close to each other.
Graph 2. Distribution of teachers participating in the study according to their branches

When Graph 2 is examined, it is seen that most of the teachers who participated in the study were primary school teachers (40.7%), then (8.9%) foreign language teachers, (8.5%) science, (8.2%) mathematics, (7.1%) religious culture and moral knowledge (RCMK), (6.8%) Turkish language, and (3.9%) social sciences. Besides, teachers from 22 (15.8%) different branches participated in the study. Whether there is a significant difference between the attitudes of the teachers participating in the study towards EIN according to their branches is presented in Table 6.

Table 6. Variance analysis results of teachers' attitudes towards EIN according to branches

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Sd.</th>
<th>Means of Squares</th>
<th>F</th>
<th>Sig. p</th>
<th>Significant Difference (Tukey)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1- The necessity of EIN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4.309</td>
<td>7</td>
<td>615,582</td>
<td>3.498</td>
<td>.001*</td>
<td>Primary School Teacher-Foreign Language</td>
</tr>
<tr>
<td>Within Groups</td>
<td>137.442</td>
<td>781</td>
<td>175,983</td>
<td></td>
<td></td>
<td>Foreign Language-Other</td>
</tr>
<tr>
<td>Total</td>
<td>141.751</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F2- Applicability of EIN</strong></td>
<td>23</td>
<td>7</td>
<td>3,347</td>
<td>.533</td>
<td>.809</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4.900</td>
<td>781</td>
<td>6,274</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>4,923</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.377</td>
<td>781</td>
<td>625,356</td>
<td>3.409</td>
<td>.001*</td>
<td>Primary School Teacher-Foreign Language</td>
</tr>
<tr>
<td></td>
<td>143.278</td>
<td>781</td>
<td>183,456</td>
<td></td>
<td></td>
<td>Foreign Language-Other</td>
</tr>
</tbody>
</table>

*p<.05

Descriptive statistics of Table 6

<table>
<thead>
<tr>
<th>Branches</th>
<th>N</th>
<th>X</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1- The necessity of EIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School Teacher</td>
<td>321</td>
<td>78.91</td>
<td>13.71</td>
</tr>
<tr>
<td>Mathematics</td>
<td>65</td>
<td>83.32</td>
<td>13.05</td>
</tr>
<tr>
<td>Turkish Language</td>
<td>54</td>
<td>81.30</td>
<td>12.78</td>
</tr>
<tr>
<td>Science</td>
<td>67</td>
<td>83.43</td>
<td>13.07</td>
</tr>
<tr>
<td>Social Studies</td>
<td>31</td>
<td>82.65</td>
<td>9.38</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>70</td>
<td>85.99</td>
<td>10.84</td>
</tr>
<tr>
<td>RCMK</td>
<td>56</td>
<td>81.39</td>
<td>13.54</td>
</tr>
<tr>
<td>Other</td>
<td>125</td>
<td>79.34</td>
<td>14.38</td>
</tr>
</tbody>
</table>
According to Table 6, it is seen that there is a significant difference between teachers’ attitudes towards EIN according to their branches (p=.001, p <.05). According to the results of the Tukey test conducted to determine between which groups this difference exists, it was determined that there is a significant difference between the primary school teacher and the foreign language, foreign language, and other branches. When the arithmetic means of the answers of the teachers are examined, it is understood that in both comparisons, this difference is in favor of foreign language (primary school teacher x =103.24; foreign language x =110.34; other branches x =103.79). When the attitudes of teachers for the sub-factors of the scale are examined; It is seen that there is a significant difference according to the branches in the necessity of EIN sub-factor (p= .001, p <.05), and there is no significant difference according to the branches in the applicability of EIN sub-factor. According to the results of the Tukey test conducted to determine which groups the difference in the EIN necessity sub-factor is, it was determined that there is a significant difference between the primary school teacher and the foreign language, and foreign language and other branches. When the arithmetic means of the answers of the teachers are examined, it is understood that this difference is in favor of foreign language (primary school teacher x =78.91; foreign language x =85.99; other branches x =79.34) in both comparisons.

471 (59.7%) of the teachers participating in the study work in the city center, 271 (34.3%) in the district center, 47 (6%) in the village/town. Whether there is a significant difference between the attitudes of the teachers who participated in the study towards EIN according to their place of work is presented in Table 7.

### Table 7: Variance analysis results of teachers’ attitudes towards EIN according to teachers’ workplaces

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Sd.</th>
<th>Means of Squares</th>
<th>F</th>
<th>Sig. p</th>
<th>Significant Difference (Tukey)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1- The necessity of EIN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>180,948</td>
<td>2</td>
<td>90,474</td>
<td>.018</td>
<td>.983</td>
<td>-</td>
</tr>
<tr>
<td>Within Groups</td>
<td>141,571</td>
<td>786</td>
<td>180,116</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>141,752</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F2- Applicability of EIN</strong></td>
<td></td>
<td></td>
<td></td>
<td>.502</td>
<td>.605</td>
<td>-</td>
</tr>
<tr>
<td>Between Groups</td>
<td>0.220</td>
<td>2</td>
<td>.110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>4,923</td>
<td>786</td>
<td>6,264</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4,924</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
<td></td>
<td>.478</td>
<td>.620</td>
<td>-</td>
</tr>
<tr>
<td>Between Groups</td>
<td>179</td>
<td>2</td>
<td>89.627</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>147,477</td>
<td>786</td>
<td>187,630</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>147,656</td>
<td>788</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<.05
When Table 7 is examined, there is no significant difference in teachers’ attitudes towards EIN according to the place of work in both general (p = 0.620, p <.05), in the necessity of ESA sub-factor (p = 0.983, p <.05), and in the applicability sub-factor of EIN (p = 0.605, p <.05). When the arithmetic averages of the teachers’ answers are examined, it is seen that the averages of the city center (x̄=105.16), district center (x̄=105.57), and village/town (x̄=103.47) are close to each other.

Whether there is a significant relationship between the attitudes of the teachers participating in the study towards EIN and the age and seniority is presented in Table 8.

Table 8: Pearson correlation analysis results of teachers' attitudes towards EIN according to age and seniority

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Seniority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>p</td>
</tr>
<tr>
<td>F1- The necessity of EIN</td>
<td>-.106**</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>-.116**</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>789</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>-.023</td>
</tr>
<tr>
<td>F2- Applicability of EIN</td>
<td>.520</td>
<td>.613</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>789</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>-.108**</td>
</tr>
<tr>
<td>General</td>
<td>.002</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>789</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

When Table 8 is examined, the relation between the ages of teachers (x̄= 41, SD=7.69), seniority of teachers (x̄= 16, SD=7.75), the necessity of EIN (x̄= 80.84, SD=13.41) and the applicability of EIN (x̄= 24.35, SD=2.49) scores has seemed. A low level, negative and significant relation between age and general scores variables (r (787) = -.108, p <.05), a low level, negative and significant relation between age and the necessity of EIN variables (r (787) ) = -.106, p <.05), a low level, negative and significant relation between seniority and general scores variables (r (787) = -.117, p <.05), a low level, negative and significant relation between seniority and necessity of EIN variables (r (787) = -.116, p <.05) was found.

DISCUSSION

Based on the findings, the results obtained in this study, which the attitudes of the teachers, who passed distance education in Turkey due to Covid-19 pandemic, toward EIN were interpreted by comparing them with the results of other studies in the literature. In this direction, the results obtained in the research are given below.

As a result of the research, most of the teachers use EIN. According to the general scores of the scale, teachers showed a positive attitude towards EIN. According to researches, it is seen that teachers use EIN and EIN Live Lesson effectively during the Covid-19 process. However, teachers stated that their approach toward EIN is positive and they see EIN as applicable (Çakmak & Taşkıran, 2017; Çiftçi & Aydin, 2020; Demir & Özdaş, 2020; Ünal & Buliniz, 2020; Varışroğlu, 2019). On the
other hand, as a result of the research conducted by Alabay (2015), it has been stated that EIN is not used sufficiently by the teachers in the lesson process. This result may be because EIN was used as a support for face-to-face education at the time of the research.

Teachers frequently use the EIN Live Lesson application and messaging applications together with EIN during the Covid-19 pandemic process. According to researches, it is of great importance for teachers to conduct live lessons during the Covid-19 pandemic process and to use messaging applications to keep communication with students and parents tight (Bayburtlu, 2020; Demir & Özdaş, 2020; Duban & Şen, 2020, Sönmez et al., 2020). It is observed that teachers mostly access EIN via personal computers and smartphones. It can be said that a few teachers use EIN with the tablet. Today, the capacities of smartphones are as much as tablets, but they are advantageous than tablets in terms of portability. This situation may have affected teachers’ preferences for access to EIN via a tablet. In long-term studies, the screen size of personal computers, keyboard use, and long battery life may be the main reasons for teachers to use personal computers.

When the attitudes of teachers towards EIN are examined according to their levels they work at, it can be said that secondary school teachers have a more positive attitude towards EIN than primary and high school teachers and they find EIN more necessary. According to this finding, it can be thought that primary school teachers cannot use EIN properly and adequately because their students are in the young age group and students have difficulty in using the technology. It can be thought that high school teachers cannot use EIN sufficiently because their students are mostly in adolescence and students cannot provide self-control during this period. However, secondary school teachers’ students can mostly use basic technologies by age group and they are open to the teacher guidance. Therefore, it can be said that secondary school teachers find EIN more necessary than primary and high school teachers.

When the attitudes of teachers towards EIN are examined according to their branches, it can be said that foreign language teachers have a more positive attitude towards EIN compared to primary school teachers and teachers in other branches and find EIN more necessary. According to the researches, it has been observed that the majority of social studies teachers benefit from EIN in their lessons. According to the results of the research conducted by Alabay (2015), significant differences were found in teachers' level of EIN usage depending on the branch variable.

It can be said that as the age and the seniority of teachers decrease, their positive attitude towards EIN increases, and they think that EIN is necessary. According to this result, it can be stated that old and senior teachers are experienced and knowledgeable, young and new teachers need EIN more because they do not have sufficient experience and knowledge and they have a more positive attitude in return. On the other hand, it is stated in some studies that teachers with higher professional seniority use EIN more (Türker & Dündar, 2020). Besides, in some studies, no significant difference was found between teachers’ EIN usage levels according to age and professional experience (Alabay, 2015; Varışoğlu, 2019).

When the general scores of the scale are examined; Teachers’ attitudes towards EIN do not show a significant difference according to their gender, graduation degree, and place of work. The research conducted by Varışoğlu (2019) and Düzgün & Sulak (2020) supports this finding in terms of gender and graduation degree. The results of the research conducted by Alabay (2015) support these results in terms of both genders, education level, and place of work. Contrary to our research, Sönmez et al. (2020) stated in their study that primary school teachers' attitudes towards EIN contents differ according to their place of work. While the teachers working in the province and district found EIN content appropriate for their level, the teachers in the village remained undecided. On the other hand, all teachers have stated that EIN alone is not enough.
CONCLUSION

The rapid transition to distance education during the Covid-19 pandemic naturally brought many problems. Lack of adequate infrastructure, scarcity of expert personnel in the field, lack of content, and most importantly, lack of sufficient readiness of students and teachers (Türker & Dündar, 2020; TEDMEM, 2020) can be mentioned among these problems. These problems also affect the perception of distance education. The most important issue regarding distance education is teachers' preparedness and students' attitude. If teachers are not prepared and students do not see technology as useful, they will not be open to distance education.

The results of the research show that teachers in Turkey use and need the EIN in the distance education process during the Covid-19 pandemic. However, there was not enough opinion about the applicability of EIN among teachers. In many studies, most of the teachers stated that the content in EIN was insufficient, so it should be increased and there was a lack of infrastructure (Alabay, 2015; Demir & Kale, 2020; Demir & Özoğ, 2020; Gömleksiz & Deniz, 2019; Kana & Aydin, 2017; Ünal & Bulunu, 2020; Yeşilyurt & Dündar, 2020). This situation may affect teachers' attitudes about the applicability of EIN. Increasing the content of EIN by diversifying it and improving its infrastructure may cause teachers' attitudes towards the applicability of EIN to change. In the research conducted by Bakioğlu & Çevik (2020), it was concluded that teachers felt inadequate in the Covid-19 pandemic distance education process, but they had the opportunity to improve themselves. When the 2023 Education Vision of MEB is examined, it is seen that the technological infrastructure in schools and the e-content to be used in lessons will be increased (2023 Education Vision, 2018). In line with this goal, it becomes important to make arrangements for the applicability of EIN.

Parents can contribute to the development of children by providing more materials for the school and focusing on educational activities. It is important, how much parents can support students in teaching basic skills such as reading and writing, especially at the primary school level. This problem appears more clearly for the children of families living in rural areas who are disadvantaged in various issues (TEDMEM, 2020). The use of EIN in the Covid-19 pandemic not only provides rich content to teachers and students in rural areas but also gives this opportunity to all teachers and students who cannot leave their homes. In this respect, the value of EIN increases one more time during the pandemic process.

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Predictive Power of 8th Grade Students’ Translating Among Multiple Representations Skills on their Algebraic Reasoning

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Abstract

The purpose of the present research is defining the direction and level of the relationship between 8th grade students’ translating among multiple representations skills and their algebraic reasoning and revealing the predictive power on algebraic reasoning. The research was conducted in accordance with relational survey model, which is a quantitative research method, and the study group consists of the total of 188 students, who studied at 8th grade in state schools. The data of the research were collected with the Translating Among Multiple Representations Test (TAMRT) and Algebraic Reasoning Evaluation Tool (ARET). Data were analysed using Pearson correlation and multiple linear regression analysis. Findings revealed that there is a significant relationship between students’ translating among multiple representations skills and their algebraic reasoning \( r = .59; p < .01 \). Predictive power of students’ translating among multiple representations skill on their algebraic reasoning was found as 40%. According to the analysis on the each translating skill’s prediction of the subscales of the algebraic reasoning, only translating to graph and table representation skills predict subscales of algebraic reasoning.

Keywords: Multiple Representations, Algebraic Reasoning, 8th Grade Students.

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INTRODUCTION

One of the most effective and important tools developing individuals’ thinking ability is mathematics. Dealing with mathematics refers to a whole of the intellectual efforts including problem solving processes in accordance with a certain order and resulting from the desire to know and understand the truth (Altun, 2011; Yenilmez, & Avcu, 2009). Algebra, which is a special area of mathematics is a language representing quantities and numbers in letter symbols and involving the skills of calculating with these symbols, problem solving, working on models and presenting notations (Dede, & Argün, 2003; Kaf, 2007). Algebraic reasoning is a way of thinking that requires studying or reasoning of the mathematical structures or situations through algebraic symbols by using mathematical models or variables or diagrams, graphs, equations and tables (Herbert, & Brown, 1997; Kaya, 2015; Kriegler, 2004; National Council of Teachers of Mathematics [NCTM], 2000; Trends in International Mathematics and Science Study [TIMSS], 2003). Since algebraic reasoning involves skills requiring mental activity, such as reasoning, problem solving, working on models, understanding variables, expressing ideas using multiple representations and establishing relationships between symbolic notations; algebraic reasoning is considered as a very important concept for all levels of mathematics teaching (Çağdaşer, 2008; Greene, & Findell, 1998; Warren, & Cooper, 2009) and for deciding on algebraic algorithms (López-Ibáñez, Prasad, & Paechter, 2005). Accordingly, an individual needs to develop their algebraic reasoning skills in order to succeed in understanding and performing in mathematics (Nathan, & Koellner, 2007).

Many previous studies have reported that students have difficulty in understanding algebra related subjects in mathematics teaching (Dede, & Argün, 2003; Ersoy, & Erbaş, 2005). The idea that different representations are required to develop students’ comprehension skills in mathematics teaching (especially algebra and geometry) was formed as a result of these studies, which resulted in the emergence of the concept of multiple representations in the mathematics teaching related literature (Adu-Gyamfi, 2007; Akkuş Çikla, 2004; Schoenfeld, 1992; Selling, 2016). Also, mathematical-algebraic objects cannot be displayed directly; they need to be semantic in multiple representational form (Carraher, Martinez, & Schliemann, 2008). What comes to mind along with the concept of multiple representations is a special language formed of a body of different notions, signs or symbols used to express mathematical concepts, opinions or objects (Durmuş, & Yaman, 2002; Duval, 1999; Kaput, 1998; Özgün Koca, 2004). Many studies have stressed that multiple representation-based approaches and practices create auxiliary environments for mathematics teaching and learning, provide basis for meaningful learning and contribute to students’ construction of knowledge on a conceptual level (Ainsworth, 2006; Dreher, & Kuntze, 2015; Goldin, 2004; Ministry of National Education [MoNE], 2009; NCTM, 2008; Sevimli, 2009). In other words, students can re-structure a subject by noticing the necessary-unnecessary details or specific features related to a subject with the help of multiple representations and this way they can make the subject tangible. Therefore, it is obvious that multiple representations are of utmost importance in terms of ensuring the profound learning (Ainsworth, Bibby, & Wood 1997; İzgiol, 2014).

Some of the previous studies on the concept of representation have suggested that students’ skill of choosing and forming representations among the relationships they are provided with will be more important than their calculating skills and that students with representation awareness will also develop in terms of metacognition skills (Ainsworth, 2006; Goldin, 1998; Kaput, 1998). Considering that it can be observed that the subjects are based on its different representations in multiple representations-based approaches and practices in the curriculum of primary school mathematics curriculum (MoNE, 2017). Additionally, it has been reported that teaching by enabling students expressing mathematical concepts or opinions through symbols, tables or any concrete model or any event they encounter in their daily lives increases meaningful and quality learning (MoNEf, 2009), stimulates ideas (Abdullah, Zakaria, & Halim, 2012; Parkinson, & Redmand, 2002; Stylianou, 2002), provides profound comprehension (Abdullah et al., 2012; Adu G Yamfi, 2003; Hoyles, Noss, & Kaput, 2002; Parkinson & Redmand, 2002; Roschelle et al., 2000; Stylianou, 2002) and enables algebraic thinking and reasoning (Akkan, 2009). It was suggested that extra attention should be paid to creating learning environments that enable students to establish relationships between mathematical
information (Kilpatrick et al., 2001). Adu-Gyamfi (2007) stated that individual differences among students, such as learning styles or intelligence types can provide a more effective learning process in learning environments enriched with multiple representations. While explaining the importance of the multiple representations in education NCTM (2000) data emphasizes the importance of encouraging students to use multiple representations continuously in order to systematize the mathematical ideas, choose among representations in problem solving, and model and interpret the different situations in daily life.

Many studies have been conducted on the concept of multiple representations in mathematics teaching. Generally, these studies have investigated the role of representations in understanding in mathematics (Çetin & Aydin, 2020; Dreher, & Kuntze, 2015; Duncan, 2010; Gilbert, 2010; Goldin, 1998), representation transformation processes (Adu-Gyamfi, 2007), representations awareness, representations use and representation preference among students (Ahmad, Tarmizi, & Nawawi, 2010; Akkuş Çıkla, 2004; Akkuş Çıkla, & Çakıroğlu, 2006; Bal, 2014; Dündar, 2015; Gagatsis, & Elia, 2004; Herman, 2007; İpek, & Okumuş, 2012; Kılıç, & Özdaş, 2010; Sevimli, 2009), and the concept of representations in technology assisted learning with the inclusion of technology in the learning environments (Durmuş, & Yaman, 2002; Erbaş, 2005; İzgiol, 2014; Kendal, 2002; Mallet, 2007). Similarly, studies on the algebraic reasoning have focused on defining the students’ levels of algebraic thinking in algebraic and conceptual terms (Çağdaşer, 2008; Dede, & Argün, 2003; Kaf, 2007; Kaya, 2015; Yenilmez, & Teke, 2008); meta-synthesis of Algebra I interventions (Dibbs, Hott, Martin, Raymond, & Kline, 2020). It is known that evaluation is not possible through knowledge-level questions in mathematics. It was reported that skills, such as reasoning, deduction, synthesis, inference, and interpreting are more valuable instead of these in the area of mathematics teaching (NCTM, 2000; Kabael, & Tanışlı, 2010). Developing 8th grade students’ algebraic reasoning, which is known as the basis of mathematics, is necessary. Accordingly, investigating the relationship between algebraic reasoning and translating among multiple representations skills in the area of algebra learning is important.

The purpose of the present research is defining the direction and level of the relationship between 8th grade students’ translating among multiple representations skills and their algebraic reasoning and revealing the predictive power on algebraic reasoning. Accordingly, the answers to the following research questions are sought:

1) Is there a relationship between 8th grade students’ translating among multiple representations skills and their algebraic reasoning?

2) Is 8th grade students’ translating among multiple representations skill (graph, table, equation, verbal) a significant predictor of their algebraic reasoning?

METHOD

Research Model

The present research was conducted in accordance with relational survey model, which is used for revealing the relationships between two or more variables, or in other words, whether variables affect each other. It enables explaining of the relationships between variables and prediction of the results (Plano Clark & Creswell, 2011; Mills & Gay, 2016). In relational research, the exploratory and prediction models were used together. In exploratory model, the relationship between variables was defined with correlation analysis, and continuous variable type scores obtained from the participants were analysed as a single group (Creswell, & Creswell, 2017). In this research, multiple linear regression analysis was conducted by assigning the independent variable as the predicting variable and the dependent variable as the predicted variable.
Study Group

The study group consisted of a total of 188 students, 57 male (30.3%) and 131 female (69.7%), who studied at 8th grade in Turkey. In socio-culturally low-middle-high profile state public schools are included in the study. Informed consent form was presented to the participants before the administration. It was explained to the participants that the study will be carried out on a voluntary basis and will not be used except the purpose of the study. Non-volunteer participants were not included in the study.

Data Collection Tools

To measure students’ translating among multiple representation skills the Translating Among Multiple Representations Test (TAMRT) developed by Gürbüz and Şahin (2015) was used. The sub-scales of the test are presented in Table 1 below.

### Table 1 TAMRT skill and subscales of the skill (Gürbüz & Şahin, 2015)

<table>
<thead>
<tr>
<th>Skill</th>
<th>Subscales of the skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translating Among Multiple Representations Skill</td>
<td>TAMRT1: Translating from verbal expression, table and equation to graph representation</td>
</tr>
<tr>
<td></td>
<td>TAMRT2: Translating from verbal expression, table and graph to equation representation</td>
</tr>
<tr>
<td></td>
<td>TAMRT3: Translating from verbal expression, equation and graph to table representation</td>
</tr>
<tr>
<td></td>
<td>TAMRT4: Translating from table, equation and graph to verbal expression representation</td>
</tr>
</tbody>
</table>

The Cronbach α reliability coefficient was calculated as .848 at this step. In order to enable students to detect the relationship between different representations of the same data in the TAMRT consisting of twelve open-ended questions, the present research is based on four basic problems (verbal, table, equation, graph) named as flower, pool, book and quadrangle problems and participants were asked to relate the each with other three representations (Gürbüz, & Şahin, 2015). The administration of the test took 40 minutes. An example question of TAMRT is like below.

**Figure 1. Example question of TAMRT**

Data collected with TAMRT were scored according to an analytic scoring scale (Cetin & Ertekin, 2011) (Table 2).

### Table 2 TAMRT analytic scoring scale

<table>
<thead>
<tr>
<th>Test dimension</th>
<th>Score</th>
<th>Student behaviour</th>
<th>Min-Max score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-ended question</td>
<td>3</td>
<td>Solution steps are correct, reached a correct result.</td>
<td>0-36</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Solution steps are correct, result is wrong.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Solution steps are partially correct, result is wrong.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Solution steps are wrong or there is none, result is wrong or there is none.</td>
<td></td>
</tr>
</tbody>
</table>
The second data collection tool used is Algebraic Reasoning Evaluation Tool (ARET) developed by Kaya (2015) and consisting of seven subscales in order to define school students’ algebraic reasoning. The tool consists of 16 multiple-choice and 22 open-ended, the total of 38 items including test dimension and skills obtained by grouping the similar of the reasoning related skills defined by research and curriculum documents (Kaya, Keşan, İzgiol, & Erkuş, 2016). An example question concerned “defining suitable algebraic reasoning” subscale of ARET is like below.

Sercan, Canan and Ozkan will share 45 ₺ in accordance with the following conditions:

- Sercan will take 20 ₺ more than Canan.
- Canan will take twice as much money as Ozkan.

Accordingly, how much ₺ will Ozkan get?

Table 3 Subscales of ARET and the distribution of items

<table>
<thead>
<tr>
<th>Subscales</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARET1: Defining and using algebraic constructs and relations</td>
</tr>
<tr>
<td>ARET2: Using different algebraic expressions of the same data</td>
</tr>
<tr>
<td>ARET3: Defining suitable algebraic reasoning</td>
</tr>
<tr>
<td>ARET4: Making deductions of algebraic expressions</td>
</tr>
<tr>
<td>ARET5: Establishing algebraic relations related to the deduction</td>
</tr>
<tr>
<td>ARET6: Deciding on the correctness of the result and the correct solution steps</td>
</tr>
<tr>
<td>ARET7: Solving non-routine problems</td>
</tr>
</tbody>
</table>

Cronbach α reliability coefficient of ARET was calculated as .93 by Kaya (2015). This test was administered to students in two sessions, each lasting 40 minutes. Analytic scoring scale used in the evaluation of ARET is presented in Table 4.

Table 4 Analytic scoring scale for ARET

<table>
<thead>
<tr>
<th>Test dimension</th>
<th>Score</th>
<th>Student behaviour</th>
<th>Min-max score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple choice</td>
<td>1</td>
<td>Correct</td>
<td>0-16</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Wrong</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Reasoning is clear and full and student used the reasoning correctly and answered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Answer is correct, reasoning is not full and clear</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Answer is wrong, but the students defined the correct reasoning, tried to use it but couldn’t complete it</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Answer is wrong, developed reasoning is partially correct and used only partially in the solution steps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Student made no reasoning</td>
<td></td>
</tr>
<tr>
<td>Open-ended</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>0-88</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Both instruments were administered in the second semester of the academic year, after the teaching of the related learning domains was completed. This test was administered to students in two sessions, each lasting 40 minutes. Initially TAMRT was administered then ARET was completed. The data were collected in mathematics courses by the researchers. The data collection process took three weeks.
Data Analysis

Pearson correlation analysis was conducted in the present research to study the relationship between 8th grade students’ translating among multiple representations skills and algebraic reasoning. Additionally, linear regression analysis was conducted to find out whether students’ translating among multiple representations skills (verbal, graph, table, equation) are a significant predictor of their algebraic reasoning. Quantitative data analysis was conducted on SPSS 21.0 packaged software.

To conduct multiple linear regression analysis, whether the conditions of sufficient work group, multiple linear relations, extreme values and normality were met was tested. Taking the condition that there should be at least 40 participants for each predicting variable (Pallant, 2001) into consideration, it can be stated that 188 participants were sufficient for the analysis. Besides, that the values of correlation between predicting variable (translating among multiple representation skills; translating into graph, table, equation, verbal representations) is much lower than .90 (see Table 5) and that the studied Durbin Watson values are lower than 10 (1.84) indicate that there is no linear relation problem. Moreover, because 4 predicting variables were included in the present research by studying the mahalanobis values, extreme values were cleared by excluding the ones having mahalanobis values higher than 18.47 (Pearson, & Hartley, 1958; cited in Seçer, 2015). Skewness and kurtosis values indicated a normal distribution, and Pearson correlation and multiple linear regression analyses (enter method) were conducted. According to enter method, all predicting variables are processes at the same time, and so the common predictive power of all predicting variables on predicted variables is found (Seçer, 2015).

FINDINGS

In order to find out whether there is a relationship between students’ translating among multiple representations skills and algebraic reasoning, Pearson correlation analysis was conducted between TAMRT subscales and whole ARET and ARET subscales, and the results are presented in Table 5.

Table 5 Analysis of correlation between TAMRT subscales and ARET subscales

<table>
<thead>
<tr>
<th></th>
<th>ARET 1</th>
<th>TAMRT 1</th>
<th>ARET 2</th>
<th>TAMRT 2</th>
<th>ARET 3</th>
<th>TAMRT 3</th>
<th>ARET 4</th>
<th>TAMRT 4</th>
<th>ARET 5</th>
<th>TAMRT 5</th>
<th>ARET 6</th>
<th>TAMRT 6</th>
<th>ARET 7</th>
<th>TAMRT 7</th>
<th>ARET 8</th>
<th>TAMRT 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARET 1</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>TAMRT 1</td>
<td>.595**</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>ARET 2</td>
<td>.431**</td>
<td>.386**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>ARET 3</td>
<td>.265**</td>
<td>.159**</td>
<td>.310**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ARET 4</td>
<td>.516**</td>
<td>.547**</td>
<td>.391**</td>
<td>.231**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>ARET 5</td>
<td>.708**</td>
<td>.398**</td>
<td>.380**</td>
<td>.236**</td>
<td>.584**</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>ARET 6</td>
<td>.873**</td>
<td>.537**</td>
<td>.280**</td>
<td>.215**</td>
<td>.732**</td>
<td>.556**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ARET 7</td>
<td>.874**</td>
<td>.524**</td>
<td>.328**</td>
<td>.206**</td>
<td>.739**</td>
<td>.631**</td>
<td>.726**</td>
<td>1</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>ARET 8</td>
<td>.910**</td>
<td>.533**</td>
<td>.367**</td>
<td>.167**</td>
<td>.734**</td>
<td>.832**</td>
<td>.764**</td>
<td>.725**</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>TAMRT 1</td>
<td>.599**</td>
<td>.466**</td>
<td>.269**</td>
<td>.122**</td>
<td>.557**</td>
<td>.381**</td>
<td>.510**</td>
<td>.345**</td>
<td>.540**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAMRT 2</td>
<td>.581**</td>
<td>.451**</td>
<td>.282**</td>
<td>.142**</td>
<td>.539**</td>
<td>.388**</td>
<td>.497**</td>
<td>.550**</td>
<td>.501**</td>
<td>.751**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAMRT 3</td>
<td>.400**</td>
<td>.301**</td>
<td>.104**</td>
<td>.117**</td>
<td>.357**</td>
<td>.277**</td>
<td>.402**</td>
<td>.304**</td>
<td>.382**</td>
<td>.530**</td>
<td>.507**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAMRT 4</td>
<td>.416**</td>
<td>.444**</td>
<td>.137**</td>
<td>.138**</td>
<td>.382**</td>
<td>.292**</td>
<td>.392**</td>
<td>.360**</td>
<td>.361**</td>
<td>.811**</td>
<td>.620**</td>
<td>.635**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the results of Pearson correlation analysis presented in Table 5, there is a positive and significant correlation ($r=.595$, $p<.01$) between translating among multiple representations skills and algebraic reasoning, and there are positive and significant correlations between translating among multiple representations test 1st dimension (translating to graph representation) and algebraic
reasoning \((r=.599, p<.01)\); between translating among multiple representations test 2\(^{nd}\) dimension (translating to table representation) and algebraic reasoning \((r=.581, p<.01)\); between translating among multiple representations test 3\(^{rd}\) dimension (translating to equation representation) and algebraic reasoning \((r=.400, p<.01)\); and between translating among multiple representations test 4\(^{th}\) dimension (translating to verbal representation) and algebraic reasoning \((r=.416, p<.01)\). Accordingly, it can be claimed that students’ algebraic reasoning scores increase as their translating among multiple representations skills develop.

Multiple linear regression analysis was conducted to investigate whether students’ translating among multiple representations skills subscales predict their algebraic reasoning total scores significantly, and the results are presented in Table 6.

**Table 6 Results of the multiple linear regression analysis for the translating among multiple representations test subscales’ prediction of algebraic reasoning total score**

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>(\beta)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>19.831</td>
<td>3.502</td>
<td>5.662</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>TAMRT1</td>
<td>3.562</td>
<td>.911</td>
<td>.357</td>
<td>3.911</td>
<td>.000</td>
</tr>
<tr>
<td>TAMRT2</td>
<td>3.336</td>
<td>1.033</td>
<td>.294</td>
<td>3.229</td>
<td>.001</td>
</tr>
<tr>
<td>TAMRT3</td>
<td>.893</td>
<td>.772</td>
<td>.088</td>
<td>1.157</td>
<td>.249</td>
</tr>
<tr>
<td>TAMRT4</td>
<td>-.480</td>
<td>.987</td>
<td>-0.041</td>
<td>-0.487</td>
<td>.627</td>
</tr>
</tbody>
</table>

Dependent variable: ARET
R=.635, \(R^2=.403\), p<.01

As presented in Table 6, according to the results of the multiple linear regression analysis there are positive and significant relationships between algebraic reasoning total score and between translating among multiple representations test 1\(^{st}\) dimension (translating to graph representation), 2\(^{nd}\) dimension (translating to table representation), 3\(^{rd}\) dimension (translating to equation representation) and 4\(^{th}\) dimension (translating to verbal representation) \((R=.635, R^2=.403, p<.01)\). Students’ translating among multiple representations skill (1\(^{st}\) and 2\(^{nd}\) dimensions; translating to graph and table representations) explains the 40% of the total variance in their algebraic reasoning. According to standardized \(\beta\) coefficient and \(t\) values, in the order of importance, translating to graph representation and table representation skills are significant predictors of algebraic reasoning. The 3\(^{rd}\) and 4\(^{th}\) dimensions of translating among multiple representations test (translating to equation and verbal representations) do not predict algebraic reasoning at a significant level.

Since the correlations between subscales of translating among multiple representations test and the 1\(^{st}\) dimension (defining and using algebraic constructs/relations) and 2\(^{nd}\) dimension (using different algebraic expression of the same data) of the algebraic reasoning evaluation tool is low (see Table 3), the prediction is not significant. Therefore, the analysis for the prediction of TAMRT subscales on other subscales of algebraic reasoning evaluation tool (3\(^{rd}\), 4\(^{th}\), 5\(^{th}\), 6\(^{th}\), and 7\(^{th}\)) are presented.

Results of the multiple regression analysis for TAMRT subscales’ prediction of ARET 3\(^{rd}\) dimension (defining suitable algebraic reasoning) are presented in Table 7.

**Table 7 Results of the multiple regression analysis for translating among multiple representations test subscales’ prediction of defining suitable algebraic reasoning dimension**

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>(\beta)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.796</td>
<td>1.228</td>
<td>3.091</td>
<td>.002</td>
<td></td>
</tr>
<tr>
<td>TAMRT1</td>
<td>1.139</td>
<td>.319</td>
<td>.341</td>
<td>3.566</td>
<td>.000</td>
</tr>
<tr>
<td>TAMRT2</td>
<td>1.043</td>
<td>.362</td>
<td>.275</td>
<td>2.879</td>
<td>.004</td>
</tr>
<tr>
<td>TAMRT3</td>
<td>.197</td>
<td>.271</td>
<td>.058</td>
<td>.728</td>
<td>.467</td>
</tr>
<tr>
<td>TAMRT4</td>
<td>-.131</td>
<td>.346</td>
<td>-.033</td>
<td>-.380</td>
<td>.705</td>
</tr>
</tbody>
</table>

Dependent variable: ARET3
R=.588, \(R^2=.346\), p<.01
As presented in Table 7, according to the results of the multiple linear regression analysis, there are positive and significant correlations between 1st dimension (translating to graph representation), 2nd dimension (translating to table representation), 3rd dimension (translating to equation representation) and 4th dimension (translating to verbal representation) of translating among multiple representations skill and 3rd dimension (defining suitable algebraic reasoning) of algebraic reasoning ($R=.588$, $R^2=.346$, $p<.01$). Students’ translating among multiple representations skill (1st and 2nd dimensions; translating to graph and table representations) explains the 34% of the total variance in defining suitable algebraic reasoning subscale. According to standardized ($\beta$) coefficient and t values, in the order of importance, translating to graph representation and table representation skills are significant predictors of defining suitable algebraic reasoning. The 3rd and 4th dimensions of translating among multiple representations test (translating to equation and verbal representations) do not predict defining suitable algebraic reasoning skill at a significant level.

Results of the multiple regression analysis for TAMRT subscales’ prediction of ARET 4th dimension (making deductions of algebraic expressions) are presented in Table 8.

### Table 8 Results of the multiple regression analysis for translating among multiple representations test subscales’ prediction of making deductions of algebraic expressions dimension

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>$\beta$</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.646</td>
<td>.249</td>
<td></td>
<td>10.647</td>
<td>.000</td>
</tr>
<tr>
<td>TAMRT1</td>
<td>.109</td>
<td>.065</td>
<td>.181</td>
<td>1.685</td>
<td>.094</td>
</tr>
<tr>
<td>TAMRT2</td>
<td>.146</td>
<td>.073</td>
<td>.214</td>
<td>1.995</td>
<td>.048</td>
</tr>
<tr>
<td>TAMRT3</td>
<td>.043</td>
<td>.055</td>
<td>.070</td>
<td>.783</td>
<td>.435</td>
</tr>
<tr>
<td>TAMRT4</td>
<td>.003</td>
<td>.070</td>
<td>.004</td>
<td>.041</td>
<td>.967</td>
</tr>
</tbody>
</table>

Dependent variable: ARET4
$R= .415$, $R^2=.173$, $p<.01$

As presented in Table 8, according to the results of the multiple linear regression analysis, there are positive and significant correlations between 1st dimension (translating to graph representation), 2nd dimension (translating to table representation), 3rd dimension (translating to equation representation) and 4th dimension (translating to verbal representation) of translating among multiple representations skill and 4th dimension (making deductions of algebraic expressions) of algebraic reasoning ($R= .415$, $R^2=.173$, $p<.01$). Students’ translating among multiple representations skill 2nd dimension (translating to table representation) explains the 17% of the total variance in defining suitable algebraic reasoning subscale. According to standardized ($\beta$) coefficient and t values, translating to table representation skill is a significant predictor of making deductions of algebraic expressions. The 1st, 3rd and 4th dimensions of translating among multiple representations test (translating to graph, equation and verbal representations) do not predict making deductions of algebraic expressions skill at a significant level.

Results of the multiple regression analysis for TAMRT subscales’ prediction of ARET 5th dimension (establishing algebraic relations related to the deduction) are presented in Table 9.

### Table 9 Results of the multiple regression analysis for translating among multiple representations test subscales’ prediction of establishing algebraic relations related to the deduction dimension

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>$\beta$</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.165</td>
<td>.752</td>
<td>.264</td>
<td>1.549</td>
<td>.123</td>
</tr>
<tr>
<td>TAMRT1</td>
<td>.525</td>
<td>.196</td>
<td>.264</td>
<td>2.686</td>
<td>.008</td>
</tr>
<tr>
<td>TAMRT2</td>
<td>.509</td>
<td>.222</td>
<td>.226</td>
<td>2.295</td>
<td>.023</td>
</tr>
<tr>
<td>TAMRT3</td>
<td>.304</td>
<td>.166</td>
<td>.151</td>
<td>1.834</td>
<td>.068</td>
</tr>
<tr>
<td>TAMRT4</td>
<td>-.012</td>
<td>.212</td>
<td>-.005</td>
<td>-.058</td>
<td>.954</td>
</tr>
</tbody>
</table>

Dependent variable: ARET5
$R= .553$, $R^2=.305$, $p<.01$
According to the results of the multiple linear regression analysis, there are positive and significant correlations between 1st dimension (translating to graph representation), 2nd dimension (translating to table representation), 3rd dimension (translating to equation representation) and 4th dimension (translating to verbal representation) of translating among multiple representations skill and 5th dimension (establishing algebraic relations related to the deduction) of algebraic reasoning ($R=.553$, $R^2=.305$, $p<.01$). Students’ translating among multiple representations skill 1st dimension (translating to graph representation) and 2nd dimension (translating to table representation) explain the 30% of the total variance in establishing algebraic relations related to the deduction subscale. According to standardized ($β$) coefficient and t values, translating to graph representation and table representation skills are significant predictors of establishing algebraic relations related to the deduction skill. The 3rd and 4th dimensions of translating among multiple representations test (translating to equation and verbal representations) do not predict establishing algebraic relations related to the deduction skill at a significant level.

Results of the multiple regression analysis for TAMRT subscales’ prediction of ARET 6th dimension (deciding on the correctness of the result and the correct solution steps) are presented in Table 10.

Table 10 Results of the multiple regression analysis for translating among multiple representations test subscales’ prediction of deciding on the correctness of the result and the correct solution steps dimension

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>$β$</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.914</td>
<td>.778</td>
<td>1.174</td>
<td>.242</td>
<td></td>
</tr>
<tr>
<td>TAMRT1</td>
<td>.681</td>
<td>.202</td>
<td>.322</td>
<td>3.366</td>
<td>.001</td>
</tr>
<tr>
<td>TAMRT2</td>
<td>.813</td>
<td>.230</td>
<td>.338</td>
<td>3.543</td>
<td>.001</td>
</tr>
<tr>
<td>TAMRT3</td>
<td>-.031</td>
<td>.171</td>
<td>-.015</td>
<td>-1.83</td>
<td>.055</td>
</tr>
<tr>
<td>TAMRT4</td>
<td>-.093</td>
<td>.219</td>
<td>-.037</td>
<td>-.425</td>
<td>.671</td>
</tr>
</tbody>
</table>

Dependent variable: ARET6
$R=.586$, $R^2=.344$, $p<.01$

As shown in Table 10, according to the results of the multiple linear regression analysis, there are positive and significant correlations between 1st dimension (translating to graph representation), 2nd dimension (translating to table representation), 3rd dimension (translating to equation representation) and 4th dimension (translating to verbal representation) of translating among multiple representations skill and 6th dimension (deciding on the correctness of the result and the correct solution steps) of algebraic reasoning ($R=.586$, $R^2=.344$, $p<.01$). Students’ translating among multiple representations skill 1st dimension (translating to graph representation) and 2nd dimension (translating to table representation) explain the 34% of the total variance in deciding on the correctness of the result and the correct solution steps subscale. According to standardized ($β$) coefficient and t values, translating to graph representation and table representation skills are significant predictors of deciding on the correctness of the result and the correct solution steps skill. The 3rd and 4th dimensions of translating among multiple representations test (translating to equation and verbal representations) do not predict deciding on the correctness of the result and the correct solution steps skill at a significant level.

Results of the multiple regression analysis for TAMRT subscales’ prediction of ARET 7th dimension (solving non-routine problems) are presented in Table 11.

Table 11 Results of the multiple regression analysis for translating among multiple representations test subscales’ prediction of solving non-routine problems dimension

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>$β$</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.105</td>
<td>1.108</td>
<td>2.802</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>TAMRT1</td>
<td>1.048</td>
<td>.288</td>
<td>.353</td>
<td>3.637</td>
<td>.000</td>
</tr>
<tr>
<td>TAMRT2</td>
<td>.715</td>
<td>.327</td>
<td>.212</td>
<td>2.185</td>
<td>.030</td>
</tr>
<tr>
<td>TAMRT3</td>
<td>.396</td>
<td>.244</td>
<td>.132</td>
<td>1.624</td>
<td>.106</td>
</tr>
<tr>
<td>TAMRT4</td>
<td>-.244</td>
<td>.312</td>
<td>-.070</td>
<td>-.781</td>
<td>.436</td>
</tr>
</tbody>
</table>

Dependent variable: ARET7
$R=.568$, $R^2=.322$, $p<.01$
According to the results of the multiple linear regression analysis, there are positive and significant correlations between 1st dimension (translating to graph representation), 2nd dimension (translating to table representation), 3rd dimension (translating to equation representation) and 4th dimension (translating to verbal representation) of translating among multiple representations skill and 7th dimension (solving non-routine problems) of algebraic reasoning ($R = .568, R^2 = .322, p < .01$). Students’ translating among multiple representations skill 1st dimension (translating to graph representation) and 2nd dimension (translating to table representation) explain the 32% of the total variance in solving non-routine problems subscale. According to standardized (β) coefficient and t values, translating to graph representation and table representation skills are significant predictors of solving non-routine problems skill. The 3rd and 4th dimensions of translating among multiple representations test (translating to equation and verbal representations) do not predict solving non-routine problems skill at a significant level.

The present research revealed a general significant relationship between students’ translating among multiple representations skills and their algebraic reasoning. According to the findings related to students’ skills of translating to each representation predicting subscales of algebraic reasoning (defining suitable algebraic reasoning, making deductions of algebraic expressions, establishing algebraic relations related to the deduction, deciding on the correctness of the result and the correct solution steps, and solving non-routine problems skills), it was found that only translating to graph and table representations skills predict subscales of algebraic reasoning at a significant level.

**DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

According to the findings of the present research, there is positive correlation 8th grade students’ translating to multiple representations skills and their algebraic reasoning. This finding is in agreement with the findings of the study conducted by Akkuş Çikla (2004) on 7th grade students that multiple representations have a significant effect on algebra performance. Similarly, it is in agreement with the findings of the study conducted by Kaya (2015) on algebraic reasoning that multiple representations are effective in developing 7th grade students’ using different algebraic expressions of the same data, defining suitable algebraic reasoning, establishing algebraic relations related to the deduction, deciding on the correctness of the result, deciding on the solution steps and solving non-routine problems skills. It is also in agreement with the finding of the study conducted by İzgiol (2014) that multiple representations-based teaching has a significant effect on pre-service teachers’ linear algebra achievement.

The present research also found that 8th grade students’ translating to graph and table representations skills among the multiple representation skills predict defining and using algebraic constructs and relations, using different algebraic expressions of the same data, making deductions of the algebraic expressions, establishing algebraic relations related to the deduction, deciding on the correctness of the result and the correct solution steps, and solving non-routine problems skills subscales of algebraic reasoning at a significant level. Accordingly, translating among multiple representations skill (1st and 2nd dimensions; translating to graph and table representations) explain the 40% of the total variance in algebraic reasoning. What is different than expected here is that inference representations (graph, table) rather than equation representation predict subscales of algebraic reasoning. The related literature suggests that alternative representations other than equation representation are very important in deciding suitable algebraic algorithms (López-Ibáñez, Prasad, & Paechter, 2005). Additionally, the definition that “Algebraic reasoning is a way of thinking that requires studying mathematical constructs and situations with the help of algebraic symbols, using mathematical models and variables or with diagrams, graphs, equations and tables” (Herbert, & Brown, 1997; Kaya, 2015; Kriegler, 2004; NCTM, 2000; TIMSS, 2003) verifies the findings of the present research theoretically.

While the development of algebraic reasoning is considered as a basic requirement for individuals’ understanding mathematics and achievement in performing mathematics (Nathan, & Koellner, 2007) it comes along with the need of students for methods to follow in acquiring skills,
such as interpreting, transferring information to representations and reasoning. Taking the relationship between students’ algebraic reasoning and translating among multiple representations skills into consideration, development of translating among multiple representations skills is only possible with representations assisted teaching. According to the findings of the studies conducted in this context (Adu-Gyamfi, 2007; Akkuş Çıkla, 2004; Bal, 2014; Çetin & Aydin, 2020; Dreher, & Kuntze, 2015; Duncan, 2010; Durmuş, & Yaman, 2002; Gilbert, 2010; Goldin, 1998; Kendal, 2002; Mallet, 2007; Sevimli, 2009) translating among multiple representations skills must be developed, and for this multiple representations-assisted teaching can be utilized in mathematics teaching. In a study by (Carraher, Martinez, & Schliemann, 2008), multiple representations used even in early age (3rd grade students) contributed to their algebraic expressions. In general, the use of multiple representations had benefit for students in algebra topic (Dibbs, Hott, Martin, Raymond, & Kline, 2020; Selling, 2016).

Based on the findings of the present research, attaching extra importance to expressing graph and table representations among multiple representations can be suggested in algebra teaching. In accordance with the finding that algebraic reasoning is not predicted by procedural skills, verbal representations in mathematics education, more attention can be paid on graph and table interpretations.

It can be suggested that instead of giving procedural learnings prominence, studies on students’ acquisition of translating between representations using different representations together can be conducted in algebra teaching. Teachers can contribute to the development of students’ algebraic reasoning by including multiple representations-assisted practices in the teaching of the subject of algebra. Based on the present research, the relationship between translating among multiple representations skills and algebraic reasoning can be studied in the context of different variables on wider samples with structural equation modelling.

REFERENCES


Kindergarten Management Problems and Solutions in Turkey: The Experiences of Principals

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Ministry of National Education

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Gaziantep University

Abstract

In this study, it is aimed to reveal the problems faced by kindergarten principals with the order of importance and to propose solutions to these problems according to their own opinions. The research was designed with mixed (exploratory order) method. In the qualitative dimension, 10 school principals were interviewed. 62 school principals were reached to obtain scaling data based on ranking judgments. As a result, the problems faced by kindergarten principals are related to finance, staff, parents, legislation, communication and students in order of priorities. The most important problems encountered under these problem headings are these: Insufficient income sources under the title of financing, not being able to employ enough auxiliary personnel under the heading of staff, parents’ perspective to school under the heading of the parents, excessive workload under the title of legislation, foreign students and parents in the subtitle of communication and adaptation process problems in the student.

Keywords: Kindergarten Principals, Management Problems, Kindergarten Finance, Turkey

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INTRODUCTION

There are many sub-systems that contribute to the sustainment and development of societies. It can be stated education holds special significance among these systems since it serves as a guide to the future of societies. Within the education system, schools make up an important sub-system with regard to the masses that it has access to as well as the duties and roles that they have taken on. Schools comprise an important sub-system within the education system with regard to the masses that it has access to and its appointed tasks. Hence, schools play an important role in the sustainment and development of the society. Schools are organizations that shape the formal education process by trying to instill desired behavioral changes through the presentation of educational activities in accordance with the needs of the society and the individual (Fidan & Erden, 1998).

Administration is one of the principal elements of schools for carrying out their functions. Therefore, it can be indicated that school administration is a unit that will provide functionality to the education system while contributing to shaping the future of societies. In this regard, it is expected from school principals to be well-equipped individuals with sufficient competence. Whereas well-equipped school principals are defined as individuals who establish coordination between the members of the organization, give orders, carry out inspections to prevent deviating from the goals, direct the works carried out and ensure that the human and financial resources at the schools are used in the most effective manner as possible so that the schools are able to reach their goals (Gürsel, 2003).

School principals may encounter different problems in the administrative processes. A problem in school administration can be defined as anything that prevents the school from reaching its goals, slows it down and diverts it from the target which should be resolved (Başaran, 1994). School principals enter a problem solving phase when they act in order to actualize the reasons of existence of schools. These problems can be resolved through awareness, defining and identifying. It is required in order for the problems to be resolved that school principals have a good command over the concepts and processes related with school management, are able to motivate all shareholders of the school in the direction of school objectives, are well-versed in behavioral sciences as well as education management (Türkmenoğlu, 2015) and are able to resolve the problems encountered not by way of trial-error but through the utilization of scientific methods (Çalık, Sezgin & Çalık, 2013).

Administration of kindergarden institutions differ and gain importance due to the fact that the ages of the educated children small, that the parents are in continuous communication with the administration, that majority of the employees are female and that they are different with regard to physical attributes, course hours as well as the recesses and the materials used etc. It can be observed when a literature survey is conducted that many studies have been conducted on the administration at primary education (primary-secondary schools) and secondary education levels as well as the problems encountered (Bakır, 2007; Bıkan, 2008; Bryik, 2014; Gülder, 2007; Guler, 2006; Kahramanoğlu, 1990; Sarce, 2006; Sevgi, 2004; Şekerci & Apay, 2009; Turan, 2007). However, the number of studies on kindergartens is quite limited (Büte and Balcı, 2010; Demir Yıldız, 2018; Demircan Aydın, 2017; Doğan, 2014; Tok, 2002). It seems quite important to use scientific methods to put forth the problems that school principal faces at the kindergardens encountered less in research studies compared with other education levels.

The importance of kindergarden institutions is understood strongly every day due to the fact that they make up the first stage among the educational institutions and that personal, moral and cognitive developments are completed rapidly as emphasized by development and education institutions at the target age group. Poyraz & Dere (2006) defined kindergarden institutions as social establishments having education as their primary function which shape children aged between 0-6 in healthy and well-organized environments in the light of the cultural characteristics of the society thus laying the foundations for a strong personality, social sensibility and creative intelligence. Therefore, each adversity faced during the pre-school period may leave behind deep traces while every positive incident may ensure that the education life of the individual continues successfully.
Students can go to kindergartens, nursery classes or day care centers during the pre-school period. Kindergartens are separated because they have an independent administration. Therefore, the aim of the present study was determined as identifying the problems encountered at kindergartens and their priority levels in addition to suggesting solutions to overcome it.

**METHODOLOGY AND METHOD**

**Design and Participant**

Mixed method was used in the present study in order to benefit from the advantages of both qualitative and quantitative methods while reducing the limitations of both in resolving the research problem. Mixed method studies can be defined as the use of both the qualitative and quantitative research methods by a researcher in one study or in several consecutive studies (Creswell, 2003). Different patterns are used in mixed method studies due to the difference of the research process. Exploratory pattern that starts with qualitative methods and continues with quantitative methods was used in order to make the study more understandable. Exploratory pattern is a research pattern during which qualitative data are collected first which are then used to develop the quantitative follow-up stage (Mert, 2019). During the research process, opinions of the participants on the problem areas they encounter at their respective schools were collected first. They were then asked to use the scaling method for listing the problems.

The qualitative study group was comprised of 10 kindergarten principal in differ with regard to socioeconomic states in order to ensure maximum diversity by identifying situations that are similar to and differ from the problems examined in the study population. A sample group was not identified for the quantitative dimension of the study and it was aimed to contact with the principals of 67 kindergartens (MoNE, 2019) after which 62 school principals were contacted thus shaping the quantitative dimension based on their opinions.

**Data Collection and Analysis**

Data for the qualitative dimension of the study were acquired by way of semi-structured interview from among the interview methods in the guidance of the interview form. A semi-structured interview is a meeting in which the researcher does not strictly follow a formalized list of questions but directs the questions to the participants in a more flexible manner based on a form (Özer Özkan, 2019). The interviews were recorded in order to ensure an accurate transcription. The 10 participants were coded as KP1 (Kindergarten Principal 1), KP2………,KP10.

While scaling method was used in the quantitative dimension of the study in order to sort the problems identified by way of the interview method in order of decreasing importance. Findings were obtained using the online scaling form for identifying the level of importance for the data acquired as a result of the qualitative processes. This form was sent to the participants either via mail or through messaging applications.

**Data Analysis**

According to Creswell & Plano Clark (2010), qualitative and quantitative analysis techniques are used when analyzing the data in mixed method studies. Descriptive analysis technique was used in the qualitative dimension of the study. In descriptive analysis, the acquired data are summarized and interpreted based on pre-determined themes and direct quotations are frequently used to reflect the opinions of individuals (Yıldırım & Şimşek, 2005).

Scaling based on ordering judgments was applied during the analysis of quantitative data. Scaling is used to express the procedure which includes the development of a measurement tool followed by fitting the acquired data to the equal interval scale level which enables the consideration of the classification as a unit when interpreting (Acar Güvendir & Özer Özkan, 2013). Microsoft Excel
software was used during the analysis for preparing order frequency matrices indicating which problems have been placed how many times at which order by the kindergarten administrators. A matrix of proportions Ratio matrices were prepared based on the responses to the questions after which the “z” values corresponding to the matrix elements were obtained passing on to the preparation stage for the unit normal deviations matrix. The sum of each column was written down at the lowest line of the unit normal deviations matrix followed by calculating the mean values for the “z” value on this line thereby obtaining the scale values.

FINDINGS AND DISCUSSION

Administrative issues at kindergartens were classified under the main headings of; financing, personnel, parents, students, regulations and communication.

Opinions of Kindergarten Principals on Financing Issues

The opinions of kindergarten principals on financing issues can be handled under three sub-headings. These sub-headings are; variations in income items, variations in expense items and expenditure process.

Variations in income items: The first aspect that attracts attention with regard to financing was the problem of variations in income items. Kindergarten principals emphasized the insufficiency and diversity for the resources related with income items and specified these items as; fees and allowances after which they indicated various problems they encountered under both headings.

Kindergarten principals stated that the fees generally cause problems. The participants emphasized that the collected fees are insufficient. Participant opinions on the insufficiency of the collected fees;

It is difficult to manage a weathered building on fees alone. It is very difficult to collect money from the parents. If it is necessary we call [or] message them regarding fees. The energy I spend for calling people all the time is another issue. These calls may sometimes become annoyingly frequent. (KP9)

Of the participants, KP2 and KP7 stated that some parents who give fees use this as an element of pressuring thus trying to make an impact on the decisions of school administration. They also stated that as a result of this they either experience conflicts or are forced to give priority to the demands of the parents indicating that fees incite competition with other schools and that they have to increase the classroom sizes to take more fees. The participants stated that they experience allowance related problems as well. This was expressed as;

We do not demand allowance but this is related with luck, if we have it we have a better year, if not… (KP1)

Under the allowance heading, kindergarten principals mentioned the chance factor, that they cannot move beyond certain expense items, that their budgets are not sufficient to accomplish their goals because they are left by themselves in the school and that all these factors have an adverse impact on quality.

Variations in expense items: Expense items at the kindergartens consist of expenses made for staff members, cleaning, acclimatization activities, expenses for the physical spaces, repairs, maintenance activities, educational tools and equipment along with unexpected expenses that may occur. Participant opinions were as follows;
Of the collected fees, 90-95% is spent on the staff members and we are left with a very little amount after this. We struggle in finding material because we have to fit in the budget. The Ministry sends only books; I did not see anything else. (KP1)

This is an old building, the school needs to be repainted because it is a living structure, it should be renovated continuously which is costly and we have to deal with workers all the time. (KP5)

Kindergarten principals mentioned the importance of the exterior appearance of the building and the equipment inside stating that the parents pay attention to them during registration rather than the quality of education. They said that the schools have to be painted every year and that the materials used should be renewed but complained that they experience difficulties in finding the financial power to do these.

Expenditure process: Kindergarten principals mentioned the extreme workload for the expenditure process, that the teachers do not take on responsibility for this and that they try to solve the issue faster because they do not have sufficient staff for market research. The opinions of a principal on this issue are given below:

We establish a commission, there are tenders. This is a serious workload and plus we have to be meticulous. We write the names of the teachers for the commissions but they do not want to take on responsibility and we are forced to do it as well.” (KP6)

Opinions of Kindergarten principals on personnel problems: The kindergarten principals said that they experience various problems due to the demand by more parents for certain teachers.

We have teachers who stand out which is a problem because right now the maximum students a classroom can have is 20-25. But the demand sometimes rises up to 50, all those after the first 25 go and try to find some acquaintances in high-up places or they feel resentment towards you. (KP4)

KP5 stated that some teachers do not display their best performance in order to be more comfortable and work with fewer students. KP 8 also put forth that some teachers do not improve themselves that they still stick to old habits and fail to keep pace with the current age which in turn leads to some problems. The principals indicated that job security is an obstacle between the teachers and their efforts to display their best performances. Opinions of one administrator on this subject are presented below:

Some of our friends use job security as an excuse and do almost nothing in the classroom. They come to the school as if they are forced to do so. They are not good at self-sacrifice. The only reason for this is the lack of a performance-based salary system. (KP9)

The kindergarten principals compared staffed teachers with contracted or paid teachers indicating that job security may have an adverse impact on the teacher and that they receive higher efficiency from contracted and paid teachers. On the other hand, the principals also mentioned that working with paid teachers may lead to different problems due to the insufficiency of assignations. One of the school principals said:

The concept of paid teachers is one of the most problematic areas in education. They come from outside the field and we experience a lot of problems with them, there are even those who come only with a certificate. They do not know how to behave in front of the children or parents. Every year another paid [teacher] comes. (KP7)

The principals stated that they experience problems at school because of the lack of a vice principal. An exemplary administrator opinion on this subject is given below:
Because our students are small, the number of principals is not enough when the number of students is above 250. Because the parents always expect something from you but when there is no vice principal we cannot spare enough time for the parents because we have to do our duties. (KP1)

It has been indicated that there problems are experienced related with staffed auxiliary employees. KP5 indicated staffed auxiliary employees as the most serious problem. Kindergarten principals also mentioned that they cannot work with staffed personnel, that their education levels lead to problems, that they do not display their best performances that they do not meet their responsibilities and that they abuse their rights because of job security emphasizing that they can experience problems which in turn may harm corporate belonging.

Of the participants, KP6 said that each service presented requires one more staff member and that the number of employees should be increased in order to increase school quality thus pointing out another problem. In support of this, KP3 said that they cannot teach Syrian children Turkish at the schools because of the lack of Turkish instructors.

Opinions of kindergarten principals on parent problems: The principals stated that parents may act reactively against obeying the rules of the school and that they especially experience security problems because the parents do not want to obey the rules. The opinions of the principals on the parent problem are indicated below:

They see us as babysitters; [because they pay a particular fee] they think it is a private institution. They want what they paid for. They think we are private workers because we are being paid. (KP3)

The parents think this is a semi-private institution because they pay money. And so their expectations are very high. (KP5)

Majority of the kindergarten principals stated that they experience problems because the parents pay money to the school, because they think their children is more special than others and because of the high academic expectations they have due to their lack of knowledge on pre-school education process. Whereas KP10 put forth contrary to the other kindergarten principals that the parents have no expectations and that is why he experiences problems which in turn makes an adverse impact on his motivation. Accordingly, it can be understood that the problems related with parents at schools differ among the regions.

Opinions of kindergarten principals on student problems: As a general observation, it has been seen that the principals do not experience problems that are directly related with the students. The principals mostly stated that the students experience difficulties especially during the adaptation process. The participants indicated that they are always on the edge because it is difficult to control the students because of their age group which is transferred as a significant workload over to themselves. KP7 and KP10 indicated that they experience problems because of children who have not yet received potty training. They emphasized the difficulties related with ensuring hygiene at their schools. Similarly, they also said that they experience problems due to students with special needs. Various opinions on this subject:

Students with special needs may act violently against the other children because they cannot fully adapt to the classroom and they may behave differently. (KP2)

Schools do not accept these children. That is why the numbers are quite high at schools which do accept them. (KP8)

The principals implied that students with special needs disrupt the harmony in the classroom, which they may behave aggressively against the other children in which case parents start complaining
while they also indicated that they consider the fact that the other parents do not want such children in the classroom as a difficult problem to overcome.

**Opinions of Kindergarten Principals on Regulation Problems**

The principals pointed out that continuously changing regulations result in misinformation which in turn causes a significant workload to follow up on all the changes, that they sometimes miss important changes resulting in investigations and that some of their efforts turn out to be in vain because of the rapid changes that take place. The most striking participant opinion on this subject was expressed as follows:

We have to do something but we see that they have changed the regulation suddenly and then we start discussing how we should proceed. It seems as if it is present in the regulations but then we take a look and it is not. (KP1)

On the other hand, the participants state that they do not know how to proceed because the regulations are not explicit and understandable, that they can be interpreted in different ways and contain questionable expressions. They emphasize that various confusions and conflicts may arise as a result. The principals have indicated that they experience problems in teacher inspections because they are not inspected themselves. The opinions of an administrator on this subject are provided below:

I wish we were also inspected, that some people would tell us our shortcomings. We do something but we always interpret, we do not know for sure. (KP8)

The principals mentioned that because they are not inspected they continue their duties by now knowing if what they do is right or wrong, that their accomplishments are not appreciated and that some indecent school principals use state facilities for different purposes because they are not inspected. The principals commented that pre-school teachers cannot take a break during recess time, that they have to deal with their needs, course preparations, opinion exchanges during the working hours which is risky because it is not legal and that they experience conflicts with the teachers when they try to place clear rules on this issue.

KP4 and KP5 stated that they want to give out achievement certificates to their own teachers in order to motivate them but that they do not even have authority to do so thereby stating that they consider this as a major issue. In addition to the problems caused by the authority appointed and not appointed to them, the kindergarten principals indicated that they experience work load related problems due to regulations expressing their opinions as such:

Our biggest problem is paperwork, we sometimes proceed with the paperwork in accordance with the regulations, and our workload may sometimes place us in difficult administrative situations. (KP2)

**Opinions of Kindergarten Principals on Communication Problems**

It was understood that the principals consider the architectural structure of school buildings as one of the sources of communication related problems. The principals mentioned some examples as the one presented below with regard to the school building structure related problems that they experience.

A school design with multiple floors is always more difficult I suppose, we have to employ a lot of people for this. (KP4)

Kindergarten principals have emphasized that multiple storey schools make management more difficult, that they have to employ more people in order to establish control in the school which in turn
leads to various other problems. Kindergarten principals have indicated that they experience communication problems related with foreign students and their parents. Accordingly, they said:

We experience a lot of problems with the Syrians because we do not know their language. They sometimes come and go for days. They come and we do not always have a translator, so it is difficult to take out the best performance. (KP1)

The principals have mentioned that they cannot establish communication due to lack of knowledge of the language and failure in finding a translator which leads them to experience problems that are also experienced by the teacher in the classroom. Kindergarten principals have also stated that they experience problems in communicating with their higher executives. Administrator opinions on this subject are indicated below:

What we tell people remains suspended in mid-air when top management members are not really interested and do not have sufficient experience in the subject at hand. (KP4)

We cannot talk about these problems with the upper management because they do not want to face this-this (KP6)

In support of these opinions, the principals mentioned that the process takes a very long time when establishing communication between institutions, that they cannot establish communication with the municipalities and the mukhtarate (neighborhood management) and that they cannot receive the support required for the school. The principals also stated that they experience difficulties in communicating with the principal or vice-principal they are working with as part of the same management team. They commented that the communication problems experienced here lead to greater problems because they are part of the same management team. The principals stated the following with regard to the problems they experience because the school shareholders escalate the problems to others instead of themselves:

The most important problem here is that when you remind the teachers their primary duties some people may protect the teachers and back them up, the problem here is that they have strong people who back them up. (KP4)

The principals indicated that they experience problems because the school shareholders contact different people to solve their problems indicating that problems may be experienced with the teacher, staff members or parents but that problems increase even more when others step in or that they are forced to do things they do not want.

Suggestions of Kindergarten principals for Solving the Problems

The suggestions of kindergarten principals for solving the financing problems they encounter are as follows: increasing the fees, collecting the fees in full during registration as installments to the credit card or developing channels of enforcement for parents who do not pay the fees, providing a certain allowance to the schools for each student and determining this allowance based on the needs of the respective schools, meeting the expenses of personnel, additional resources and material demand centrally through public funding as items that principals spare the most resources for and providing additional special resources for the school through individuals, institutions and establishments.

The suggestions of kindergarten principals for solving the personnel problems they encounter are as follows: supporting the personnel continuously through trainings; ensuring that especially the permanent personnel go through a tough training period during the employment process, putting into effect a wage system based on performance which can identify who is actually working and who is not, contractual employment for auxiliary personnel and laying them off if necessary, increasing the authority of the school administrator in order to prevent arbitrary leave of absence and health report
demands on the parts of the employees and setting up an inspection mechanism for preventing such arbitrary practices.

The suggestions of kindergarten principals for solving the problems related with teachers are as follows: meticulous planning of the teacher assignment process which should be completed outside of the academic year, completing the paid teacher assignment process prior to the start of the semester taking into consideration the adaptation process for the teacher, enabling school administration to continue working with paid teachers they worked with in previous years, taking the opinions of school administration with regard to the paid teachers that will be called in, protecting the paid teachers and increasing their wages to ensure justice inside the school, signing of a contract for preventing the teachers to quit whenever they want, identifying the age group with which guidance teachers will work with during their university education period and ensuring that they receive the required training, increasing the quality of in-service training activities for teachers, conducting them regularly and ensuring that the candidate teachers receive training at least once a month.

The suggestions of kindergarten principals for solving the parent related problems they encounter are as follows: employing male security personnel at schools against the violent incidents at schools, being as transparent as possible in all finance related issues since this is the area for which majority of the parent complaints are made, making a positive change in the opinions of parents related with pre-school and organizing activities and parent visits to make them grasp the importance of pre-school education and using techniques such as draws or first come first serve technique in order to prevent problems during registration.

The suggestions of kindergarten principals for solving the regulation related problems they encounter are as follows: organizing shift hours, eliminating the uncertainties about this issue or providing financial support to those who work overtime, allowing a time for break to pre-school teachers, carrying out activities for teachers during outside class hours in order to improve the quality of education, increasing inspection frequency for kindergartens, increasing the authority of administrators, decreasing the number of students norm for a second vice principal, taking the opinions of kindergarten principals when appointing a vice principal in order to increase effectiveness at the school.

The suggestions of kindergarten principals for solving the communication problems they encounter are as follows: ensuring that the superiors trust the school administration and reduce the pressure on school administration, reducing the frequency of bureaucratic correspondence and ensuring that only the documents that are related with the school are sent, setting up a unique system to establish the coordination between the institutions, carrying out the meetings in a preplanned manner and constructing the school buildings to ensure that they have command over the school.

The suggestions of kindergarten principals for solving the student problems they encounter are as follows: ensuring that the adaptation period runs smoothly by dividing the crowded groups into smaller groups and providing toys that will attract the attention of the children, arranging the school environment by considering the surrounding environment and habits, ensuring that students with special needs start school at least two weeks after the opening, ensuring that students with special needs spend less time at the school compared with the other students, providing training to children with special needs by pre-school teachers and identification of the disability groups with special needs in an accurate manner by the related institutions.

**Priority of the Problem Areas Based on the Opinions of Kindergarten Principals**

The problems based on the scaling study conducted with regard to the general problem areas were financing, personnel, parents, regulations, communication and students with the unit normal deviations matrix presented in Table 1.
It can be seen when Table 1 is examined that the smallest ($z_j$) value is -0.759 for A. $S_j$ values are determined by applying a shifting procedure starting from the origin of the axis. The order of importance given by the school principals to the problems encountered can be observed by ordering the $S_j$ values decrementally. In other words, the ordering that is obtained as a result of this process indicates the order of importance for the general problems indicated in the scaling from based on kindergarten administrator opinions.

### Table 2 Scale Values and Ranking of the List of General Problems at Kindergartens

<table>
<thead>
<tr>
<th>Problem</th>
<th>Scale Values ($S_j$)</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financing</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Personnel</td>
<td>0.306</td>
<td>2</td>
</tr>
<tr>
<td>Parents</td>
<td>0.393</td>
<td>3</td>
</tr>
<tr>
<td>Students</td>
<td>1.137</td>
<td>6</td>
</tr>
<tr>
<td>Regulations</td>
<td>1.229</td>
<td>4</td>
</tr>
<tr>
<td>Communication</td>
<td>1.309</td>
<td>5</td>
</tr>
</tbody>
</table>

It can be observed when Table 2 is examined that the ‘financing’ heading with the smallest $S_j$ value is the most important problem followed respectively by personnel, parents, regulations, communication and students. Table 3 presents the unit normal deviations matrix ($Z$) regarding the rankings of the sub-problems related with the financing problem that kindergarten principals see as the primary issue among the general problems experienced at their schools.

### Table 3 Unit Normal Deviations Matrix Regarding the Financing Issues Experienced by Kindergarten Principals at their Schools ($Z$)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.154</td>
<td>0.293</td>
<td>0.720</td>
<td>1.035</td>
</tr>
<tr>
<td>-0.154</td>
<td>0.119</td>
<td>0.642</td>
<td>0.988</td>
<td>1.148</td>
</tr>
<tr>
<td>-0.293</td>
<td>-0.119</td>
<td>0.693</td>
<td>0.250</td>
<td>0.250</td>
</tr>
<tr>
<td>-0.720</td>
<td>-0.642</td>
<td>-0.693</td>
<td>0.148</td>
<td>0.250</td>
</tr>
<tr>
<td>-1.035</td>
<td>-0.988</td>
<td>-1.148</td>
<td>-0.25</td>
<td>1.035</td>
</tr>
</tbody>
</table>

It can be observed when Table 3 is examined that the smallest value of $Z_j$ is -0.440 for A. The $S_j$ values obtained as a result of the shifting by adding the absolute value of -0.440 to each $Z_j$ value as 0.440 along with their rankings are presented in Table 4.
Table 4 Scale Values and Rankings for the Financing Problems Encountered at Kindergartens

<table>
<thead>
<tr>
<th>Scale Values ($S_j$)</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficiency of income items</td>
<td>0.000</td>
</tr>
<tr>
<td>Diversity of expense items (personnel, maintenance, repair etc.)</td>
<td>0.121</td>
</tr>
<tr>
<td>Problems related with fees (Requesting, Collecting etc.)</td>
<td>0.154</td>
</tr>
<tr>
<td>Reflections of the socio-economic status of the region</td>
<td>0.801</td>
</tr>
<tr>
<td>The need to spare resources for additional materials (educational sets, toys etc.)</td>
<td>1.124</td>
</tr>
</tbody>
</table>

It can be observed in Table 4 that the principals have ranked the financing problems encountered at kindergartens as follows: Insufficiency of income items, Diversity of expense items (personnel, maintenance, repair etc.), Problems related with fees (Requesting, Collecting etc.), Reflections of the socio-economic status of the region, The need to spare resources for additional materials (educational sets, toys etc.). Table 5 presents the unit normal deviations matrix ($Z$) regarding the rankings of the sub-problems related with the personnel problem that kindergarten principals have ranked as the second issue among the general problems experienced at their schools.

Table 5 Unit Normal Deviations Matrix Regarding the Personnel Issues Experienced by Kindergarten Principals at their Schools ($Z$)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-1.278</td>
<td>1.278</td>
<td>1.521</td>
<td>1.499</td>
<td>1.204</td>
<td>1.726</td>
<td>1.578</td>
</tr>
<tr>
<td>B</td>
<td>-1.278</td>
<td>0.858</td>
<td>0.418</td>
<td>0.238</td>
<td>0.792</td>
<td>0.611</td>
<td>0.611</td>
</tr>
<tr>
<td>C</td>
<td>-1.521</td>
<td>-0.585</td>
<td>-0.174</td>
<td>-0.297</td>
<td>0.242</td>
<td>0.088</td>
<td>0.512</td>
</tr>
<tr>
<td>D</td>
<td>-1.499</td>
<td>-0.418</td>
<td>0.174</td>
<td>-0.297</td>
<td>0.242</td>
<td>0.437</td>
<td>0.296</td>
</tr>
<tr>
<td>E</td>
<td>-1.204</td>
<td>-0.238</td>
<td>0.297</td>
<td>0.121</td>
<td>0.557</td>
<td>0.368</td>
<td>0.781</td>
</tr>
<tr>
<td>F</td>
<td>-1.726</td>
<td>-0.792</td>
<td>-0.242</td>
<td>-0.437</td>
<td>-0.557</td>
<td>-0.119</td>
<td>0.328</td>
</tr>
<tr>
<td>G</td>
<td>-1.578</td>
<td>-0.611</td>
<td>-0.088</td>
<td>-0.296</td>
<td>-0.368</td>
<td>0.119</td>
<td>0.403</td>
</tr>
<tr>
<td>H</td>
<td>-1.770</td>
<td>-1.005</td>
<td>-0.512</td>
<td>-0.654</td>
<td>-0.781</td>
<td>-0.328</td>
<td>-0.403</td>
</tr>
</tbody>
</table>

Z Tot. -10.5758 -2.372 1.735155 0.476047 -0.68218 3.544969 2.420735 5.058662

Z Avg. -1.322 -0.297 0.217 0.060 -0.085 0.443 1.625 0.632

Sj 0.000 1.025 1.539 1.382 1.237 1.765 1.625 1.954

It can be observed when Table 5 is examined that the smallest $\bar{Z}_j$ value is -1.322 for A. The $S_j$ values obtained after shifting are presented in Table 6.

Table 6 Scale Values and Rankings for the Personnel Problems Encountered at Kindergartens

<table>
<thead>
<tr>
<th>Scale Values ($S_j$)</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to employ sufficient number of auxiliary personnel</td>
<td>0.000</td>
</tr>
<tr>
<td>Negative attitudes and behaviors of auxiliary personnel due to job security</td>
<td>1.025</td>
</tr>
<tr>
<td>Negative attitudes and behaviors of teachers due to job security</td>
<td>1.539</td>
</tr>
<tr>
<td>Problems related with paid teachers</td>
<td>1.382</td>
</tr>
<tr>
<td>Resistance of teachers towards change</td>
<td>1.237</td>
</tr>
<tr>
<td>Insufficiency of teacher appointments</td>
<td>1.765</td>
</tr>
<tr>
<td>Timing of teacher appointments</td>
<td>1.625</td>
</tr>
<tr>
<td>Problems related with the candidate teacher process</td>
<td>1.954</td>
</tr>
</tbody>
</table>

The personnel problems encountered have been ranked as follows according to Table 6: Inability to employ sufficient number of auxiliary personnel, Negative attitudes and behaviors of auxiliary personnel due to job security, Resistance of teachers towards change, Problems related with paid teachers, Negative attitudes and behaviors of teachers due to job security, Timing of teacher appointments, Insufficiency of teacher appointments and Problems related with the candidate teacher process.

Table 7 presents the unit normal deviations matrix ($Z$) regarding the rankings of the sub-problems related with the “parents” problem that kindergarten principals have ranked as the third issue among the general problems experienced at their schools.
Table 7 Rankings and Unit Normal Deviations Matrix Regarding the Personnel Issues Experienced by Kindergarten Principals at their Schools (Z)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>-0.678</td>
<td>0.323</td>
<td>0.687</td>
<td>0.599</td>
</tr>
<tr>
<td>B</td>
<td>0.678</td>
<td></td>
<td>1.082</td>
<td>1.547</td>
<td>1.288</td>
</tr>
<tr>
<td>C</td>
<td>-0.323</td>
<td>-1.082</td>
<td></td>
<td>0.358</td>
<td>0.352</td>
</tr>
<tr>
<td>D</td>
<td>-0.687</td>
<td>-1.547</td>
<td>-0.358</td>
<td></td>
<td>0.066</td>
</tr>
<tr>
<td>E</td>
<td>-0.599</td>
<td>-1.288</td>
<td>-0.352</td>
<td>-0.066</td>
<td></td>
</tr>
</tbody>
</table>

Z Tot.  -0.93077  -4.595  0.695028  2.526063  2.304704
Z Avg.  -0.186  -0.919  0.139  0.505  0.461
Sj      0.733  0.000  1.058  1.424  1.380

It can be observed when Table 7 is examined that the smallest \( \bar{z} \) value is -0.919 for B. The \( S_j \) values obtained after shifting from the origin of the axis are presented in Table 8.

Table 8 Scale Values and Rankings for the Parent Problems Encountered at Kindergartens

<table>
<thead>
<tr>
<th>Scale Values (( S_j ))</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Parent cooperation</td>
</tr>
<tr>
<td>B</td>
<td>Perspective of the parent towards the school (caregiver, nursery etc.)</td>
</tr>
<tr>
<td>C</td>
<td>Physical or verbal abuse by the parents</td>
</tr>
<tr>
<td>D</td>
<td>Adaptation process of the parents to the school</td>
</tr>
<tr>
<td>E</td>
<td>Impact of the parents on school operations</td>
</tr>
</tbody>
</table>

According to Table 8, the ranking is as follows: Perspective of the parent towards the school (caregiver, nursery etc.), Parent cooperation, Physical or verbal abuse by the parents, Impact of the parents on school operations and Adaptation process of the parents to the school. Table 9 presents the unit normal deviations matrix (Z) regarding the rankings of the sub-problems related with the “regulations” problem that kindergarten principals have ranked as the fourth issue among the general problems experienced at their schools.

Table 9 Rankings and Unit Normal Deviations Matrix Regarding the Regulation Issues Experienced by Kindergarten Principals at their Schools (Z)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>0.648</td>
<td>0.884</td>
<td>0.909</td>
<td>0.890</td>
<td>0.95</td>
<td>0.883</td>
<td>0.745</td>
</tr>
<tr>
<td>B</td>
<td>-0.648</td>
<td></td>
<td>0.175</td>
<td>0.217</td>
<td>0.231</td>
<td>0.340</td>
<td>0.277</td>
<td>0.277</td>
</tr>
<tr>
<td>C</td>
<td>-0.884</td>
<td>-0.175</td>
<td></td>
<td>0.105</td>
<td>0.224</td>
<td>0.406</td>
<td>0.343</td>
<td>0.181</td>
</tr>
<tr>
<td>D</td>
<td>-0.909</td>
<td>-0.217</td>
<td>-0.105</td>
<td></td>
<td>0.169</td>
<td>0.359</td>
<td>0.351</td>
<td>0.236</td>
</tr>
<tr>
<td>E</td>
<td>-0.89</td>
<td>-0.231</td>
<td>-0.224</td>
<td>-0.169</td>
<td></td>
<td>0.178</td>
<td>0.172</td>
<td>0.125</td>
</tr>
<tr>
<td>F</td>
<td>-0.95</td>
<td>-0.340</td>
<td>-0.406</td>
<td>-0.359</td>
<td>-0.178</td>
<td></td>
<td>0.011</td>
<td>0.009</td>
</tr>
<tr>
<td>G</td>
<td>-0.883</td>
<td>-0.277</td>
<td>-0.343</td>
<td>-0.351</td>
<td>-0.172</td>
<td>-0.011</td>
<td></td>
<td>0.025</td>
</tr>
<tr>
<td>H</td>
<td>-0.745</td>
<td>-0.190</td>
<td>-0.181</td>
<td>-0.236</td>
<td>-0.125</td>
<td>-0.009</td>
<td>-0.025</td>
<td></td>
</tr>
</tbody>
</table>

Z Tot.  -5.90836  -0.782  -0.19999  0.115513  1.037132  2.213217  2.012895  1.598375
Z Avg  -0.739  -0.098  -0.025  0.014  0.130  0.277  0.252  0.200
Sj      0.641  0.714  0.753  0.869  1.016  0.991  0.939

Table 10 presents the \( S_j \) values obtained by adding 0.739 as the absolute value of the starting point of the axis of -0.739 to each of the \( \bar{z} \) values in Table 9.
Table 10 Scale Values and Rankings for the Regulation Problems Encountered at Kindergartens

<table>
<thead>
<tr>
<th>Scale Values ($S_j$)</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.000</td>
</tr>
<tr>
<td>B</td>
<td>0.641</td>
</tr>
<tr>
<td>C</td>
<td>0.714</td>
</tr>
<tr>
<td>D</td>
<td>0.753</td>
</tr>
<tr>
<td>E</td>
<td>0.869</td>
</tr>
<tr>
<td>F</td>
<td>1.016</td>
</tr>
<tr>
<td>G</td>
<td>0.991</td>
</tr>
<tr>
<td>H</td>
<td>0.939</td>
</tr>
</tbody>
</table>

It is observed that the kindergarten principals rank the regulation related problems encountered at their schools as follows: High workload (stationary, bureaucracy etc.), Uncertainty of shift hours, Inspection related problems, Continuous changes in regulations, Clarity and intelligibility of the regulations, Problems related with double shift schooling, Inability to preserve the balance between responsibility and authority and Different interpretations of regulations.

Table 11 Rankings and Unit Normal Deviations Matrix Regarding the Communication Issues Experienced by Kindergarten Principals at their Schools (Z)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>Z Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-0.098</td>
<td>-0.014</td>
<td>0.293</td>
<td>0.352</td>
<td>0.428</td>
<td>-0.048</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>0.098</td>
<td>0.120</td>
<td>0.470</td>
<td>0.538</td>
<td>0.603</td>
<td>0.069</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.014</td>
<td>-0.120</td>
<td>0.444</td>
<td>0.535</td>
<td>0.625</td>
<td>-0.008</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>-0.293</td>
<td>-0.470</td>
<td>-0.444</td>
<td>0.087</td>
<td>0.249</td>
<td>-0.370</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>-0.352</td>
<td>-0.538</td>
<td>-0.535</td>
<td>-0.087</td>
<td>-0.198</td>
<td>-0.454</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>-0.428</td>
<td>-0.603</td>
<td>-0.625</td>
<td>-0.249</td>
<td>-0.198</td>
<td>-0.562</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>0.048</td>
<td>-0.069</td>
<td>0.008</td>
<td>0.370</td>
<td>0.454</td>
<td>0.562</td>
<td></td>
</tr>
</tbody>
</table>

It can be observed when Table 11 is examined that the smallest $\overline{S_j}$ value is -0.271 for B. The $S_j$ values obtained after shifting from the origin of the axis are presented in Table 12.

Table 12 Scale Values and Rankings for the Communication Problems Encountered at Kindergartens

<table>
<thead>
<tr>
<th>Scale Values ($S_j$)</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.141</td>
</tr>
<tr>
<td>B</td>
<td>0.000</td>
</tr>
<tr>
<td>C</td>
<td>0.058</td>
</tr>
<tr>
<td>D</td>
<td>0.448</td>
</tr>
<tr>
<td>E</td>
<td>0.524</td>
</tr>
<tr>
<td>F</td>
<td>0.652</td>
</tr>
<tr>
<td>G</td>
<td>0.075</td>
</tr>
</tbody>
</table>

It is observed that the kindergarten principals rank the communication related problems encountered at their schools as follows: Foreign students and parents, Inter-school communication of the personnel (comparisons, gossip etc.), Putting into effect elements of oppression by school shareholders (influential individuals etc.), Problems due to the building structure (command, control etc.), Communication with superiors (branch manager, district manager etc.), Communication with different institutions and establishments (municipality, mukhtarate, police force etc.), Communication with the other principals.
Table 13 presents the unit normal deviations matrix (Z) regarding the rankings of the sub-problems related with the “student” problem that kindergarten principals have ranked as the fifth issue among the general problems experienced at their schools.

<table>
<thead>
<tr>
<th></th>
<th>Adaptation process</th>
<th>Students with special needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation process</td>
<td>-0.506</td>
<td>0.506</td>
</tr>
<tr>
<td>Students with special needs</td>
<td>-0.50593</td>
<td>0.506</td>
</tr>
<tr>
<td>Z Total</td>
<td>-0.50593</td>
<td>0.506</td>
</tr>
<tr>
<td>Z Avg</td>
<td>-0.253</td>
<td>0.253</td>
</tr>
<tr>
<td>Sj</td>
<td>0.000</td>
<td>0.506</td>
</tr>
</tbody>
</table>

It can be observed based on the Sj values that the kindergarten principals have listed the student problems encountered at their schools as adaptation process and students with special needs.

**CONCLUDING REMARKS**

Even though the administrative problems encountered at kindergartens can be presented under different headings, they are multiple and varied. Classifying or limiting administrative problems with headings of financing, personnel, parents, regulations, communication and students paves the way to viewing the problems from a specific framework. However, while contributing to the intelligibility of the problems, this framework should not mean that different problems may not be present.

The fact that the financing structure of kindergartens is quite different from those of the other stages of education may have led to the principals to consider financing as the primary issue. Even though it is not the main subject of the present study, it has been observed that financing serves as a source for other problem areas through direct or indirect impacts. Thus, it can be emphasized that financing is among the primary issues.

The first problem that kindergarten principals experience with regard to financing emerges as the insufficiency of the sources of income. It is of significant interest that school principals consider private resources rather than public resources with regard to solving the problem of finding resources. There may be different reasons for this: - their lack of belief that they may have the right to speak with regard to the allocation of public resources, - the fact that they think private resources should be used for financing pre-school education, - the number of problems they face regardless of where financing comes from. It may be asserted that the lack of a mutual opinion on the part of the education shareholders (parents-school administrators-teachers) regarding how we should approach the financing issue lies at the heart of the problem that principals experience with regard to finding resources.

Büte & Balcı (2010) and Tok (2002) have reported that fees and school budget is insufficient; Sarıce (2006) stated that the primary school principals are under suspicion due to the money that is collected; whereas Tok (2002), Ada et al. (2014) and Demir Yıldız (2018) illustrated that the principals experience problems in collecting the fees in full and on time. On the other hand, it is also understood that there uncertainties regarding the allocation of the financing acquired from public resources. There does not seem to be any public resource allocation based on the number of students or needs. Sarıce (2006), Özmen & Yalçın (2011) and Kayıkçı & Akan (2014) mentioned the insufficiency of resources and the uncertainties related with the allocation mechanism in their respective studies.

The presence of teachers who resist to change, who consider shifts only as working hours and who do not want to take on responsibility is another major issue. Tok (2002) asserts that the efficiency of education decreases because teachers go round in circles. The teacher candidates who took part in the study by Yılmaz & Altunkurt (2011) have also indicated that teachers do not display the effort required for self-improvement. Sarıce (2006) stated that teachers without job security cannot focus on
their duties because of job related concerns. The kindergarten principals who contributed to the study have also mentioned the negative aspects of job security. They stated that the personnel hides behind the concept of job security and abuse their rights to paid leave. Bıyık (2014) conducted a study in which it has been reported that classrooms are left without a teacher when female teachers go on birth leave and that school principals are faced with problems. It has also been observed that the problems related with auxiliary personnel at kindergartens have transformed into the primary personnel issue. Demir Yıldız (2018), Sarıce (2006), Çınkır (2010) and Bıyık (2014) indicate that personnel shortcomings lead to administrative problems. The school principals who contributed to studies by Çevik (2019) and Ada et al. (2014) mentioned that the quality of education is adversely affected when auxiliary personnel does not have sufficient knowledge.

The fact that parents consider kindergartens as caregiver or nursery is among the primary problems that kindergarten principal’s face. According to Öztürk et al. (2016), preschool teachers experience problems related with the perspective of parents towards the school which leads to further issues with other discipline-classroom teachers.

The unwillingness of parents for cooperation or their efforts to direct the school operations when they do cooperate are among the encountered problems. Economic, cultural and school administration attitude factors play a role in the unwillingness of parents for cooperation (Sarıce, 2006). İnan (2010) conducted a study as a result of which it was determined that the parents do not want to join the family participation activities because they find themselves insufficient which is indicated by families as a problem. Tok (2002) indicated that principals also face similar problems stating that the permanence of education is possible through continuity, that the school activities should be supported at home which is hindered due to the attitudes of parents who are not inclined towards cooperation. Dolman (2015) mentioned that parent participation to activities organized by the school is insufficient; while Aktaş (2018) reported the problem of parents who do not take part in the school activities.

Problems related with regulations encountered by kindergarten administrators: indefinite and long shift hours, the teachers preparing for the classes during course hours because they cannot give a break, conflicts with the teachers when they leave the classroom for various reasons such as exchanging ideas etc., the fact that kindergarten principals cannot know whether what they are doing is right or wrong due to lack of sufficient inspections, unwillingness on the part of the teachers when the principals want to inspect them or problems encountered at the end of the inspection process because the principals do not have any powers of sanction. In his study, Tok (2002) set forth the problems related with the insufficiency of inspection and guidance activities at preschool education institutions. Kindergarten principals also experience problems due to the workload related with official correspondence that does not concern their schools. School principals included in the study by Turan (2007) stated that they encounter problems because the correspondence work takes too much of their time.

Problems encountered by kindergarten principals regarding the inability to preserve the balance between responsibility and authority are as follows: negative attitudes and behaviors of personnel who is aware that the principals do not have any power of sanction, encountering complaints and threats when they use their authority and awarding the personnel for motivation.

One of the primary problems encountered by kindergarten principals is related with the fact that foreign parents and teachers do not know Turkish or the lack of translators. Ada et al. (2014) conducted a study on teachers as a result of which it was stated that they encounter problems related with the education of children who do not know Turkish and that they spend most of their time for teaching Turkish to these children which leads to further problems. Demir Yıldız (2018) stated that principals also encounter problems related with the parents who do not know Turkish. Other problems encountered are; shortcomings related with the interschool communication of the personnel, groupings, gossips, comparisons and teachers leaving the classroom during course hours to communicate with other teachers, school shareholders resorting to influential acquaintances to solve
their problems, not being listened to by their superiors or lack of feedback related with the solutions of problems, failure to establish communication with different institutions and establishments, significant damages caused in the operation of the institution due to miscommunication with the administrator colleagues and the inability to establish communication with some shuttle bus drivers because of their harsh, vulgar etc. personalities.

The student related problems encountered by kindergarten principals are as such: Related with the adaptation process; overcrowded classrooms, the first primary school experience of the students and the inability on the part of the students to use toilet seats. Tok (2002) and Sarıce (2006) conducted a study in which the participating principals stated that they experience problems due to overcrowded classrooms. Ekinci (2019) mentioned in his study that students experience problems related with the adaptation process which are caused by parents. Çevik (2019) also indicates that student related problems are fewer at kindergartens which are attributed to the small age group.

Problems encountered due to the students with special needs are; the fact that these students affect the classroom order, violence inflicted by these students on other students, the unwillingness of some teachers to include these students in their classrooms, the fact that some schools are overcrowded with such students because others do not accept students with special needs and the failure to identify the disability groups of students with special needs by related institutions and establishments. Aktaş (2018) indicated in his study that students with special needs are overlooked in the education system in addition to reporting findings on the inefficiency of inclusion education.

Fees should be increased for overcoming the financing issue however parents who cannot pay the fees should be identified and supported in order to provide equality of opportunity and social justice or this service should be supported completely by the general public, the burden on the schools related with personnel expenses should be reduced, allocations should be determined based on the needs of the schools, expenses should be strictly controlled, the required personnel should be employed, job security should be ensured, teacher appointments should be conducted in a systematic manner, in-service training activities should be improved to support the personnel, regulations should be changed based on the requirements and ambiguous expressions should not be used, the balance should be attained between the responsibility and authority of school administrators, uncertainties related with the shift hours of the principals should be eliminated, translators should be present who are responsible from various schools in order to solve the communication problems encountered with foreign students and parents and the it should be ensured that shuttle bus drivers and school administration do not face each other.

REFERENCES


A Primary School Teacher’s Journey on Using Drama Method in the Classroom: Collaborative Action Research Model*

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Abstract

This study aims to determine a primary school teacher’s observations and experiences regarding in-service training on drama method within the framework of collaborative action research model. The first author was invited to offer a 120-hour Drama Course upon request of the teachers in a primary school. In the 14th week, the action research process started with a teacher who wanted to implement the drama method in her classroom. Collaborative action research cycle was consisted of following phases: structuring the lesson plan, implementing, and monitoring the lesson plan in the classroom, teacher’s observation of the process, and reflection of the findings obtained through student feedback and reflective diaries. The teacher prepared 4 lesson plans, implemented, and evaluated them in this cycle, which lasted a total of 8 weeks. According to results, Derya teacher actively participated in the process, questioned her practices systematically, and became open to development and change with the students and researcher’s feedback. Based on the findings obtained, it is suggested that collaborative action research model in in-service training should be used. Thus, thanks to this model based on practice, it may be possible to reduce the theoretical weight of traditional in-service training and seminars.

Keywords: Drama, Collaborative Action Research, In-Service Training, Elementary School Teacher

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INTRODUCTION

The need for the integration of drama efficiently and effectively into the education system has been in the education agenda for a long time. Because the aims and achievements of drama overlap with the skills required by the age we live in, this situation occurs. Drama is defined as an enactment of an idea or a subject by using improvisation and role-playing techniques based on the life experiences of a group (Adıgüzel, 2014). The group, life-oriented, role-playing, and game processes that the drama hosts enable children to develop from different angles. Baldwin (2008) states that drama develops the child holistically in cognitive, physical, linguistic, cultural, social, creative, aesthetic, and emotional areas. The contributions of drama to social and affective development are important for the education systems that are criticized for focusing more on cognitive development. Goleman (2018) states that today we leave the emotional education of children to chance and this has devastating effects. As solution, he suggests that schools should fully consider what the student needs in the classroom and develop an educational vision by integrating mind and emotions.

Ken Robinson (2015) emphasizes the importance of a holistic development that includes both emotional and cognitive characteristics and underlines some competencies required for the individuals of our age. These competencies include curiosity, asking questions, creativity, generating and applying new ideas, analysing information and opinions, constructing logical arguments, expressing oneself effectively, working with others, effective citizenship, building empathy, awareness of emotions, and personal balance and harmony. Robinson states that same sources and status should be provided for disciplines including science, human sciences, mathematics, physical education, language arts and fine arts to gain relevant competencies in schools. He states that we shape our thoughts, emotions, and experiences of the world through fields such as drama. McCaslin (2016) also mentions that the aims of contemporary education and the purpose of drama overlap. These include creativity and aesthetic development, critical thinking, social development and collaborative skills, communication skills, development of moral and spiritual values, self-knowledge and understanding and valuing others’ values and cultural backgrounds.

In the report called “Road Map for Arts Education” which emphasizes the importance of developing the creative thinking capacity required by the 21st century, United Nations Educational, Scientific and Cultural Organization (UNESCO) (2006), evaluated art as a tool in learning and teaching the cultural and artistic dimension of curricula and drama method had its place between these tools. The report grounded the need for art education, which drama is a component, on four basic reasons. Among these, following opinion draws attention: It is human’s right to receive education in which culture and art are complementary. In addition, it was highlighted in the report that education systems must adapt to changing conditions to meet creative, flexible and innovative workforce demands in the 21st century. At this point, it was presented that there was a need for art education that equips students with skills that enable them to express themselves and evaluate the world critically. Moreover, among the mentioned reasons is the belief that cultural practices, artistic knowledge and skills will strengthen personal and collective identities as well as values and promote the preservation of cultural diversity. The report states that teachers should have access to the materials and training they need for the effectiveness of this process and creative partnerships between ministries, schools and teachers should be encouraged within this framework.

The practices carried out by the Ministry of National Education (MEB) General Directorate of Teacher Training and Development set a good example for drama education in 2019 in our country for the creative partnerships mentioned above. An activity and practice-based professional training program was developed for teachers in September 2019 and this program included Drama in Education, Drama in Nature, and Drama in the Museum (MEB, 2019). In addition, MEB Ankara In-Service Training Institute opened the Drama Instructor Training in Education course in August 2019 and took the first steps of a process that would enable the teachers within its body to learn the drama method (Ankara In-Service Training Institute, 2019).
These attempts are valuable; however, they must be supported by in-service training, teacher opinions, expert contributions and research, and a roadmap must be determined considering the problems and suggestions. In-service training includes goals such as fulfilling the pre-service training needs in terms of professional competence, acquiring the knowledge, skills and behaviours which innovations and developments in the field of education demand, and supporting the development of the education system (Ministry of National Education In-Service Training Regulation, 1994). However, it can be stated that there are some problems in the realization of the relevant objectives. According to some studies, professional development needs cannot be determined completely, and most teachers do not find the professional development activities which they participate in effective. Traditional courses and seminars are considered ineffective because they focus on theory, are detached from the context, do not provide monitoring and feedback, and are based on memorization (Bümen, Ataş, Çakar et al., 2012).

The problems generally regarding in-service training processes are also experienced in the field of drama. As a matter of fact, one of the reasons why drama is not widespread in schools and is not implemented effectively is inadequate in-service training. (Bertiz, 2011). In a study conducted with 16 primary teachers who received drama training through the Ministry of National Education or the school they work in, teachers stated that they did not feel themselves competent enough to implement drama and added that they needed to be monitored by experts and they wanted to have more in-service training in the field of drama (Çetingöz, 2014). In another study, after a 30-hour drama training, the data obtained from 102 culture teachers revealed the demand that drama should be taught gradually by connecting it with groups divided into branches and courses and indicated that teachers required more experiences to use drama in their lessons (Akkocaoglu Çayır, Akhun, & Şimşek, 2016). 51 pre-school teachers working in the state school evaluated the in-service trainings related to drama and stated that the training should last longer and include more steps, it should be carried out more frequently, and the number of groups should be standard. In addition, teachers stated that the training events were occasionally carried out in the form of conferences, those who gave the training had a lack of knowledge, and they needed relevant sharing such as activity pools for implementation (Kavaz, 2017). However, drama is one of the teaching methods which primary school teachers desire to learn through in-service training (Ergin, Akseki & Deniz, 2012). At this point, it can be stated that teachers become individuals who not only get knowledge but also produce knowledge and they are more critical and reflective in their practices carried out with the collaboration of the field expert and they may exceed the boundaries of existing in-service teacher training models with action research (Aksoy, 2003; Kuzu, 2009; Uzuner, 2005). The support of the field expert can play an important role in solving the problems that teachers encounter when they start to apply the drama method and the cooperation with the field expert can foster the professional development of teachers. In this respect, the purpose of this paper is to examine the observations and experiences of a primary school teacher who has just been introduced to drama during the learning and implementation process of the drama method within the framework of the collaborative action research model.

**Collaborative Action Research Model in In-Service Teacher Training**

Action research, which is defined as a cycle in which teachers examine their own practices and the achievements of their students in the process, organize their practices as a result of their observations and maintain this process systematically, has an important role in teacher education (Cochran-Smith & Lytle, 2009; Gore & Zeichner, 1991; Tripp, 1987). In action research, teachers or teacher candidates become an active part of the learning process by asking challenging questions about their own practices and make a positive change in education possible by developing reflective thinking skills (Elliott, 2015; Gore & Zeichner, 1991). In-service teacher training based on action research has more lasting effects in terms of learning a new pedagogical approach as it is usually long-term and places teachers at the centre (Cochran-Smith & Lytle, 2009).

It is considered that action research will allow teachers to think systematically about their own practices and support them to develop positive attitudes towards their profession (Feldman & Minstrell, 2000). In this process, teachers not only become reflective and questioning practitioners...
(Gore & Zeichner, 1991), they also increase their knowledge of learning and teaching processes that take place in their classrooms. Unlike traditional teacher education models that are disconnected from classroom practices (Darling-Hammond, 2005), when teachers participate in in-service training within the context of action research, they examine and think about their own practices and make sustainable changes in their own classroom with the pedagogies they have just learned (Elliott, 1991). Thus, a step is taken towards filling the gap between theory and practice.

An important focus of action research is the collaboration between teachers and academics (Clift, Veal, Johnson, & Holland, 1990). In this collaboration, an attention is paid to create settings where teachers can focus on the “problems” they will encounter during the implementation, work together with field experts so that they can have the required “time and support”. In this approach, teachers are expected to take steps in their own classes as well as learning the theoretical dimensions of new pedagogical approaches in order to reveal problems related to the implementation. Collaborative action research is a systematic model that promote teachers to think reflectively about their own practices with the support and guidance of the field expert (Gore & Zeichner, 1991). Like other types of action research, teachers create data-driven knowledge on how to change their practices for the better and solve problems they encounter in their classes (Wahlgren & Aarkrop, 2020).

In a study, 19 drama activities based on learning outcomes were developed and implemented in cooperation with a drama expert and primary school teacher in response to the needs of teachers who joined in-service teacher training but were not experienced in drama method (Flynn, 1997). Here, solutions were sought with the drama expert to the difficulties such as noisy classroom, irrelevant questions asked by students and lack of interest in activities. The collaboration between the teacher and the drama expert turned out to be an effective learning process for both and carrying out professional development workshops in cooperation with teachers were included among the future studies of the drama expert. The collaboration leads the way for research about in-class drama practices.

As a result of in-service training in which the researchers became partners with the teachers, planned the drama lessons and instructed together considering the needs, the teachers stated that the student participation and their interest towards the lesson changed positively, but they had lack of knowledge about drama, and they had problems in classroom management (Stinson, 2009). In addition, due to the hierarchical, top-down, and centralized administration in Singapore, where the study was conducted, teachers had difficulties in practising drama, a new method, in their classrooms. Time constraints were added to these difficulties, which also emerged in other studies (Flynn, 1997). However, thanks to the positive relationship built between teachers and the researchers during the process, the teachers stated that they were not alone against all these difficulties. Therefore, researcher-teacher partnership provided positive and productive opportunities for learning and implementing drama method.

Although there are few studies conducted in collaboration with field experts in learning the drama method and its application in classrooms, they offer effective opportunities for teachers’ professional development. Collaboration with the field expert not only leaves the teacher alone in the process, but also allows them to work together in solving the problems encountered by the teacher while applying the drama. This paper sought answers to the following research question in the light of the data obtained from the in-service training program that a drama expert and a teacher who has just learnt drama and wants to implement in her classroom based on collaborative action research: What are the observations and experiences of a primary school teacher who has implemented drama method within the framework of collaborative action research model?
METHOD

Research Model

Collaborative action research, one of the qualitative research methods, was used in this study (Lune & Berg, 2017). Action research is generally defined as a systematic data collection and analysis process by practitioners to identify and solve problems that arise in practice (Mills, 2000). In addition to solving problems in practice, collaborative action research is a frequently used research model for teachers’ professional development (Cochran-Smith & Lytle, 2009; Somekh & Zeichner, 2009). Collaborative action research brings a researcher who has a comprehensive knowledge of the field and a teacher together and it involves implementation of a new teaching method and scientific evaluation related to the implementation after the process is examined by the researcher (Lune & Berg, 2017; Yıldırım & Şimşek, 2016). In this approach, there is an intense interaction between the practitioner and the researcher. Including the problems that arise in practice and the researcher’s suggestions for solutions in the action research cycle, lesson plans are developed and become more effective in the following cycles. According to Yıldırım and Şimşek (2016), in collaborative action research, the interaction between researcher and teacher, and description and analysis of the teachers’ observations and experiences in action research cycles are at the forefront.

Context, Participants, and In-Service Training Process

The first author who is an expert on the field of drama was invited upon the request of teachers working in a state primary school in Ankara to take a Drama Course within the scope of in-service training. The course, which lasted 120 hours in total, started on December 21, 2019 and ended on May 24, 2019. In the process, recognition of individual characteristics, communication between individuals and groups, the theoretical, social, psychological dimensions of drama and its relationship with arts, and the use of drama as a method were the main topics. It was emphasized in the course that during the use of drama as a learning method, the stages of warm-up, animation, and evaluation must be structured.

Following the applied lessons on the aforementioned subjects, sample lessons about the use of drama in primary schools were held and teachers were asked to plan a drama lesson which was applied to their colleagues.

The action research process started with a teacher (Derya teacher) who wanted to implement drama method in her classroom through collaboration with the field expert in the 14th week of the drama course. In addition to the information obtained from the literature, the other reasons for the use of drama method during the action research process include drama’s need for extensive knowledge and skills, Derya teacher’s wish, and students’ demands from her. Derya teacher is a graduate of vocational school and has been working as a primary school teacher for 30 years. Derya, who teaches the third grades, decided to use the drama method in her classroom after being introduced to drama method and thus the collaboration process between the first author / expert and she were planned.

First of all, Derya teacher was asked to determine on which subject, problem, outcome and etc., she wanted to use drama in the framework. Considering her observations and the needs of her students, the teacher decided to work on “rules” within the scope of the Social Studies lesson. After determining the subject to teach with drama method, the meeting times and meeting contents for the field expert and Derya teacher were decided. The collaboration process between Derya teacher and expert consisted of the following stages:

1. Structuring the lesson plan under the guidance of an expert
2. Implementation of the lesson plan in the classroom and monitoring by the expert
3. Teacher’s evaluation process and its aftermath through expert observation, student feedback and reflective diaries.

4. The teacher’s evaluation process, relevant questions, and reflection of her findings in the next lesson plan in line with the expert’s observations

Following the stages mentioned above, Derya teacher prepared 4 lesson plans and then applied and evaluated them. These stages, which were repeated for each lesson plan, took 8 weeks in total. During the preparation stage of the lesson plans, the expert answered Derya teacher’s questions, gave feedback by following her practices, and guided Derya teacher so that the data obtained from the evaluation process could shed light on her next lesson plan. The expert and the teacher held two meetings for each practice in order to prepare a lesson plan and observe its implementation. At the end of these interviews, which took place six times over eight weeks, the process was evaluated together, and the problems encountered in the process were solved together and the plans made at every turn were adapted to the procedures and principles of the drama method. After the third lesson plan, it was determined that the teacher did not need the field expert’s support during the planning process based on drama method (6th interview) and it was decided to end the action research process with the fourth lesson plan. The analysis of Derya teacher’s observations and experiences regarding the process also supports this decision.

Data Sources

In collaborative action research, both the teacher and the researcher use various data sources to examine the process (Mills, 2000). After the drama lessons, the teacher got feedback from the students to evaluate her own practice and examine its effect on the students. Although student feedbacks were not analysed within the scope of this study, the teacher reported classroom observations with the feedbacks, made general evaluations and did self-evaluation on her own practices, and thus systematically wrote three different articles at the end of each action cycle. In addition, the teacher was asked to keep a diary about the drama practices she carried out in her classroom.

Another data collection tool included within the content of this study is the semi-structured interview carried out at the end of the fourth cycle with the teacher. Interview is a strong data collection tool in action research as it strengthens the interaction between the researcher and the teacher and makes the other collected written data more detailed (Yıldırım & Şimşek, 2016). The interview with the teacher was administered in the school where the teacher worked and lasted about 45 minutes. In addition to the data the teacher gathered and data collected from the teacher, the researcher’s notes are particularly important data source for this study. The researcher in these notes included descriptions which would improve the instruction positively in terms of the applied approach.

The data obtained from different sources aim at revealing the observations and experiences of the teacher who practised the drama method within the framework of collaborative action research model. Data variety contributes to minimization of the limitations of a single data collection method by avoiding biased presentation of findings in qualitative research (Maxwell, 2005).

The Researchers’ Role and Attitude

The teacher is a researcher in collaborative action research and plays an active role in the determination of the implementation process. However, in this study in which the observations and experiences of the teacher were reported, the teacher could not be included in the data analysis and reporting of the findings process due to reasons such as school break and time constraint. The subject matter expert (first author of the article) and the second author, who took an active role in the collaboration process, reported the research. Both authors are teacher educators. The first author spent a lot of time in the application environment both as a drama expert and as a collaborator with the teacher. In this process, she gave some advice to the teacher on how to improve drama lesson plans and the application of the drama method. In addition, she generated data by describing the process
from her own perspective for the study. In this sense, the first researcher is the person who observes the practices as a field expert and cooperates with the teacher. Although the second author was involved in design of the study, selection of data sources, analysis of the data and reporting of the study, she did not join the implementation. She contributed to the process in terms of creating a collaborative action research model in teacher education and the methodological follow-up of this model. Both authors are concerned about developing an alternative approach for in-service teacher training and consider that teachers should take an active role in their own education and the teacher and teacher educator cooperate while implementing a new approach.

Data Analysis

The audio recording of the interview with the teacher was transcribed for the analysis of the collected data. The transcribed interview and the other written data were uploaded on computer. The data were encoded with content analysis (Corbin & Strauss, 2008). During the coding process, the meaningful parts which refer to the teacher’s professional development were given names (Yıldırım & Şimşek, 2016). The two authors of the article came together and grouped the codes obtained in the first analysis in accordance with the action research model and obtained umbrella themes under which the grouped codes could be included (Yıldırım & Şimşek, 2016). While introducing the themes, codes were examined, compared, associated, and conceptualized using constant comparison method (Corbin & Strauss, 2008). These themes were organized within the context of the action research model and interpreted in accordance with the research question (Corbin & Strauss, 2008).

Reliability and Validity of the Research

There are various methods to ensure validity and reliability in qualitative research (Yıldırım & Şimşek, 2016). Internal validity is whether the explanations for reporting the findings are consistent within the context of a particular study. In this study, data diversification method was used to ensure internal validity. In other words, the data and teacher’s observations and experiences were gathered from different sources including interviews, diaries, and self-evaluation reports and they were subjected to analysis. Thus, the observations and experiences of the teacher applying the drama method within the framework of the collaborative action research model were included in the findings with the help of various data sources.

In addition to data diversification, the researcher spent a lot of time in the field due to the nature of the collaborative action research and composed the researcher notes which described the class and school where the study was carried out and the context of the implementation in addition to the data gathered from the teacher (Uzuner, 2005). The two authors checked the consistency of the data obtained from different participants during the data analysis and the quotes obtained from the teachers were included in the findings.

Based on the assumption that social events vary according to the environment they are in, it is not possible to directly generalize the findings of qualitative research to another environment (Yıldırım & Şimşek, 2016). However, considering the external validity of the study, the authors described the context of the study, the participants, and the research process in detail in the previous sections so that the readers could understandable to the results. It is asserted that there may be differences in the way each researcher understands and interprets the phenomena in qualitative approaches (Yıldırım & Şimşek, 2016). Therefore, the researchers clarified their position in the study process. In addition, as stated before, both authors played an active role in the data analysis process and working together in the creation of umbrella themes, they verified their interpretations on the basis of data.
FINDINGS

The aim of this study is to examine the observations and experiences of a primary school teacher who implements the drama method within the framework of collaborative action research model. Accordingly, the findings will be presented under the stages of the collaborative action research model. The general view of the themes obtained in data analysis is as given in Figure 1:

![Figure 1. Collaborative action research model in the implementation of drama method](image)

**Teacher Observations and Experiences in the Planning Stage**

While Derya teacher prepares her lessons on drama method, the planning phase she has worked with the researcher constitutes one of the most important parts of the collaborative action research. Derya teacher benefited from her collaboration with the researcher while preparing her lessons on the drama method. She also stated that due to the action research cycle (planning-implementation-evaluation) she was involved in, she often needed information, sources and experience.

**Collaboration with Researcher**

The theme of collaboration with researcher indicates the strengths of the teacher’s collaboration with the researcher in the planning stage of the drama lesson. Derya teacher draws attention to the importance of the researcher in diversifying the activity options and generating different ideas while preparing the drama activities. In addition, according to Derya teacher, another strength of the collaboration is the analysis of her plans by the researcher in terms of their suitability to the drama method.

It can be stated that it is important for the teacher to develop her own activities rather than ready or structured plans to gain the necessary knowledge and skills in terms of a new learning method she has been introduced to. However, the field expert accompanies the teacher for a while and gives feedback on what she has developed and thus this makes the teacher feel safe and encouraged to use the relevant method at this stage. An example of Derya teacher’s opinion parallel to these findings is given as follows:
“I received a lot of support from you regarding the plan. I always got support from you because I didn’t know too many techniques (used in drama) and whether my practices were appropriate or not. If I were alone, I would stay within certain patterns, but my horizon expanded. So I will learn more if I work with you more ...”

Need for knowledge, source, and experience.

The theme of need for knowledge, sources and experience corresponds to the teacher’s understanding that knowledge and experience are a prerequisite for effective implementation of the drama method. Derya teacher mentioned the need for knowledge and experience for planning the drama lesson effectively, diversifying the activities, finding solutions to the problems encountered during the implementation stage where there was no expert support. At this point, sources and frequent implementations fill the gap left by the researcher. Derya teacher’s statements representing this theme are given as examples:

“Since there is no exemplary teacher in front of me, I think I should probably read books about them because I think I have to know a lot of activities... And the more you practice, the more you learn. Sometimes we start to find such practical solutions, that is, the more we do the same studies, the more practical we become.”

Based on the above statements, it is regarded that Derya teacher needs to enrich and develop what she learned in the professional development course with new knowledge and experiences while planning the activities which she will use with the drama method. This situation shows that the teacher is open to development while learning and applying a new teaching method and focuses on the process rather than the result. The teacher stated that she became “more practical” as she practiced and emphasized the continuity of the learning process by expressing the need for knowledge, sources and experience for her own professional development and learning in drama.

Derya teacher also wants to prepare drama lesson plans by benefiting from other stages of the action research model. It can be stated that as there were features specific to the drama method such as improving the physical environment of the classroom and giving clear and understandable instructions for the animations which she experienced during the implementation and evaluation stages, she reconsidered them in the later planning stages. Repeating her need for knowledge and experience as well as being open to learning in the self-reflection report that she wrote following the course, she states the following while preparing her lesson plans:

“While preparing the drama lesson plan, I need more knowledge and experience to ensure that the warm-up and animation stages are interconnected.”

Teacher Observations and Experiences in the Implementation Stage

During the implementation stage of the collaborative action research model, Derya teacher had the opportunity to observe both children and her own professional development. The teacher’s observations and experiences were collected under two themes, in terms of their effect on children and professional development.

Effects on Children

During the implementation stage, Derya teacher evaluated the drama method in terms of its effects on children. In this context, the teacher observed that drama increases children’s knowledge retention, attracts their attention, enables them to cooperate, improves their creativity and imagination, and that they learn with fun. She stated that all of these made the lesson effective and efficient. Derya teacher’s statements on this issue are as follows:
“While explaining a subject in the lesson, if I teach it with games, improvisation, animation, or still image, in one way or another, you retain the knowledge, that is, it becomes permanent. Its retention increases as a behaviour too because they realize their mistakes much better. Considering knowledge, it becomes more permanent as they learn while playing.”

“... they have learned to share, they have learned to give a role to everyone in the group, they try to cast everybody no matter how many groups there are. As they do these in every task, they do collectively so these will serve me because they do it in harmony. There are shows and events that I want to prepare for the next year. I think it will make my job easier.”

“I did not know the process very well; I even considered the drama as if it were just animating. But now I have learned the stages of drama, I can apply it at any time with children, I can transfer it to the lesson, and we have more effective lessons. The children also need their energy to be transferred correctly. It is really good in that sense”.

In addition to what Derya teacher stated in the interview, she pointed out in the self-evaluation reports that the lessons in which the drama method was used were more effective and efficient:

“The children liked the game I prepared for the warm-up stage very much and they wanted to play it again.”

Derya teacher’s positive observations of children during the implementation encouraged her to use drama method in her lessons and benefit from the drama method in her further studies. In addition, these observations inspired her to learn new games and activities and thus they supported her to consider children’s need for learning with fun. Moreover, these observations in the implementation paved the way for regarding the problems that occur while using the drama method. This is an example from one of the findings mentioned by Derya teacher:

“While one group is acting, the others do not listen to them, they focus on their own preparations. Those who could not complete their preparations, or whose preparations were not fully completed could not adapt to the others or could not listen... I also had a little difficulty in stopping the hyperactive children, that is, there are what we experienced most.”

The observations Derya teacher made during the implementation stage of the drama method provided her with feedback about the children and led her to examine the strengths and weaknesses she experienced in the process with a reflective eye. As elaborated in the next theme, the implementation stage of action research constitutes an important building block for professional development.

In terms of Professional Development

Another theme determined during the implementation stage is the professional development of the teacher. Under this theme, Derya teacher’s views about her own learning process in the implementation stage are included. The problems encountered and mistakes made during the implementation triggered the teacher to develop herself professionally. Derya teacher realized her mistakes as stated in the following expressions given below and progressed in the learning process by generating solutions to the problems that emerged during the implementation.

“Well, I performed an application and my mistakes, I mean I make mistakes because there are things I do not know, but I can say that I learnt during the application. ...For example, during the implementation, I could not put the students in groups, that is, I have
problems with grouping … What I mean is we can encounter such problems while grouping the students. I won’t do this next time. For example, something happened. I could not decide whether I would intervene the students during acting or playing their roles. Later, during improvisation, acting their roles, I learned that I had to intervene. However, while forming the groups, sometimes they cannot share roles. I realized that I could help them choose their roles and tell them the situation much better.”

“Now, I can solve the problems I have encountered while grouping the students or such things much more practically. You can encounter a problem suddenly and I have gained the habit of solving that problem in a practical way. That is, the more I have experience, the more I become experienced, and I solve the problems much more easily.”

In addition to the mistakes made and the problems encountered, the implementation became a tool to learn “new things” and it helped Derya teacher to learn through “doing and experiencing”. As can be seen from the following statements, professional development became more permanent.

“You know there is learning through experience. I learned through experience. You join in-service training, some people explain, there is no practice. If you do not practise it, it is not permanent, but now it has become more permanent. As what I taught to children became permanent, my knowledge has become permanent too. Now I can think practically about some subjects. Sometimes I can even give instant support to my colleagues, they say, fortunately, you are with us, we found a practical solution right away, we can do it right away with drama. I think I will become much better if I have a lot of experience.”

“Let me tell you. When you tell us to prepare a lesson plan (in the course), I only stick to what I have learnt, that is, I do not have a broad perspective, but I learn new things in every drama work (while practising) ...”

Derya teacher stated in the diaries she kept throughout the term that she learned something new from each drama practice and her experiences contributed to her professional development:

“Any drama work performed is an experience for us. I practice different methods in every drama work, and I learn new things. As I practice more, I come up with new ideas and I see that I can produce.”

Derya teacher, with the above statements, revealed the importance of integrating knowledge acquired in the in-service training process with practices. Identifying the problems encountered during the implementation and trying different solutions in the next implementation are a meaningful experience in the teacher’s journey to use the drama method. What instructions to give under which situations to the students, or the ways for the teacher to intervene the students in the drama lesson are features that can be grasped during the best practice. This process also makes it possible to consider mistakes as a learning opportunity. Derya teacher’s statement supporting this view is given below:

“And of course, I make a mistake at that moment and when I ask you, I learnt it when we talked about that mistake. I do not make that mistake again. It is all a new experience, I saw my mistakes, learned from my mistakes, I learned not to make it again or what to do where.”

Observation of the teacher’s practices by the field expert made the implementation stage more effective. Presence of an expert that the teacher can consult when needed or to overcome her hesitations was important. Collaboration has accelerated the teacher’s learning process.

The researcher’s observation notes, grouping students (randomly or through a game), intervening students while acting their roles with such expressions as “you did it or didn’t”, giving clear and understandable activity instructions, organizing the physical environment of the classroom in accordance with the needs, starting the process with the students in a circle promote teacher’s
determination. On the other hand, the fact that the teacher gives the instructions to the groups and withdraws, that is, she does not work with the groups, does not check whether they have questions, and does not move between the groups is noted as a factor preventing the effective use of the method. Another factor affecting the effectiveness of the method is that the teacher does not ask the students enough questions to make them think about their inferences, feelings, and opinions after the improvisations or during the evaluation stage. This situation may have caused the students to perceive drama as a game or as a means of fun but also it may avoid the realization of the purposes of drama such as creative and critical thinking. These obstacles can be explained by the teacher’s traditional attitude. It is considered that the understanding of teacher-centred learning and classroom management that the teacher has experienced and used throughout her professional life affects the teacher’s use of drama in her classroom.

**Teacher Observations and Experiences Between Evaluation and Feedback**

The evaluation stage of the implementation of the drama method carried out in the action research cycle focuses on two themes. Students’ feedback and the researcher’s questions and instructions prompted the teacher to think reflectively about her practices and question her practices systematically. The students’ feedback and the researcher’s instructions given in the following subheadings were instrumental in the teacher’s self-evaluation and enriching the learning process of the drama method.

**Through Students’ Feedback**

Student feedback includes the observations and experiences of the teacher in line with the student observations and opinions obtained after each drama practice. Feedback on students’ willingness to take the drama lesson motivated Derya teacher to try new practices. In addition, the observations about enhancing student creativity and imagination and retention of learned knowledge and the statements gathered from the students also contributed to the teacher’s desire to implement the drama method. Derya teacher expressed her views on student feedback as follows:

“The opinions of the students are more useful to me. Their opinions concern me more. Because we constantly questioned whether they enjoyed it or what they need. They give feedback, so it was definitely effective in that sense.”

“Student feedback is definitely important because you are doing it for him, I am doing drama work for children. Giving them a message or teaching them something is my goal. You want to develop your imagination and your creativity, and you want to teach or there is a rule and you try to teach that rule. That's why student feedback is particularly important to me.”

Student feedback has an important place in the self-evaluation that Derya teacher does every week. Derya teacher stated the observations she made in her classroom in writing as follows:

“Students state that they learn by having fun with drama, what they learn is more permanent, their talents are unearthed, their imagination improves, and their friendships improve.”

Derya teacher stated that referring to student feedback was effective for her learning process; but, the evaluation and reporting process of student observations and feedback took time.
Through researcher’s questions and instructions

This theme includes the teacher’s opinions about her learning process through researcher questions and instructions after each implementation. Derya teacher stated that she made progress in terms of being open to mistakes, considering mistakes as learning opportunities and being open to criticism.

“Because of my personal interest in doing everything very well, everything will be the best. Even if I make a small mistake, I find it a bit difficult to accept my mistake in that sense. Maybe I am a little demoralized, but apart from that, I have gone beyond myself in the sense of being more open to criticism because I think that I must do everything properly, and thus I do not receive any criticism. At least now I have a belief that I can do wrong, I can get criticism, but I can fix it. It was particularly useful for me to excel myself.”

The teacher’s revelation about herself is important. This view may indicate a point that might be an obstacle to the teacher’s professional development. This is about being able to make self-criticism. In this process, what makes the teacher more open to criticism is to evaluate her own practices, and regularly to encounter the questions and feedback of the experts throughout the implementation. In addition, the self-evaluation questions and diaries after the implementation also reflected the teacher’s strengths and caused her to think about her practices from different angles.

“...What were my mistakes there, I have realized my mistakes better. If I have superior qualities, I start to notice them. They were good in that sense; I would not have realized them if there were no questions.”

“I realized that those questions that were asked to me were the ones I wrote it first. If there were not any questions, maybe I would not have been so aware. I did it, I did it today, I did it like this, but because there were questions, I am looking for what my mistakes were and what they are.”

Derya teacher stated her personal reservations regarding self-evaluation and keeping a diary as follows:

“It is because of me. It could be different if it were someone else. It is a problem because I’m thinking of what to write or whether I am writing correctly and I am difficult with myself. It is not difficult to write a diary, I can write it. While I am writing, I consider if my sentence is correct because I am little obsessed.”

On the other hand, Derya teacher stated that self-evaluation in action research would be used in other learning processes:

“We evaluate ourselves in drama work; we can do the same, that is , evaluate ourselves, in the other studies , too. A preparation might be needed ... In this sense, the same thing can be used in the other lessons, could be administered. That is, it worked for me. My horizon has certainly broadened, and it was really a good experience.”

DISCUSSION

This study aimed at determining Derya teacher’s observations and experiences regarding the implementation of drama method within the framework of collaborative action research model. Teacher’s observations and experiences were evaluated according to the planning, implementation, and evaluation stages of the collaborative action research. Her observations and experiences support the studies and conceptual discussions based on the collaborative action research model in in-service teacher training. Particularly, the active engagement of the teacher in the process made the learning of
a new method permanent (Cochran-Smith & Ltyle, 2009), developed a positive attitude towards the profession (Feldman & Minstrell, 2000), motivated the curiosity of learning due to the need for knowledge and experience, and had her gain reflective thinking skills (Gore & Zeichner, 1991).

The collaborative action research cycle pushed Derya teacher to systematic inquiries about her practices (Gore & Zeichner, 1991), triggered her need to learn despite being on the verge of her retirement and led her to change the teaching methods and techniques she currently uses. Based on the diaries kept by the teacher and the self-evaluation reports she wrote at the end of each drama cycle, it can be stated that needs and problems that arise with the implementation and evaluation stages of the action research model has an effect on the planning stage of next cycle. Derya teacher needed to enrich her plans with new information and try them, and it was revealed that even though the research was completed, the teacher’s learning process continued. In other words, it is significant that Derya teacher thinks she is open to change and development without saying “I have learnt, and I am done” and thus it can be stated that this finding shows parallels with the literature (Clift, et al., 1990).

Derya teacher’s collaboration with the subject-matter expert can be defined as a process of systematic data collection and analysis in the classroom (Mills, 2000). After implementing the drama method, the teacher kept reflective diaries with the questions and instructions provided by the researcher, questioned and reported her own practices in line with the feedback she received from the students. However, the teacher also mentions that writing is difficult and takes time in the action research process. Although the number of action research articles in the field of education is rare in our country, it was stated that the researchers and practitioners should gain more knowledge and experience in action research (Çalışkan and Serçe, 2018). In terms of professional development and in-service training process, it can be stated that the collaboration between researchers and teachers must also focus on the stages of writing and reporting. The support that the teacher will receive while analysing the data collected systematically from the students and putting them into practice serves as a bridge between the theory and practice (Wahlgren and Aarkrop, 2020).

The findings obtained from the teacher’s observations and experiences show that each stage in the action research cycle positively affects professional development in addition to the contribution of the partnership with the subject-matter expert to the implementation of drama method (Flynn, 1997). In Derya teacher’s own words, “self-actualization” can be regarded as an indication that she is open to development and change. As in other studies carried out in the field of drama (Dawson, Cawthon, Ihorn, and Judd-Glossy, 2017), Derya teacher stated that student participation in the classroom increased significantly. Because of the collaborative action research, Derya teacher had the opportunity to make the drama method more permanent by following this change and development in her students one-to-one. In this context, it can be said that it would be meaningful to benefit from the teacher’s opinions and suggestions while determining the tools, questions, and instructions to be used in the evaluation process of in-service training programs.

Derya teacher stated that she made progress in planning the drama lesson, establishing relationships between activities, and preparing activities suitable for the warm-up, animation, and evaluation stages of the drama during the action research process. In addition to this, Derya teacher also mentioned her gains in connection with the problems experienced during the drama practice and generating solutions to them. As a matter of fact, providing immediate solutions to the problems when necessary and paying attention to the transition and continuity between drama activities and sessions are important qualities for a teacher who conducts the drama lesson (Tekerek, 2007).

Derya teacher stated that she needed more sources to diversify her activities during the planning stage of the drama lesson and highlighted that she shared her knowledge and experience with her colleagues. In parallel with this finding, Okvuran (2003) included following professional publications and sharing experiences with others among the qualifications of a drama teacher.

The other two prominent qualifications suggested by Okvuran (2003) regarding drama teacher’s competencies are offering students the opportunity to express themselves and improving
their critical thinking skills. Although Derya teacher provides positive feedback on the process of using the drama method through action research, the researcher’s notes reveal that the two qualities expressed by Okvuran have not yet existed for Derya teacher. The fact that the teacher does not ask the students enough questions, does not make them think, does not support them to share their feelings and opinions can have precedence over the use of drama. Derya teacher’s attitude is not only towards the drama but towards the traditional teacher approaches raised in the problems in research in general.

Although Derya teacher states that she has positive observations and experiences during the planning, implementation and evaluation stages in her diaries, self-evaluation reports and interviews with the researcher, her past habits occur as the difficulties she encountered while implementing the drama method. However, it is considered that the professional knowledge and skills she acquired throughout the collaborative action research process (for example, getting feedback from students, reflective thinking and writing about her practices) will help her in the future. As a matter of fact, the teacher presented an exemplary drama lesson to the audience with her students at the opening of the Drama Room at the school following the end of the study and became in charge of the Drama Club, and shared her knowledge and experience with her colleagues on how to implement drama in their lessons at various meetings.

Results and Suggestions

This paper includes the examination of in-service training on the drama method based on a teacher’s observations and experiences in the process within the framework of the collaborative action research model. As a result of the study, although the teacher had difficulties in the implementation of the drama method, unlike other in-service training courses, she actively participated in the process, questioned her practices systematically, and became open to development and change with the feedback she received from the students and the researcher. Considering this result and a few number of action research studies in our country, it is suggested that the collaborative action research model in in-service training programs should be used. Thanks to this model based on practice, the theoretical weight of traditional in-service training and seminars can be reduced, and learning can be made more effective by spreading the process. In this study, one of the teachers who took the drama course volunteered to use drama in his classroom. A broader participation is recommended for the future research. In this way, both the collaborative action research model can become widespread and the functionality of the model can be examined with different subjects at different class levels.

Although this study was based on the collaborative work of the field expert (first author) and the teacher, the teacher could not be included in the data analysis and reporting process of the research due to time constraints as stated in the previous sections. It is suggested that the teacher should be included in the data analysis and research reporting process with a better time management in the further studies. Thus, it might be ensured that the teacher has a say in his/her own practices as well as taking part in the research effectively.

Drama is a multidimensional field including many concepts such as improvisation, play, art, theatre, and education. Creating an understanding of drama and understanding its theoretical foundations is only possible with practical in-service or pre-service training. To provide the effective use of drama and its continuity, it is important to ensure that the teacher can make a drama planning and implement the plans she has made. For this reason, it is quite valuable to structure in-service drama training with the cooperation of experts and with elements that include planning and implementation of drama.

Teachers should also consider traditional approaches with a critical point of view in order to effectively implement methods such as drama in which a student should be placed at the centre of learning process. Thus, it is suggested that in-service training should allow teachers to gain knowledge and skills related to the methods which promote learning through experience, and they must be supported by instructions including subjects that will enable them to absorb concepts such as “learning through experience”, “constructivism”, “learner-centred education”, and “active learning”.
In this study, the problems that teachers may encounter while implementing an innovative method such as drama and the practices for solving the problems were analysed in line with the teacher’s own observations and experiences about the process. In conclusion, it can be stated that collaborative action research is an effective professional development model while learning and implementing a new teaching method.

REFERENCES


Woman, Man, Society and Sex: How Pre-Service Teachers Perceive Basic Gender Concepts?

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Abstract

The aim of the study is to reveal Turkish pre-service teachers' gender perceptions. For this, cognitive structures of pre-service teachers were analysed with minds maps created with the word association test (WAT) and their mental models were analysed by drawing. In this context, a holistic single case study was adopted depending on the purpose of the research and the data collection process. According to the findings obtained from the WAT, it was determined that the cognitive structures of pre-service teachers were built on the sex, society and woman, and the man was in a weakly related in the cognitive structure. On drawing analysis, it was seen that most of the pre-service teachers depicted man and woman with visuals reflecting traditional stereotypes. On the other hand, visuals reflecting an egalitarian and contemporary perspective. In the light of both analysis results, Turkish teacher education curricula were discussed and specific suggestions were presented.

Keywords: Gender Perceptions, Pre-Service Teachers, Teacher Training, Word Association Test, Drawing.


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INTRODUCTION

Gender stereotypes are dominant in educational settings, and students are exposed to both explicit and implicit gender discrimination. Important steps have been taken for gender policy and women's studies at Turkey's universities, but still it is the beginning of the road (Göker and Polatdemir, 2019). Indeed, according to the OECD's 2019 data in Turkey, 43% of women aged between 18-24 are neither in education nor in employment (OECD average 16%) and this figure is 18% for men (OECD average is 13%). According to this, Turkey has the highest gender inequality gap between men and women (TEDMEM, 2019). According to 2018 data, the schooling rate of women in higher education was 47.4%. Turkey's 11th Development Plan which covers the period 2019-2023 has envisaged that this rate will increase to 60% until 2023 (Directorate of Presidential Strategy and Budget, 2019). Yet, it is rather important to highlight that no bigger targets were set. “Higher Education Institutions Gender Equality Attitude Certificate”, which is one of the latest developments in universities to raise awareness about gender equality created controversy when it was introduced but also when it was abolished in 2019. In addition, research shows that that gender equality discourse literally cannot be implemented in Turkey (Aratemur-Çimen and Bayhan, 2018). According to, 2020 The Global Gender Gap Report, Turkey ranked as 130th among 153 countries for gender equality; this indicates Turkey needs to take more rigorous steps towards gender equality (World Economic Forum [WEF], 2020).

Ensuring gender equality in education is not only the focus of research in Turkey, but also international platforms have emphasized the importance of gender in education. In the Global Gender Gap Report’s published by UNESCO since 2006 draws attention to the importance of education in ensuring gender sensitivity and equality. In this context, the report mentions that “Education, can be a locus of gender inequality, where stereotypical behavior and views are reinforced, or a catalyst or transformation, providing individuals with opportunity and capability to challenge and change discriminatory attitudes and practices” (UNESCO 2016, 12). The OECD report by the ABC of Gender Equality in Education pointed out the need for teachers to be free of gender stereotypes in the teaching-learning process; it emphasized the importance of the training given to teachers on gender equality in Sweden, Belgium and the United Kingdom (OECD, 2015). The report titled “Gender Equality Index” published by the European Institute for Gender Inequality shows that the factors that increase the education levels of women in the European Union countries and gender inequalities in their educational status (EIGE, 2019). In the light of these data, it is important that all stakeholders in political, economic, health and education sector take responsibility for ensuring gender equality and developing gender awareness. In this process, education and especially teacher training is very important.

Teachers’ behaviours, feedback, classroom management, teaching materials, language, expectations, behaviour styles, values and attitudes shape children's perceptions of gender (Frawley, 2005; Younger and Warrington, 2008). Gender bias in education is explained by treating male and female students differently during the education process. It can be caused by many factors, from how students are encouraged to work to how gender roles are represented in textbooks (Owens, Smothers and Love, 2003). Smith, Hardman, and Higgins (2007) found that primary school students had gender imbalance in their classroom interactions. Boys were more active in the classroom than girls, responding to questions, receiving more praise and guidance from the teacher. In the research of Gray and Leiht (2004) with teachers, it was stated that the school and teachers unintentionally brought the gender stereotypes of the society to the class. Muntoni and Retelsdorf (2018) stated that classroom teachers expect higher performance from female students in reading. Similarly, the research of Saldıray and Doganay (2017) shows that teachers in Turkey reflect their gender stereotypes to teaching-learning process and they show behaviors towards to gender discrimination.

Teachers should be attentive to not promoting traditional masculinity and femininity roles. In this context, teacher education appears to be the focus area aiming to provide students with this perspective (Sayman, 2007). However, according to the study of Lumadi and Shongwe (2010), there is a gap between teacher theory and practice regarding gender sensitivity in teacher education. Also Gray
and Leith (2004) reached similar results and they concluded that pre-service teachers did not take any gender-related courses during their education and they discussed gender issues indirectly, not directly. Similarly, Mhlalali (2011) stated that teachers do not know how to teach gender equality. Tantekin-Erden (2009) mentioned that issues related to gender equality in teacher training process had been ignored in Turkey and teachers started their profession unprepared to teach gender equality. In the teacher education process, it is necessary to give importance to the issues and problems related to gender equality (Gray and Leith, 2004). In this context, in Turkey, the undergraduate program of primary school teaching program, which was renewed in 2018, does not have a mandatory gender course. In addition to that the responsibility of opening elective courses left to initiative of the faculty member (YÖK, 2018). This may cause negligence of gender issues in the primary school teaching program. On the other hand, some studies show that the primary school pre-service teachers have high perception of gender (Seçgin and Tural, 2011; Ünal, Tarhan and Çürükvelioglu-Köksal, 2017). For example, the research of McDowell and Klattenberg (2019) show that the factors affecting both female and male teachers' use of language strategies for discipline is explained as workplace / school culture, not gender roles. The research results are undoubtedly insufficient in making generalizable judgments for pre-service teachers regarding gender perception and more research is needed. Therefore, studies that draw on multiple data sets to examine different perspectives and alternative views on gender perception play an important role. In the process of teacher education, revealing the existing situation is a prerequisite for developing gender sensitive policies. It can provide much-needed recommendations on facilitating the integration of gender issues into teacher education programs. This research is considered important in terms of demonstrating the capacity of the primary school pre-service teachers to create a gender-free learning atmosphere when they start the profession. In this context, the aim of the research is to reveal primary school pre-service teachers' gender perceptions by using alternative assessment and evaluation techniques. The study aims to seek responses to following research questions:

- What are the cognitive structures of primary school pre-service teachers for gender roles?
- What are the pre-service primary school teachers' images of male and female?

**Literature Review**

The societies' adoption to technological innovations and recovery of their financial, political and culture will provide the foundation for social transformation. Equal contributions of women and men to achieve this deep economic and social transformation is very important (World Economic Forum, 2018). Indeed, bias and prejudice in workplace towards to male-female interaction affect the productivity of the country (Sadker and Sadker, 1986). This situation prevents the realization of social transformation and makes it necessary to develop awareness about gender. Gender is to classify a person as masculine or feminine in a social context (Oakley, 1985). Gender describes the individual in the context of the biological components of masculinity and femininity. The term is traditionally used to describe the psychological, social and cultural aspects of masculinity and femininity (Kessler and McKenna, 1985). In other words, it represents the characteristics that women and men experience with socialization and adopt social life and cultural activities (Wharton, 2005). Sex is conceptualized as man and women; gender is conceptualized as masculinity or femininity, which means being a man or a woman (Kimmel, 2011). Gender refers to learned behaviors rather than innate behaviors that change according to time and place (Mannathoko, 1999). Gender, which contains a series of expectations about what behaviors are appropriate for sex, it represents roles attributed to the individual (Kessler and McKenna, 1985). In other words, the duties and responsibilities that society deems appropriate for female and male are explained in the context of gender roles.

The precondition for women and men to benefit equally from right to education is ensuring gender equality (ERI, 2017). Walker, Pearce, Boe and Lawson (2019) addressed right to equal education with different factors. In addition to the common factors such as urban / village distinction, family income level, ethnic, religious and linguistic identity, geographical region in the world, they made strong emphasis on gender perception. Esen (2013a) emphasized on important role of gender in
education environments, stated that perception of gender role identity started in the family and continued in school life. Mannathoko (1999) stated that gender inequalities are built in social, political, economic and legal institutions such as family, school, and teacher education institutions. As a matter of fact, research shows that teachers have a great influence on stimulating awareness of gender equality (Baba, 2007; Mhlauli, 2011; Younger and Warrington, 2008).

Children’s perceptions of gender roles at an early age show themselves through the clothes they wear, the games they play, their conversations and their behavior in the classroom (Frawley, 2005). Parents have an impact on the formation of gender stigmatization and gender stereotypes of children (Wharton, 2005). Even parents raise their children in the context of the identities and expectations created by the community (Tantekin-Erden, 2009). These expectations, consisting of gender stereotypes, include beliefs that girls are submissive, and trucks are boys’ toys (Wharton, 2005). These gender stereotypes directly shape the child's individual, social life and career choices (Gündoğan and Erbey, 2020). Schools, the first social institution encountered after the family, have a critical role in the development of gender perception. When children start school, the teacher has a greater impact on children’s social life than their families (Tantekin-Erden, 2009). Indeed “Teachers are key players in children’s evolving understanding of gender issues” (Younger and Warrington, 2008, p431). Social learning plays an important role in primary school students’ developmental characteristics. In addition to skills and attitudes in the education process, the social learning allows them to internalize every behaviour displayed by the teacher through observation and imitation. Therefore, in order to ensure gender equality in schools, it is necessary to focus on teachers’ beliefs and attitudes (Tantekin-Erden, 2009).

Whether it is desired or not, the effect of teacher characteristics on shaping students' behaviours requires teachers to be careful and attentive. Teachers’ own perception of gender affects how they treat their students and interact with them (Frawley, 2005). In this context, teachers need to teach gender equality in order to develop men’s and women’s potential at the highest level (Mhlauli, 2011). According to Owens, Smothers, and Love (2003), training pre-service teachers on gender equality makes a great contribution to dismantling gender bias in education. If a pre-service teacher learns to behave gender-neutral in an undergraduate program, then it is likely that s/he will use adequate strategy-method-techniques for this and will have a high gender equality sensitivity. In this way, teachers will create a democratic learning atmosphere in the class, and they will see their students as “human” rather than girls and boys.

METHOD

The research employs holistic single case study. According to the report of Stake (1974, as quoted in Çepni (2014), several data collection tools can be used in accordance with the purpose of the research to investigate a given phenomenon. According to Gillham (2000), a case subject to research must exist in the current time period and must be a human activity attached to the real world. Gender, the special case examined in this study, is thought to be a very current topic of discussion, which reflects these characteristics with its basic concepts and is discussed in many international reports and scientific research. (UNESCO, 2016; [WEF], 2020). Punch (2005) stated that the case study provided a holistic meaning to the obtained data by associating a single event with various phenomena and thus defined it as a detailed analysis of this singular event. Accordingly, the associations of the most basic, relevant and inclusive concepts thought to represent gender in the minds of pre-service teachers were described in detail through drawings and WAT. In this context, the associations of the most basic, relevant and inclusive concepts thought to represent gender in the minds of pre-service teachers were described in detail through drawings and WAT. The data obtained were analysed holistically according to common and different findings. Consequently, this research aims to explore the perceptions of pre-service teachers about gender roles using different data collection tools and employs a special case study.
Participants

The participants of this research are 63 pre-service teachers studying at Uşak University Faculty of Education, Department of Primary School Teaching. 40 participants (63.5%) are female and 23 of them (36.5%) are male students. We used convenient sampling to recruit participants. According to Büyüköztürk et al. (2009), the appropriate sampling method is created by considering the limitations such as time, money and workload. Similarly, Patton (2002) stated that in the appropriate sampling method, the participant groups selected in easy-to-reach and inexpensive ways to study can be preferred. In this study, which was conducted with pre-service teachers who were educated in the institution where the researchers work, it is thought that the selection of the participants is in accordance with the nature of the study. We collected the data during 2019-2020 academic year and the participation was voluntary.

Data Collection Tools

The first of the data collection tools used to reveal the cognitive structures of pre-service teachers’ perceptions regarding gender roles is the Word Association Tests (WAT). WATs are used to examine the schemes, models, concepts and the relationships between them. They are also used to explore "cognitive structure", "mental model" and "mental image". They are used for a similar purpose in this research. The stimulus words of Woman, Man, Society and Gender selected within the scope of gender roles and they are presented to teachers in a sub-section under WAT. Sample WAT pages presented to each participant are shown in Figure 1.

<table>
<thead>
<tr>
<th>Page 1</th>
<th>Page 2</th>
<th>Page 3</th>
<th>Page 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX</td>
<td>SOCIETY</td>
<td>WOMAN</td>
<td>MAN</td>
</tr>
<tr>
<td>SEX</td>
<td>SOCIETY</td>
<td>WOMAN</td>
<td>MAN</td>
</tr>
<tr>
<td>SEX</td>
<td>SOCIETY</td>
<td>WOMAN</td>
<td>MAN</td>
</tr>
<tr>
<td>SEX</td>
<td>SOCIETY</td>
<td>WOMAN</td>
<td>MAN</td>
</tr>
<tr>
<td>SEX</td>
<td>SOCIETY</td>
<td>WOMAN</td>
<td>MAN</td>
</tr>
<tr>
<td>SEX</td>
<td>SOCIETY</td>
<td>WOMAN</td>
<td>MAN</td>
</tr>
<tr>
<td>Related</td>
<td>Sentence</td>
<td>Related</td>
<td>Sentence</td>
</tr>
</tbody>
</table>

Figure 1. WAT Pages

Participants were asked to write the words or concepts that evoke in their minds in the space next to each stimulus words and they were given 45 seconds for each stimulus words.

Another data collection tool used to reveal the cognitive structures of participants regarding gender roles is the Drawing. According to Rennie and Jarvis (1995), drawing can be used as an alternative technique for students who have difficulty in verbally expressing their thoughts. In the research, the drawing technique, which is considered to complement the WAT findings, was used. Dove, Everett and Preece (1999) emphasized that drawing technique is an easier tool to reveal some thoughts such as environment and human figures in comparison to written definitions. Accordingly, it was considered appropriate to use the drawing technique for the images of men and women, which constitute the main content of the research. Pridmore and Bendelow (1995) emphasized that the drawings reflect the models and the general structure in the minds and stated that they serve as a window to reveal students' feelings and thoughts. In this context, two different forms were presented to prospective teachers with the instructions "Draw the Image of Woman in Your Mind" and "Draw the Image of Man in Your Mind". They were asked to draw the learning environments in their minds on the provided space in the forms. In addition, participants were asked to explain their drawing verbally. Ethical principles were taken into consideration in all processes of the research. In this context, the participants were clearly informed about the study and the confidentiality of the participants was ensured.
Data Analysis

As a result of the WAT, a key frequency table was created showing the response words generated against each stimulus words (Table 3). The first analysis method used by using this frequency table is the relatedness coefficient (RC) method. In the calculation of this index developed by Garskof and Houston (1963), rank values (degrees) are given according to the number of stimulus words produced by students. Taking these values into account, RC is calculated, which reveals the strength of the relationship between any two stimulus words. While calculating, the common (same) words produced for the two stimulus words selected are taken into account. HR is calculated according to the formula is presented in Figure 2.

Figure 2. Formula

\[
RC = \frac{\text{Sum of Multiplications of Sequence Numbers of Common Words}}{\sum n^2 - 1}
\]

\(n = \text{the number of words with many words}\)

Table 1 presents the formula and sample table to calculate the related connectedness for any two stimulus words (eg: WOMAN and SEX).

<table>
<thead>
<tr>
<th>Response words and frequency for Woman</th>
<th>Degree</th>
<th>Response words and frequency for Sex</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMAN*</td>
<td>7</td>
<td>SEX*</td>
<td>6</td>
</tr>
<tr>
<td>Society (f=33)</td>
<td>6</td>
<td>Society (f=38)</td>
<td>5</td>
</tr>
<tr>
<td>House (f=29)</td>
<td>5</td>
<td>Man (f=27)</td>
<td>4</td>
</tr>
<tr>
<td>Man (f=24)</td>
<td>4</td>
<td>Force (f=21)</td>
<td>3</td>
</tr>
<tr>
<td>Child (f=20)</td>
<td>3</td>
<td>Woman (f=13)</td>
<td>2</td>
</tr>
<tr>
<td>Mother (f=19)</td>
<td>2</td>
<td>Discrimination (f=9)</td>
<td>1</td>
</tr>
<tr>
<td>Businesswoman (f=11)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 1, for example, the common words in the WOMAN-SEX are woman (degrees 7 and 2), society (degrees 6 and 5), men (degrees 4 and 4). Since there are 7 words in the long list, \(n = 7\). Accordingly, the Related Coefficient between the concepts of WOMAN and SEX;

\[
RC = \frac{(7 \times 2) + (6 \times 5) + (4 \times 4)}{7^2 + 6^2 + 5^2 + 4^2 + 3^2 + 2^2 + 1^2 - 1} = \frac{45}{139} = 0.317
\]

RC values for all stimulus words are calculated separately according to the formula and the values are shown in the table. Based on this table, mind maps showing the relationships between stimulus words are drawn.

Another analysis method used in WAT is the Cut-off Point (CP) technique. While the strength of the relationship between stimulus words is shown in RC analysis, in KN analysis, the direction of this power and the most common words are revealed. First, the most produced answers for stimulus words was determined as 3-5 points below the cut-off point. The concepts and words that repeat above this frequency are associated with interconnection lines and linked to the first part of the mind maps. Then, the cut-off point was pulled down at certain intervals and the process continued until all the keywords appeared in the mind map (Bahar, Johnstone and Sutcliffe, 1999; Nakiboğlu, 2008). Each
cut-off point range shows the frequency range of the words produced. Thus, how often the words are produced is shown starting from the stronger and proceeding to the weaker.

We employed Content analysis and analyzed the studies using drawing technique as a data collection tool. (Dove, Everett, and Preece 1999; Miele 2014; Taşdere and Özsevgeç 2012; Thomas, Pedersen, and Finson 2001). The themes, categories, classifications, etc., which were put forward in the related studies, were examined. Those who are considered to be suitable for the content of this research have been used. The verbal expressions explaining the drawings, visuals, physical features, facial expression, current environment, having / not having children, -material features were analyzed. Subcategories representing each feature have been created. Some drawings evaluated under these categories are presented in the findings. Common categories and themes that represent repeated situations, concepts, emphasis are unearthed.

**FINDINGS**

*Cognitive Structures of Pre-Service Teachers for Gender Roles*

In this context, the first method used in the analysis of the findings from the WAT is RC analysis. Accordingly, RC values among stimulus words are presented in Table 2.

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.398</td>
<td>0.297</td>
<td>0.689</td>
</tr>
<tr>
<td>2</td>
<td>0.368</td>
<td>0.307</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>0.258</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2. The mean relatedness coefficients (RC).

RC values are mapped from strong to weak to visualize the strength of the relationship between stimulus words. We used cut-off point technique introduced by Bahar et al. (1999). Accordingly, the cutting-point range with the strongest relationship was preferred as $RC \geq 400$. Breakpoints that are drawn down at certain intervals are terminated in the range of $0.200 \geq RC \geq 0.299$, where relations between all stimulus words occur. Relations between stimulus words are shown in the Figure 3, from strong to weak:

![Figure 3](image.png)

*Figure 3. Relationship among the stimulus words according to RC values*
For RC = 04.00 and above: The strongest relationship is between the GENDER and SOCIETY. Pre-service teachers produced the most common words for these two concepts.

RC = 03.00 - 0.399: The stimulus words for this range are of WOMAN and MAN. WOMAN has been included in the network with multiple associations with GENDER, SOCIETY and MAN.

HR = 0.200 - 0.299: In this range, the MAN has been associated with weak links to the GENDER and SOCIETY. Accordingly, the least number of common words were produced between the MAN and other stimulus words.

Another technique used in the analysis of the findings from the WAT is the cut-off point technique. The frequency table consisting of the words given to the stimulus words are presented in Table 3:

<table>
<thead>
<tr>
<th>Response Words</th>
<th>STIMULUS WORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SEX</td>
</tr>
<tr>
<td>Sex</td>
<td>4</td>
</tr>
<tr>
<td>Woman</td>
<td>48</td>
</tr>
<tr>
<td>Man</td>
<td>50</td>
</tr>
<tr>
<td>Society</td>
<td>11</td>
</tr>
<tr>
<td>Equality</td>
<td>11</td>
</tr>
<tr>
<td>Girl</td>
<td>11</td>
</tr>
<tr>
<td>Child</td>
<td>9</td>
</tr>
<tr>
<td>Role</td>
<td>9</td>
</tr>
<tr>
<td>Differences</td>
<td>8</td>
</tr>
<tr>
<td>Discrimination</td>
<td>6</td>
</tr>
<tr>
<td>Feminism</td>
<td>6</td>
</tr>
<tr>
<td>LGBT</td>
<td>6</td>
</tr>
<tr>
<td>Mother</td>
<td>39</td>
</tr>
<tr>
<td>Violence/Pressure</td>
<td>8</td>
</tr>
<tr>
<td>Altruist</td>
<td>7</td>
</tr>
<tr>
<td>Power</td>
<td>6</td>
</tr>
<tr>
<td>Family</td>
<td>1</td>
</tr>
<tr>
<td>Love</td>
<td>6</td>
</tr>
<tr>
<td>Wife</td>
<td>6</td>
</tr>
<tr>
<td>Murder</td>
<td>6</td>
</tr>
<tr>
<td>Father</td>
<td>33</td>
</tr>
<tr>
<td>Patriarchal</td>
<td>8</td>
</tr>
<tr>
<td>Job</td>
<td>3</td>
</tr>
<tr>
<td>Income</td>
<td>7</td>
</tr>
<tr>
<td>Human</td>
<td>2</td>
</tr>
<tr>
<td>Culture</td>
<td>10</td>
</tr>
<tr>
<td>Person</td>
<td>9</td>
</tr>
<tr>
<td>Rule</td>
<td>7</td>
</tr>
<tr>
<td>Respect</td>
<td>7</td>
</tr>
<tr>
<td>Crowd</td>
<td>7</td>
</tr>
<tr>
<td>Inequality</td>
<td>1</td>
</tr>
<tr>
<td>Unjustness</td>
<td>1</td>
</tr>
</tbody>
</table>

The most frequently response words were placed at the top of the cutting-point in mind map. Figure 4 shows the mind map demonstrating the cognitive structure of pre-service teachers when cutting points are drawn down at certain intervals until all stimulus words are revealed.
Cut off Point 36 and Above: MAN and WOMAN were produced in response to the GENDER. WOMAN is associated with the word “Mother”.

Cut off Point Between 21-35: In this range, a mind map similar to the previous cut point range has emerged. In addition to that, the word “father” was for the MAN.

Cut off Point Between 6-20: In this range, all stimulus words and words emerged with multiple connections and associations. The words of equality and difference are common responses for GENDER and SOCIETY, violence / pressure for SOCIETY and WOMAN, girl and child for GENDER and WOMAN, and the power for WOMAN and MAN. In this range, relationships such as MAN-work, WOMAN-altruist are frequently used in everyday language and evoked semantic affinity. Gender-feminism-LGBT-discrimination and WOMAN-murder associations are related to contemporary issues and have also emerged in this range. However, the stimulus words of SOCIETY and GENDER were produced as a mutually common word and a strong relationship between these concepts was revealed. The cognitive structure was built on these three stimulus words according to the CP technique, in which the most common association and word arises between the stimulus words of GENDER, SOCIETY and WOMAN.
The Images of "Woman" and "Man" of Pre-Service Teachers

“Woman” Images

As can be seen in Figure 5, the image of women created by participants consists of six themes. The categories related to the theme of “woman in family and home life” are presented in Table 4.

Table 4. Woman in family and home life

<table>
<thead>
<tr>
<th>Maternity</th>
<th>Woman in Family and Home Life</th>
<th>Home Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td></td>
<td>Housework</td>
</tr>
<tr>
<td>Childcare</td>
<td></td>
<td>Home</td>
</tr>
<tr>
<td>Fertility</td>
<td></td>
<td>Responsible</td>
</tr>
<tr>
<td>Devoted</td>
<td></td>
<td>Protector</td>
</tr>
<tr>
<td>Compassion</td>
<td></td>
<td>Order</td>
</tr>
<tr>
<td>Educator</td>
<td></td>
<td>Boss</td>
</tr>
<tr>
<td>Heaven</td>
<td></td>
<td>Supporter</td>
</tr>
<tr>
<td>Glory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows that the theme of “woman in family and home life” consists of two categories: “maternity” and “home life”. Maternity category consists of mother, childcare, fertility, devotion, compassion, educator, heaven and glory codes. PT2 remarked the following in relation to fertility code: “I tried to draw attention to the fertility of the woman. The woman is fertile, productive. It is the basis of the family”. The visuals of PT2 emphasizes fertility and they are in Figure 6.

The images of “home life” category consisted of housework, home, responsible, protector, order, boss and supporter codes. PS27 made the following state in relation to boss code: “The woman is the head of the house. Order and harmony never happen where there are no women. It does not happen”. The visual of PT27 is presented in Figure 7.
Table 5 shows the codes produced by pre-service teachers for the theme "Woman in Career and Professional Life".

Table 5. Woman in Career and Professional Life

<table>
<thead>
<tr>
<th>Woman in Career and Professional Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Laborer</td>
</tr>
<tr>
<td>• Rush</td>
</tr>
<tr>
<td>• Hardworking</td>
</tr>
<tr>
<td>• Facultative</td>
</tr>
<tr>
<td>• Successful</td>
</tr>
<tr>
<td>• Career</td>
</tr>
<tr>
<td>• Businesswoman</td>
</tr>
<tr>
<td>• Earning money</td>
</tr>
</tbody>
</table>

The images of this theme consisted of labourer, rush, hardworking, facultative, successful, career, businesswoman and earning money codes. The image drawn for this is presented in Figure 8.

![Figure 8](image)

**Figure 8.** "Woman in Career and Professional Life"

Images of pre-service teachers on the theme of "Strong and Productive Woman" are shown in Table 6.

Table 6. Strong and Productive Woman

<table>
<thead>
<tr>
<th>Strong and Productive Woman</th>
<th>Representation of Power</th>
<th>Representation of Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Warrior</td>
<td></td>
<td>• Skilled</td>
</tr>
<tr>
<td>• Woman standing on their feet</td>
<td></td>
<td>• Nutritious</td>
</tr>
<tr>
<td>• Hero</td>
<td></td>
<td>• Fertile</td>
</tr>
<tr>
<td>• Free</td>
<td></td>
<td>• Productive</td>
</tr>
<tr>
<td>• Intelligent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Powerful</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 shows the images related to the theme of “Strong and Productive Woman” which consisted of two categories as “representation of power” and “representation of production”. The images for the “representation of power” category consisted of warrior, woman standing on their feet, hero, free, intelligent and powerful codes. For the “representation of production” category, it consists of skilled, nutritious, fertile and productive codes. PT40 made the following statement regarding the skilled code: “If a woman laughs, the world will laugh. If a person normally has ten fingers, the woman has twenty fingers. Because the things women can do are not what a normal person can do”. The corresponding drawing is the Figure 9.
Figure 9. “Skilled”

The images regarding the theme of “Oppressed Woman” are shown in Table 7.

Table 7. Oppressed Woman

<table>
<thead>
<tr>
<th>Oppressed Woman</th>
<th>Woman who is subjected to violence</th>
<th>Woman who is ignored</th>
<th>Woman whose labor was exploited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence</td>
<td>Violent</td>
<td>Preoccupied</td>
<td>House painter</td>
</tr>
<tr>
<td>Oppressed</td>
<td>Oppressed</td>
<td>Helpless</td>
<td>Building worker</td>
</tr>
<tr>
<td>Despised</td>
<td>Despised</td>
<td>Silenced</td>
<td>Portage</td>
</tr>
<tr>
<td>Slave</td>
<td>Slave</td>
<td>Exhausted</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lonely</td>
<td></td>
</tr>
</tbody>
</table>

For the former category, codes are violence, oppressed, despised, slave. PT 13 stated: “While a woman cries out that I do not want to die here, another woman finds it appropriate for her peers to be visible in outdoor or freely mobile”. The corresponding drawing for this statement is Figure 10.

For the second category, the codes are as preoccupied, helpless, silenced, exhausted, and lonely codes. PT54, for the silenced code (Figure 11), said, “Women add colour to our lives. Instead of silencing them, we should free them to speak and express their ideas.” As for the category of women whose labor was exploited, PT12 says “We see the labor of women. A woman who supports her household and works to make money bears the burden alone. It is difficult to be a woman.” The visual that emphasizes this statement is Figure 12.

Figure 10. “Violence”  Figure 11. “Silenced”  Figure 12. “Portage”

Beauty, well-groomed, fancy, make-up and radiant codes have been produced for the theme of “Physical characteristics of a beautiful woman”. PT30 drew Figure 13 regarding the well-groomed code “Women must be well-groomed. The fact that they care about themselves makes them beautiful”.
The words produced for the theme of “Woman as a Source of Happiness and Hope” are flower, happy-hopeful, love-respect, everything and cheerful-laughing. PT19 said: “Woman is everything. Without a woman, everything is incomplete. She is the reason for happiness”. The visual reflecting this view can be seen in Figure 14.

![Figure 13. “Well-groomed”](image1)

![Figure 14. “Everything”](image2)

“Man” Images

As can be seen in Figure 15, the male images consist of seven themes. The opinions on the theme of “Father” are presented in Table 8.

Table 8. Father

<table>
<thead>
<tr>
<th>Father</th>
<th>Dominant</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patriarchal</td>
<td>Breadwinner</td>
</tr>
<tr>
<td></td>
<td>Pillar of the house</td>
<td>Someone who cares about his family</td>
</tr>
<tr>
<td></td>
<td>Chief of the family</td>
<td>Raises happy child</td>
</tr>
</tbody>
</table>

Table 8 shows that man as a father figure has two categories “dominant” and “domestic”. For the former category, words such as patriarchal, pillar of the house and chief of the family were produced. PT21 made the following statement in relation the chief of family code: “I think of a father figure when you say man. At the same time, I think of a strong pole.” The latter category was associated with the words such as breadwinner, someone who cares about his family and raises happy child. For instance, Figure 16 by PT35 shows that “today, although bad events happen in our society, there are also good men. We should not always see every man guilty. Our fathers are also men. There are fathers who raise happy children.”
Figure 16. “Father”

The images regarding the theme of "Angry-Aggressive Man" are shown in Table 9.

<table>
<thead>
<tr>
<th>Angry-Aggressive Man</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Angry</td>
</tr>
<tr>
<td>• Aggressive</td>
</tr>
<tr>
<td>• Oppressive</td>
</tr>
<tr>
<td>• Compassionate</td>
</tr>
<tr>
<td>• Harmless creature</td>
</tr>
<tr>
<td>• Terror</td>
</tr>
<tr>
<td>• Violent</td>
</tr>
<tr>
<td>• Ax</td>
</tr>
<tr>
<td>• Evil</td>
</tr>
</tbody>
</table>

As can be seen in Table 9, the codes of angry, aggressive, oppressive, compassionate, harmless creature, terror, violent, ax and evil have been created for the theme of "Angry-Aggressive Man". PT12 expressed more than one of these codes in his statements: "the man is nervous; his hand is on the waist and the fist is ready. I think he is aggressive. I see it as someone who believes that power is only physical". The drawing that reflects these views of PT12 is presented in Figure 17. PT56 explained the image in Figure 18 as "unfortunately men, not all of them, always show their fists in this way in our society".

Figure 17. “Aggressive”  
Figure 18. “Violent”

The codes for the theme of “Man in terms of Physical-Visual Feature” were listed as for handsome, muscular, strong, someone who wears shirt or do not pay attention to the dress code. In relation to his strong code, PT38 said, “In society, men are always seen as power factors. Therefore, I also emphasized this in the picture.” The pre-service teachers have also created the codes of sad, oppressed, troubled, unhappy, anxious and ignored for the theme of “Oppressed Man”. The Figure 19
shows that under pressure code, PT13 explained his drawing with the expression “Although the man does not want to do it, the public pressure is dragging him to do it”. Regarding the sad code in Figure 20, PT 59 said “The sad clown entertains but does not have fun. It doesn't matter if you're sad. The show must continue.”

Another theme that emerges in the opinions of teacher candidates is the “Leader-Protective Man” theme. Protecting, solid, power, authoritarian, manager, success and role-model codes have been created for this theme. Again, the opinions on the theme of “Selfish-Unreliable Man” are presented in Table 10.

Table 10. Selfish-Unreliable Man

<table>
<thead>
<tr>
<th>Selfish-Unreliable Man</th>
<th>Selfish</th>
<th>Unreliable</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Materialism</td>
<td>• Careless</td>
<td></td>
</tr>
<tr>
<td>• Self-oriented</td>
<td>• Fun-loving</td>
<td></td>
</tr>
<tr>
<td>• Supremacy</td>
<td>• Wandering</td>
<td></td>
</tr>
<tr>
<td>• Unbalanced</td>
<td>• Ignorant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Unfaithful</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Flirtatious</td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in Table 10, the "Selfish-Unreliable Man" theme consists of selfish and unreliable categories. Selfish code includes associations related to materialism and self-oriented acts and behaviors whereas unreliable entailed words such as careless, fun-loving, wandering, ignorant, unfaithful and flirtatious. PT48 explained his drawing (Figure 21) about selfish man as “The man has a stick in one hand and a flower in the other hand. I wanted to explain with the objects what we want and don't want. I left the man's facial gesture blank. Because he is lost. He wants to be nice to his wife but at the same time cause a mess as a reflection of his selfish character.” PT54 reflect the unreliable category in her drawing (Figure 22). “I think every man is cheating. I think they are unreliable. I don't trust any of them. The phone in their hands is what gives them away.” Figure 23 reflects the lazy code and PS 11 says “Men are always looking for an easy way to do thing. The difficult tasks always frighten them.”
The opinions on the theme of “Supportive Man/Spouse support” are presented in Table 11.

Table 11. Supportive Man/Spouse Support

<table>
<thead>
<tr>
<th>Emotional Support</th>
<th>Supportive Man/Spouse Support</th>
<th>Spouse Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Good</td>
<td>• Self-sufficient</td>
<td>• Comrade</td>
</tr>
<tr>
<td>• Understanding</td>
<td>• Man of hard days</td>
<td>• Assistant</td>
</tr>
<tr>
<td>• Respectful</td>
<td>• Employee</td>
<td>• Housework</td>
</tr>
<tr>
<td>• Tolerant</td>
<td>• Money making</td>
<td>• Food</td>
</tr>
<tr>
<td>• Happy</td>
<td>• Livelihood</td>
<td>• Childcare</td>
</tr>
<tr>
<td></td>
<td>• Sweat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Laborer</td>
<td></td>
</tr>
</tbody>
</table>

Table 11 shows the theme of “Supportive Men/Spouse support” which consists of “emotional support”, “financial support” and “spouse support” categories. “Emotional support” category is defined by the codes of good, understanding, respectful, tolerant, happy; “Financial support” category is associated with self-sufficient, man of hard days, employee, money making, livelihood, sweat and labourer codes, “Spouse support” category consists of comrade, assistant, housework, food and childcare codes. PT 42 expressed financial support through Figure 24 with the expression “A man who preserves and, works, and brings money to the house and sheds sweat for it”. As for the spouse support, PT45 stated “A male role-model should support his spouse, cook and look after the child” and drew the Figure 25.
DISCUSSION

According to the findings of the WAT analysis, the cognitive structures of pre-service teachers were built on the gender, society and woman. According to RC analysis, the strongest relationship arises between the gender and society and the woman is associated with these two concepts. According to the CP technique, the most common words are produced for these three stimulus words. Man was partly and weakly correlated in both the CP and CR analysis findings. Society and gender emerged in a stronger and multiple relation structure with the woman. This can be interpreted as preservice teachers’ making sense of gender through the traditional perspective/image of woman. Another finding that supports this result is that the words “Mother, Altruist, Child” listed for the woman, and “Father, Work, Money” words produced for man. All these words represent the traditional roles for woman and man in the society. Aslan (2015) has reached similar findings and found that pre-service teachers had gender prejudices. In contrast, few of them have made associations that reflect their contemporary perspective on gender, such as Gender-Equality-Society, Woman-Violence / Pressure, Gender-Discrimination. Also, the relationship between the concept of gender and the controversial concepts such as LGBT, Feminism and Murder show that pre-service teachers have a partial awareness about gender. In studies that support these partial findings, it was found that pre-service teachers have an egalitarian attitude towards gender roles (Almutawa, 2005; Bayraktar and Yaşar-Güder, 2019; Yaşar, 2018) and positive perception (Çuhadaroğlu and Akfirat, 2017).

When the pre-service teachers' images of man and woman are analysed, traditional and egalitarian perspectives emerge in each theme. Codes such as motherhood, childcare, kindergarten, house chores, and fertility have been produced in traditional views on the theme of “woman in family and life”. These codes generally represent traditional stereotypes. As for the images of man, the themes of “father” and “supportive man/Spouse support” have emerged. Codes such as patriarchal, chief of the house, pillar of the house and breadwinner are included for the father's role. In the theme of “supportive man/Spouse support”, codes such as tolerant, livelihood, breadwinner, and laborers were produced. The codes produced both for man and woman reveal the traditional perceptions. Likewise, in the research of Zelyurt (2018), the children stated about women was “The oppressed woman”. All these words such as underdogs, undervalued, working like slaves are also presented for the same category. As a matter of fact, one of the representation forms of women in newspapers is that they are shown as victims of violence (Toker- Erdoğan, 2009). However, some of the participants represented theme of "oppressed man” with codes such as sad, oppressed and anxious, which show that some of them have a view that is far from traditional stereotypes.

One of the themes that pre-service teachers stated about women was “The oppressed woman”. The codes produced for the category of exploited women within the scope of this theme are oriented towards traditional understanding such as wall painting, construction worker. Similarly, the codes that such as underdogs, undervalued, working like slaves are also presented for the same category. As a matter of fact, one of the representation forms of women in newspapers is that they are shown as victims of violence (Toker- Erdoğan, 2009). However, some of the participants represented theme of "oppressed man” with codes such as sad, oppressed and anxious, which show that some of them have a view that is far from traditional stereotypes.

Codes such as successful, career, conscious, and breadwinner, which are produced in the theme of woman in career and business life, reflect their contemporary thoughts. In the theme of “spouse support”, codes such as those that do every job, earn money, and work for the financial support are produced. This finding can be interpreted that some pre-service teachers have stereotypes about women in their professional life, while others attribute more effective modern roles. Çetin-Gündüz and Tarhan (2017) stated that gender stereotypes restricted women to roles such as being responsible for kids, spouse and household chores. Despite these views, which are similar to the theme of women in mother and home life, it can be said that there are opinions that differ with the theme of women in professional life. In the research of Özen (2018), primary pre-service teachers indicated that men should work in professions that produce numerical and tangible products, and women should look for guaranteeing their emotional and physical security in their professions. Similarly, Hand, Rice, and Greenlee (2017) found that students attribute more masculinity to jobs dealing with science and more feminine to those dealing with humanities. Unlike these findings, according to Özyaydınlık (2014), it is
known that, although the professional differentiation between women and men is still evident, it also has indicators that show that this distinction has weakened. As a matter of fact, some of the findings of this research support this view.

Lastly, these research results do not provide data to generalize the pre-service teachers' perceptions of woman and man. However, it is observed that some pre-service teachers have gender stereotypes, they do not think about man and woman independently, and they make inferences in relation to society. Elmore (2000) stated that the learning experiences that primary school teachers acquired before entering the classroom were effective in transforming schools. In this context, it can be said that all education stakeholders are responsible for providing gender training to pre-service candidates. To emphasize this responsibility, Gülberg et al. (2018) determined that the gender-sensitive teaching model they developed balanced the gender stereotypes of pre-service teachers. Esen (2013a), on the other hand, demonstrated that pre-service teachers questioned traditional stereotypes and gained motivation to change their own lives after going through a teaching process focused on gender issues. Similarly, Tantekin-Erden (2009) found that training on gender issues has an important effect on the attitudes of pre-service teachers. Elmore (2000) determined that teachers who take gender courses in the teacher training process focus more on gender issues in their classes than those who do not take such courses. These results reveal the importance of gender education in teacher education processes. Observing this reflection on students, Gillanders and Vazquez (2018) found that the inclusion of a gender perspective in the teaching process positively affects students' daily lives as well as their teaching practices. In this context, the skills and values of the teacher, especially at the primary education level, are transferred to students through society and affect their social development / transformation. The relevant development / transformation process also shows the effect of schools on the internalization of universal skills and values such as rights, justice, responsibility, equality, love, respect, and individuals that form the basis of gender. The results found in the literature and this research highlight gender emphasis on teacher education undergraduate programs. However, the lack of a course on gender in university degree programs in Turkey lead to difficulties in ensuring that awareness and sensitivity. Koyuncu-Şahin, Esen-Çoban, and Korkmaz (2018) revealed that the pre-service teachers believe in gender equality, but that there is no compulsory course on gender equality in preschool teacher training undergraduate programs.

Conclusion

The data obtained through WAT and drawing are analysed together and the findings mostly reflect the traditional perspective. Accordingly, women are most frequently associated with being a mother figure in the WAT and drawing analysis reflected quite a lot of code reflecting for motherhood category. Similarly, for the woman, the child association in the WAT and the childcare code in the drawing are emphasized. In terms of men, the most common association in the WAT is the Male-father; and the most dominating theme in the drawing is the father. Similarly, for man, WAT shows money and job association, in the drawings man is portrayed as a person who provides for the household. However, both data collection tools indicate the word of power for men and draw attention to different meanings associated with men. The traditional perspective for men are leadership, protection and authority. The power is associated with being independent and warrior for men and whereas for women it is linked with someone who can stand on her own feet. Also, violence against women, which is a current issue in the national and international arena, is a common finding indicated in both data collection instruments. The relationship between women and violence/pressure in the WAT and violence, pressure codes in the drawings show the pre-service teachers' awareness on this issue.

The results show that even though the pre-service teachers have egalitarian views on gender issues, they mostly have stereotypical judgments. This attitude can relate with the fact that teacher training in Turkey does not focus on gender issues. As a result, pre-service teachers do not fully develop awareness about gender differences. In this context, it may be suggested that teacher training programs need courses focusing on gender issues. In these courses’ classroom activities, pre-service teachers can be provided with universal skills such as equality and justice. When these suggestions are
incorporated into the education system in Turkey, the perceptions of women and men in society can change and we can see some progress based on justice and equality. As Esen (2013b, 2551) stated, “Education is the main driver for triggering social change on gender equality”.

Disclosure statement

No potential conflict of interest was reported by the author(s).

REFERENCES


Examining Experiences of Parents About Distance Education During the Epidemic Process

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Abstract

This research aims to examine parents' experience in distance education during the epidemic process. The research is designed as a case study from qualitative research patterns. A semi-structured interview technique as a data collection tool has been used for the study. The data obtained have been analyzed by descriptive and content analysis methods. Typical case sampling method has been used in the study. The study group consist of 48 parents of three different primary schools. According to the results of the research, parents carried out educational activities such as preparing, supporting students, monitoring and conducting activities during the epidemic process. Parents have carried out the educational activities in the epidemic process by providing and participating in the environment for students and contributing to them. Parents evaluate educational activities in the epidemic process in three different ways, which are satisfactory, inadequate and limited. Parents have encountered problems with infrastructure, participation, planning and EIN platform in distance education activities during the epidemic process. It is seen that the proposals for distance education activities in the epidemic process are related to the infrastructure of the EIN platform, preparation for the process, planning the process, the implementation of the content and activities used in education.

Keywords: Pandemic Process, Distance Education, Primary School, Parent Experiences

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INTRODUCTION

Education is one of the most important factors affecting the development of societies. For this reason, large investments in education systems should be made. Meeting the increasing educational need in parallel with population growth is one of the important educational problems that societies need to solve. At the same time, lifelong learning needs should be met as a result of the information age. All countries must continue their training systems quickly in terms of renewal and development in accordance with the conditions of the age (İşman, 2011). The distance education system is one of the systems that provides this opportunity. Especially with the new type of Coronavirus (Covid-19) outbreak, the importance of distance education has come to the fore more than ever.

One of the biggest advantages offered by modern information technology is distance education. Thanks to technology, teachers and students can participate in education without being directly together. The international interaction and educational opportunities that have emerged with globalization enable distance education programs to grow and many institutions to do more online studies. Especially the increasing interest of adult students who work in a specific job or need a flexible learning environment has increased the interest of institutions in distance education (Verduin & Clark, 1991). Distance education means that education is web-based for students with the help of evolving internet technologies and computers (Newby, Stepich, Lehman & Russell, 2006). Distance education is a method of education in which the student is physically separated from the teacher. It is used in conjunction with other forms of education, including self-or face-to-face training (Greville, 1989). Distance education is a platform that many schools use to meet the learning needs of students (Hannum, Irvin, Lei & Farmer, 2008). Distance education provides the opportunity for individuals to develop in the field of their own with the possibility of individual and independent learning throughout life (Arat & Bakan, 2011). Distance education is the product of efforts aimed at providing alternative educational opportunities where students and teachers are located in separate environments, is an elaborate, systematic form of education that expands with student support services, where various educational environments are employed (Özer, 1990). With the provision of distance education, advantages such as freedom of time and space, variety of educational materials and methods come to the fore (Katane, Kristovska & Katans, 2015). According to Belanger and Jordan (2004), three important factors play a role in the growth of distance education. The first of these is the provision of educational opportunities for students. The second is to reduce the economic costs of institutions by providing an educational environment with fewer instructors to a larger student body. Finally, individuals have access to educational opportunities throughout their lives, regardless of location and living conditions.

Distance education is a planned systematic educational technology application, where resources and recipients are located in separate environments in most of their learning–teaching processes. It allows recipients the opportunity of "individuality", "flexibility" and "independence" in respects such as teaching age, purpose, time, place and method, etc. In learning-teaching processes; tools and technologies, methods materials such as written and printed materials, audio tools, technologies, face-to-face training, and communication and interaction between resources and recipients are used. (Uşun, 2006). Thanks to distance education practices, teachers and students in different environments miles away from each other can communicate effectively with each other by video and voice (İşman, 2011).

In long holiday periods and in such crisis situations, the use of open and distance learning opportunities based on mutual interaction will prevent students as well as parents from feeling alone. Open and distance learning applications must also perform a supportive, helpful function in these crisis situations (Can, 2020). During the outbreak, the Ministry of National Education of Turkey (MoNE) initiated distance education through the Education Information Network (EIN) in a short period of time with the onset of the outbreak. EIN is an online social education platform benefited by educational stakeholders and developed by the General Directorate of Innovation and Education Technologies. By establishing different television channels at different school levels, the platform has created an opportunity for all students to benefit from distance education. According to statistics of the
Ministry of National Education (MoNE, 2020), EIN, which is actively used in distance education due to the Covid-19 outbreak, is the 10th most visited site in Turkey and the 3rd most visited education website in the world with 3.1 billion clicks. 7 million 383 thousand 213 students and 1 million 30 thousand 516 teachers actively used EIN and 2 thousand 516 hours of lessons have been broadcasted on the platform.

The globally effective New Type of Coronavirus (Covid-19) outbreak has taken over the world by 2020. During the outbreak, systems such as business life, health, social life, education etc. have been severely affected. Due to the outbreak, face-to-face training has been suspended in Turkey as of March 13, 2020, and the decision has been made to transition to distance education. During the epidemic process, the closure of schools led to significant changes in the roles of teachers, students and parents. During the epidemic, parents played a key role in the distance education process. In the process of distance education, parents have been involved in education, perhaps more than ever in the history of formal education. They faced a variety of roles that they were not used to before, such as preparing suitable environments at home, supplying equipment, building the technology infrastructure and providing motivation for their students. It is thought that the presentation of the experiences of the parents who follow the process closely regarding the activities of distance education will make significant contributions to the nature of the work within the scope of distance education.

Parent support for education is an important factor for student success in traditional school settings. This support in the distance education process has made significant contributions to the success of students (Lee & Figueroa, 2012). During the distance education process, parents have tried various alternatives to facilitate their children's education. Parents have experienced the limits of their skills and resources to support their children in this process. They have tried to meet the expectations of their children by collaborating with the school (Koskela, Pihlainen, Piispa-Hakala, Vornanen & Hamalainen, 2020). The academic progress and special needs of their children are the main issues that worry parents in the distance education process. For this, parents have made efforts to design a quality education opportunity for their children (Garbe, Ogurlu, Logan & Cook, 2020). In this process while parents have tried to rearrange their working lives on the one hand, they have tried to meet the educational needs of their children without neglecting the emotional and psychological aspects on the other hand (Coppola, Senatore & Masullo, 2020). However, research shows that this situation is not easy at all and parents face problems during the process (Demir & Özdaş; Koskela et al, 2020). Revealing parent experiences related to distance education is important for supporting the evaluation of the studies carried out within this framework. On the other hand, this research is important because it is one of the first studies in Turkey to evaluate parent experiences related to distance education at the primary school level. In this respect, research results and recommendations are expected to contribute to subsequent studies in terms of improving distance education, preparing better content and more effective conduct of the process. Within this framework, it is aimed to examine parents' experience in distance education during the epidemic process. Within the scope of this purpose, the following sub-objectives will be sought to respond to:

1. What are the educational activities that parents have carried out during the epidemic process?
2. How do parents carry out educational activities during the epidemic process?
3. How do parents evaluate the activities of distance education in the epidemic process?
4. What are the problems parents face in distance education during the epidemic process?
5. What are the parents' suggestions for distance education in the epidemic process?
METHOD

Research Method

This research is designed as a case study from qualitative research patterns. The aim of the case study is to try to clarify why a decision or a number of decisions were made, how they were implemented, and concluded (Yin, 2003). The most obvious feature of the qualitative condition study is the investigation of one or more states into the depth (Yıldırım & Şimşek, 2013). In this context, the parent's opinions on distance education activities carried out at home during the epidemic process were examined with a holistic approach within the framework of research questions. Thus, it focuses on how parents affect the process of distance education and how they are affected by the distance education process.

Study Group

The study group of the study was selected with typical case sampling technique. Typical situations are used to express situations that do not differ from the universe in terms of their core characteristics and represent the universe (Marshall & Rossman, 2006). In this context, three primary schools were selected in the city center that were not unusual in terms of their basic characteristics and that they could represent the province. Through classroom teachers in these three schools, parents were sent data collection tools and were asked to answer the form. As a result, 48 parents answered the interview form as part of the study. Since it was decided that the data saturation was reached, the responses of the parents were deemed sufficient. Information about parents participating in the study is presented in Table 1:

Table 1. Characteristics of Participants

<table>
<thead>
<tr>
<th>Participated</th>
<th>Sex</th>
<th>Grade their student attend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Parents</td>
<td>22</td>
<td>26</td>
</tr>
</tbody>
</table>

As seen in Table 1, 48 parents participated in the study. 22 of the participating parents are female and 26 are male; 11 are first-grade, 10 are second-grade, 17 are third-grade and 10 are fourth-grade parents. In addition, permission has been obtained from the Directorate of National Education of Batman Province for research. The ethics committee decision dated 11.06.2020 and numbered 2020 / 5-9 was also taken from the Mardin Artuklu University Ethics Committee.

Data Collection Tools

A semi-structured interview form was used as a data collection tool in the study. Semi-structured interview helps to gain in-depth information on a specific issue by eliminating the limitations of write-and-fill tests and surveys with its standardish and flexibility features (Yıldırım & Şimşek, 2013). Interview forms were created in line with research questions and based on literature review (Bilgiç & Tüzün, 2020; Can, 2020; Harrison, 2019; Williamson, Eynos & Potter, 2020; Yılmaz & Banyard, 2020). There are five questions in the form. In order to check the extent to which the prepared interview form serves the research purpose and its applicability, the opinions of field experts were consulted. Corrections were made in the research form in line with the expert opinions received. In order to check the comprehensibility of the forms, a pre-application was made with five parents. The application was started after it was seen that there was no problem.

Expert examination has been applied for the internal validity of the research. In order to increase external validity, the research process and the processes performed in this process are explained in detail. In this context, the research method, the study group, the data collection tools, the collection of data, analysis and how the findings are organized are detailed. To increase the internal reliability of the study some of the findings were given directly and the rest were given in tables. In
order to increase the external reliability of the research, explanations were made about the researcher’s locations, participants and the method of analyzing the data. The research findings were encoded and compared by both researchers to calculate consistency.

**Data Collection**

Research data were collected through a semi-structured interview form. Through the semi-structured interview forms prepared within the scope of research questions, parents were asked to answer by sending e-mail and messaging programs electronically through classroom teachers. Answers from the participants were recorded electronically. After the data collection process was completed, a written transcript of the responses of the participants was made. The data obtained from the parents were analyzed within the sub-objectives of the study. Data analysis was done on this written document.

**Data Analysis**

Descriptive and content analysis was used in the analysis of the data. The data analysis process was generally analyzed with descriptive analysis according to the research questions. Then, each research question was analyzed with content analysis. The main purpose in content analysis is to reach the concepts and relationships that can explain the collected data. In this context, data are first conceptualized. Later, the emerging concepts are organized logically and the themes explaining the data are determined. The basic process in content analysis is to gather similar data within the framework of certain concepts and themes and to interpret them in a way that the reader can understand (Yıldırım & Şimşek 2013).

Data analysis started with the examination of the written data. In the first stage, the data were coded by the researchers independently from each other, taking into account the research questions. Coding is based on concepts extracted from the data. The resulting codes are significantly divided into wholes. In the second stage, the themes were obtained by examining the codes assembled by the researchers. In the third stage, codes were arranged and defined according to the themes obtained. The data obtained at this stage are presented without interpretation. In the last stage, the findings were interpreted and conclusions were drawn.

Reliability was calculated in order to calculate consistency between coders. In this context, the "agreement percentage formula" developed by Miles and Huberman (1994) was used. The percentage of agreement indicates "Reliability = Agreement / (Agreement + Disagreement) x 100". According to Yıldırım and Şimşek (2013), the percentage of compliance being 70% and above indicates that the coding reliability is ensured by the researchers. In the research, the agreement percentage was found to be 0.93 using this formula.

The findings obtained are shown in the tables for research purposes. While the findings were tabulated, codes and themes were shown with numerical data. However, digitization is not done to make generalizations and to look for relationships between variables. Digitization was done to increase reliability and reduce bias. While the opinions of the participants are entered into the codes and given directly, they are abbreviated with the letter "P".

**FINDINGS**

Below, the findings obtained from the parents are presented within the framework of the sub-objectives of the study.

**What are the Educational Activities Parents Carried out during the Epidemic Process?**

The opinions of the parents participating in the research on the educational activities they carried out during the epidemic process are presented in Table 2:
Table 2. Educational Activities Carried Out by Parents During the Epidemic Process

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>Planning (P9, 11, 29)</td>
<td>3</td>
</tr>
<tr>
<td>Support</td>
<td>Providing additional resources (P8, 16, 24, 30, 34, 36, 37, 46), Testing, solving questions (P5, 9, 10, 11, 12, 16, 17, 19, 20, 21, 23, 33, 37, 38, 40, 42, 44, 46)</td>
<td>26</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Keeping track of assignments (P1, 2, 5, 7, 8, 12, 13, 14, 19, 23, 27, 28, 29, 32, 34, 35, 44), Keeping track of course work (P1, 6, 9, 11, 14, 20, 21, 25, 28, 29, 30, 31, 39, 43, 44, 46, 48), Keeping track of live lessons (P4, 6, 10, 12, 14, 17, 22, 26, 37, 40, 42), Keeping track of book (story) reading (P5, 7, 9, 11, 13, 14, 15, 16, 22, 23, 25, 30, 31, 32, 33, 35, 38, 39, 43, 44, 45), Following the teacher's program (P7, 9, 11, 12, 13, 19, 22, 23, 30, 32, 38)</td>
<td>77</td>
</tr>
<tr>
<td>Execution</td>
<td>Having them watch EIN TV (P1, 2, 5, 6, 9, 10, 11, 14, 19, 22, 26, 36, 37, 40), Repetition of past topics (P7, 9, 11, 15, 16, 19, 38, 39, 48), Handling remaining topics (P16, 21, 32, 38), Implementing the prepared program (P29), Playing games (P10, 23, 31, 39, 44)</td>
<td>33</td>
</tr>
</tbody>
</table>

When Table 2 is examined, it is seen that the educational activities carried out by parents during the epidemic process are grouped under four themes. These themes are named as preparation, support, monitoring and execution. It was revealed that the parents planned for the process within the scope of preparation and provided additional resources within the scope of support. Regarding the monitoring, it was determined that the they followed students’ homework, course studies, books they read, their participation in live lessons and the program prepared by the teacher. As part of the execution, it was revealed that the parents had their students watch EIN TV, had them repeat past topics, cover the remaining subjects and implemented the program prepared with the teacher. However, it was also revealed that there were parents who did not perform any activities during the process.

Examples of parents’ opinions regarding some of the activities carried out during the epidemic process are as follows:

“I followed the training program on EIN TV. I had my student solve the tests on the subject. I followed up on the homework given by our teacher. I followed my student’s book reading in spare time.” (P5)

“I followed the program prepared by our teacher for the holiday period, did the general repetition of the books, had my student read story books and do homework for an hour or two every day.” (P7)

“We enabled him to follow lessons during live class hours. We ensured that he does the homework his teacher sends on a daily basis in a certain order. During this time, we also had the opportunity to make a general repetition of our topics. We especially focused on testing.” (P19)

Evaluating the opinions of the parents who participated in the study, it is understood that the parents generally took an active role in education during the epidemic process. As a requirement of this role, it is seen that they devote time to their students, take care of their education, cooperate with classroom teachers, monitor the process, and have their students study and support them.

How Do Parents Carry Out Educational Activities During the Epidemic Process?

The views of the parents involved in the study on how they carried out the educational activities in the epidemic process are presented in Table 3:
Table 3. Parent Views on How Educational Activities Are Carried Out

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring participation</td>
<td>Having her/him watch EIN TV regularly (P1, 5, 9, 11, 12, 15, 16, 17, 19, 22, 24, 26, 27, 28, 33, 35, 37, 38, 41, 42, 43, 44, 45, 47), Having her/him participate in live classes (P5, 10, 12, 15, 16, 22, 24, 33, 37, 38, 39, 44), Encouraging her/him to study (P4, 17, 33, 42, 43, 45, 47).</td>
<td>24</td>
</tr>
<tr>
<td>Providing a suitable environment</td>
<td>Creating a quiet room (P2), Preparing a study room (P4), Making her/his room single (P10), Organizing her/his workspace (P19), Preparing a daily study schedule (P9, 11, 19, 29).</td>
<td>8</td>
</tr>
<tr>
<td>Support</td>
<td>Helping her/him work (P5, 10, 14, 20, 22, 28, 29, 31, 46), operating with the teacher (P7, 8, 9, 11, 13, 23, 26, 30, 31, 32, 33, 34, 38, 40, 44, 46), Following different websites (P16, 30, 46).</td>
<td>8</td>
</tr>
</tbody>
</table>

As can be seen in Table 3, it was revealed that the parents' views on how they carried out their educational activities during the epidemic process were gathered under three themes. These themes have been named as ensuring participation, providing a suitable environment and support. As can be seen in the table, it was revealed that parents generally carried out distance education by ensuring the participation of students. It has been determined that parents who participate in distance education activities encourage their students to study, watch EIN TV and participate in live lessons. Some of the parents also stated that they carried out distance education by providing a suitable environment. It was revealed that the parents who carried out distance education activities by providing an environment created a quiet environment for the student to study comfortably at home, prepared a study room, made the room single person, organized a study area and prepared a study program. In addition, some of the parents stated that they carried out distance education by contributing to the student. It has been revealed that parents who carry out distance education by contributing to the student help the student to study, get help from the teacher, and research different websites for education.

Some examples of parents' views on how they carried out educational activities during the epidemic process are as follows:

“*We followed EIN lessons on TV and tablet, I made a daily study plan by following the frequent instructions of our teacher and made my child follow it*” (P9).

“*By attending TV lessons in the early days, then by attending live lessons*” (P15).

“*I carried it out by encouraging reading books and studying*” (P46)

Considering the opinions of the parents participating in the research on how they carried out the educational activities during the epidemic process, it is seen that the parents were integrated into this process, they took an active role in the education of the child and they worked in this context. In this context, it can be said that they prepared a suitable study environment at home, contributed to the education of the student personally and ensured the participation in the distance education activities offered by the ministry.

**How Do Parents Evaluate Distance Education Activities During the Epidemic Process?**

The opinions of the parents participating in the study regarding how they evaluate distance education during the epidemic process are presented in Table 4:
Table 4. Parents’ Opinions on Distance Education Assessment During the Epidemic Process

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>( f )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfying</td>
<td>The best that can be done (P4), Liked it (P5), Satisfying (P9, 11, 14), Good (P11, 20, 23, 24, 29, 44), Positive (P13, 40), Could not be better (P15), Successful (P16), It was a nice experience (P23), Fine (P24), Very good (P31), Entertaining and instructive (P35), Quite successful (P37, 38).</td>
<td>21</td>
</tr>
<tr>
<td>Inadequate</td>
<td>Not enough feedback from students (P7), Very lacking in infrastructure (P10), Useless (P18, 48), Negative (P25, 36), Insufficient (P30, 32, 39, 41, 43, 45), amateurish (P46).</td>
<td>14</td>
</tr>
<tr>
<td>Limited</td>
<td>Better than no lessons (P1), Better than nothing (P2), It prevented the student from leaving the school but I did not find it very useful (P3), Moderately successful (P6, 21), Good except for systemic troubles (P17, 42), Not quite sufficient (P19, 47), It was done very fast, but it was not enough. (P22), Good in terms of knowledge, inadequate in terms of emotion and movement (P23), Good but not enough (P33), Shortcomings were resolved with teacher’s contribution (P8, 34).</td>
<td>13</td>
</tr>
</tbody>
</table>

As seen in Table 4, it was revealed that the parents' views on how they evaluate distance education are grouped under three themes. These themes have been named as **satisfying**, **inadequate** and **limited**. As seen in the table, some parents are satisfied with distance education. It has been revealed that parents who are satisfied with distance education describe distance education as sufficient, good, positive, successful, nice, very good, entertaining and instructive. However, it was determined that some parents were satisfied with the distance education, but emphasized the shortcomings of the process. These parents, who evaluated the distance education process as limited, stated that distance education is better than its absence, it is not beneficial although it prevents the student from disconnecting from education, it is good, but it has systemic problems, it is done very quickly, but it is insufficient. On the other hand, it is observed that some parents approached distance education negatively and evaluated the activities performed as unsuitable. It was revealed that these parents considered distance education negatively, useless, inadequate, unprofessional and incomplete.

Some examples of parents' opinions regarding the evaluation of distance education during the epidemic process are as follows:

"I find it successful in general. I think that all kinds of difficulties encountered in the face of this situation encountered and realized for the first time are tried to be eliminated as quickly as possible" (P16).

"Cognitively adequate, insufficient in terms of sensory and psychomotor skills" (P27).

"During the epidemic, I found the activities carried out within the scope of distance education very insufficient. I do not think it contributes to children. I think it is a rushed training program" (P32).

Considering the opinions of the parents participating in the study on how they evaluate distance education during the epidemic process, it can be said that the parents are mostly satisfied. However, it is also revealed that some of the parents who are satisfied find the education given incomplete. On the other hand, some parents have completely negatively approached education in the epidemic process and it comes to the fore that they consider the education given to be useless and inadequate. This situation may have been caused by the uncertainty and innovations of the process, as well as the comparison of distance education with face-to-face education.

**What are the Problems Encountered in Distance Education for Parents During the Epidemic Process?**

The opinions of the parents participating in the research on the problems they encountered in distance education during the epidemic process are presented in Table 5:
Table 5. Problems Parents Encounter in Distance Education During the Epidemic Process

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with infrastructure</td>
<td>Lack of computer (P10, 23), Lack of internet connection (P10, 23, 47), Insufficient internet quota (P20, 38), Having to pay for internet (P46), Lack of education (P48).</td>
</tr>
<tr>
<td>Planning issues</td>
<td>Live classes being in the early hours (P11, 17, 32, 42), The length of the break time (P13), Class hours are irregular (P16), Covering subjects not covered in school (P16), Short lesson time (P16, 32), Not having every lesson (P18), Too much repetition of past lessons (P19), Topics the student does not understand (P21).</td>
</tr>
<tr>
<td>Problems with participation</td>
<td>Forgetting and missing class hours (P1), Student not concentrating (P4, 29, 30), Student boredom (P7, 30), Student's inability to wake up early (P14), Adjusting the time (P47), Student avoiding from the lesson (P25), Explaining topics that the child doesn't understand (P35), The process is new (P44).</td>
</tr>
<tr>
<td>Problems with the EIN Platform</td>
<td>Connection problems (P6, 9, 11, 13, 15, 16, 18, 19, 39, 43, 45), Late connection of the system (P17, 42), Live lesson interruptions (P22), Delay between sound and video (P24).</td>
</tr>
<tr>
<td>Problems specific to distance education</td>
<td>Lacks effect (P8, 34), Lacks interaction (P6, 9, 11, 28), EIN TV is insufficient (P30, 32, 46), Not as effective as face-to-face training (P2, 33), Lessons are inefficient (P41), Lack of order and discipline (P4).</td>
</tr>
</tbody>
</table>

As can be seen in Table 5, it has been revealed that the parents' views on the problems they encounter in distance education activities during the epidemic process are gathered under five themes. These themes are named as problems with infrastructure, problems with planning, problems with participation, problems with the EIN platform and problems specific to distance education. Regarding the infrastructure, it was revealed that the parents expressed the problems such as the lack of computers and internet, insufficient internet quota, the process being new, and lack of knowledge about distance education. Regarding planning, it was determined that the parents stated the problems such as short lecture times on television, very repetitive and long lecture breaks, early and irregular live lectures, and the teaching of only certain lectures. Regarding participation it was revealed that parents forget the lesson hours, they expressed problems regarding students such as boredom, not being able to concentrate, not waking up on time and not following the lesson. With regard to the EIN platform, it has been determined that parents have problems such as connecting to the system, disconnecting from the system, and audio-video not being synchronized. Finally, it was revealed that parents expressed problems such as lack of effect, lack of interaction, inefficiency of lessons, inadequacy of EIN TV and lack of order and discipline specific to distance education.

Some examples of parents' views regarding the problems encountered in distance education during the epidemic process are as follows:

“One of the biggest problems we encountered was the internet connection, another big problem was the lack of a computer” (P10).

“There were frequent live lesson interruptions. Sometimes there were problems with the internet.” (P22).

“I think EIN TV is insufficient in knowledge and learning. The problem was that the lecture hours were not in appropriate hours and the duration was short.” (P32).

Considering the parents' views on the problems they encounter in distance education during the epidemic process, it is understood that the parents are not yet ready for the new situation they encounter, the necessary infrastructure at home is not sufficient and they have difficulty in adapting to this process. In addition, the content planned for distance education and the time envisaged for these contents and the problems caused by the EIN platform itself come to the fore. In addition, it is observed that some parents compare distance education with face-to-face education and are not satisfied with distance education.
What are the Parents' Suggestions for Distance Education During the Epidemic Process?

The opinions and suggestions of the parents participating in the study regarding distance education during the epidemic process are presented in Table 6:

Table 6. Parents' Suggestions for Distance Education Activities During the Epidemic Period

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendations Regarding Infrastructure</td>
<td>The infrastructure of online courses should be improved (P16, 17), The infrastructure should be improved (P29, 42).</td>
</tr>
<tr>
<td>Recommendations Regarding Preparation</td>
<td>Free internet and computers should be given to each student (P10, 30), Guidelines should be prepared for parents about the process and parents should be informed (P19), Disadvantaged children should be included in the process by being provided tablets and internet (P29), Families should be guided about distance education (P32), Convenience should be provided to those who do not have internet at home (P37, 38), Equality of opportunity should be ensured (P41), Internet problems must be solved (P46).</td>
</tr>
<tr>
<td>Recommendations Regarding Planning</td>
<td>Training time should be longer (P2, 16, 21, 23, 27), Class hours can be extended (P5, 30, 33), Lessons should not be placed in the early hours (P9, 11, 14, 17, 26, 39, 42), The child's development status should be taken into account when planning live lessons (P9, 11), Daily usage time must be introduced instead of time allocation (P9, 11), Recess time should be shorter (P13), Student should be a participant (P22, 23), Individual and socio-economic differences should be considered (P28), Distance education should be done locally and school-based (P32), Live streaming lessons should be increased (P35, 39), The program must be diversified (P44), Live lessons can be more structured (P47), Distance education should be stopped (P18, 36).</td>
</tr>
<tr>
<td>Recommendations Regarding Content</td>
<td>More effective contents can be developed on EIN TV. (P4), EIN TV courses should be updated (P12), Homework should be less (P22), EIN TV needs to be improved (P43, 45, 46), EIN TV and EIN portal should be enriched in terms of content (P9, 11).</td>
</tr>
<tr>
<td>Recommendations Regarding Implementation</td>
<td>Live lessons should be continued (P1), Students and teachers must be in constant communication (P10), A more rigorous education should be given (P48), It should also have compensatory training (P15).</td>
</tr>
</tbody>
</table>

As can be seen in Table 6, it was revealed that the parents' suggestions for distance education during the epidemic process were grouped under five themes. These suggestions are named as recommendations regarding infrastructure, preparation, planning, content and implementation. It was determined that the parents made suggestions for the development of the EIN platform and the infrastructure of the live lessons regarding the infrastructure. Regarding the preparation, it was revealed that they made suggestions to overcome the internet problem, to provide free internet and computers to each student, to inform parents about the process and to prepare a guide for the parents, to include disadvantaged children in the process and to ensure equal opportunity. Regarding planning, parents made suggestions that the education and lesson times is longer than the determined time, the students should be taken into consideration when planning live lessons and lessons should not be put into the early hours, the recess time should be shortened, students should be participated, socio-economic differences should be considered, distance education should be regional and school based, live lessons should be increased and the program should be diversified. Regarding the content, it was determined that the parents suggested less homework, more effective organization of EIN TV content, updating, developing and enriching the lessons. Regarding the implementation, it was revealed that the parents suggested continuing the live lessons, teachers and students should interact constantly, more frequent and remedial training should be provided.

Some examples of parents' opinions regarding the proposals developed for distance education during the epidemic process are as follows:

“EIN TV and EIN portal should be further enriched in terms of content with lectures, question types and sample question solutions. The student should be able to log in to the EIN portal whenever they need, and time period restrictions should be lifted for this. Instead of time restriction, daily usage time can be put into effect. While organizing live class hours, the course time should be determined by
taking the development status of the students into consideration, and the course should not be put too early.” (P11).

"The systemic infrastructure needs to be improved more and eight o’clock is too early to start the lesson” (P17)

"In distance education, all students do not have equal opportunities, so equal opportunity should be achieved. First, it is necessary to make sure that the infrastructure is equal and accessible to everyone” (P41).

When the suggestions of the parents regarding distance education during the epidemic process are evaluated, it is seen that they generally make suggestions for the infrastructure of EIN, preparation for distance education, distance education planning; improvement of the content and implementation process of distance education in order for the distance education to function in a healthier way. Based on this, it can be said that parents desire a better functioning distance education system.

CONCLUSION, DISCUSSION AND SUGGESTIONS

According to the research findings, parents carried out educational activities such as preparing, supporting students, monitoring and conducting activities during the epidemic process. In this context it is seen that parents planned, provided additional resources, monitored students' homework, lesson studies and books they read, had students participate in live lessons and the followed the program prepared by the teacher, they had EIN TV watched, they made the repetition of past subjects, they taught the remaining subjects and implemented the program prepared with the teacher. Similarly, Yılmaz, Mutlu, Güner, Doğanay and Yılmaz (2020) found that parents used reading books, supplementary educational resources and internet documents during the epidemic period. Demirtaş and Koçak (2020) also found that parents have important roles and responsibilities in helping their children get over the epidemic process. Based on this, it can be said that parents have taken an active role in distance education during the epidemic process. Studies support this finding. It has been found that there is an increase in communication between students, parents and school staff during the distance education process (Eames, Tilston, White, Adams & Edmunds, 2010). Kırmızıgül (2020) also determined that students, teachers, family and education administrators are integrated into the distance education process. However, it is understood from the findings that some parents did not perform any activities during the process. This situation may cause inequality of opportunity among students as well as create or deepen level differences. In this context, it may be made mandatory for all parents to take responsibility for the student's education, to be in contact with the teacher and to fulfill their responsibilities. In addition, informative studies about the roles of parents in distance education can be carried out by the ministry, provincial and district administrations, school administrations and classroom teachers. Similarly, Özzer (2020) stated that it is important to support all education stakeholders academically and socially. According to the research data, parents have been found to provide environments for students for distance education activities, participate in the education process and contribute to them. In this context, it comes to the fore that parents encourage students to study, have them watch EIN TV and participate in live lessons, create a suitable room for the student to study comfortably at home, prepare a study room, organize a study area, prepare a study program, help the student study, receive help from the teacher and research different websites for education. Despite the uncertainty, anxiety and fear during the epidemic process, it can be said that parents fulfill their duties to provide students with an appropriate educational environment during the distance education process. Such uncertainties can distract people from the educational process. However, it is seen that the parents make an effort to make their students comfortable and turn the distance education process into an opportunity. The findings support this study. For example, in a study (Yılmaz et al., 2020), it was determined that parents set up or organize an environment at home for students to study efficiently.

According to the research findings, parents evaluate educational activities during the epidemic in three different ways, which are satisfactory, inadequate and limited. While those who are satisfied
consider distance education as successful, motivating, positive, nice, useful, good, efficient, adequate, fun and instructive; those who find limited think that it is better than not having anything, useful but incomplete, something that should be done even though it is insufficient, that it keeps the student in the education even if it is not efficient enough and it is useful but problematic in terms of connecting to the platform. Similarly, Pınar and Akgül (2020) found in their study that parents found distance education useful, Yılmaz et al. (2020) found that 42.7% of the parents were satisfied with the distance education activities during the epidemic period. Those who found distance education dysfunctional stated that this education did not function properly, it was a waste of labor, that it was not sufficient, it lacked infrastructure and that it was making students addicted to technology. It is possible to see similar results in studies conducted in different countries. It has been stated that there are deficiencies such as lack of equipment, lack of technical expertise and inadequate communication (Abuhammad, 2020; Parczewska, 2020). It is acceptable to have criticisms about the distance education process. Because it does not seem possible to open the system to millions of students without any problems in a short time and to operate this system smoothly. However, despite all the criticisms and deficiencies, Ministry of National Education’s efforts to putting the distance education system into service in such a short time is a situation that should be appreciated.

According to the research findings, parents have indicated that they face a variety of problems in remote education activities during the epidemic process. These problems are related to infrastructure, participation, planning and the EIN platform. Regarding the infrastructure, it was revealed that parents faced problems such as the lack of computers and internet, insufficient internet quota, the process being new and lack of information about distance education. Similarly, Yılmaz et al. (2020) found that technological impossibilities reduce the efficiency of distance education services, and Arat and Balkan (2011) found that the problems experienced in communication infrastructure in distance education negatively affected education. Zhang et al. (2020) also found that there are problems such as the weakness of the online teaching infrastructure, inexperience of teachers, information gaps, and a complex environment at home. Another problem caused by distance education has been internet access. The need for wide-use internet that has emerged even in developed countries has brought an infrastructure problem with it. Especially the infrastructure problem in developing and undeveloped countries constitutes a major obstacle for students and educators to access distance education (Rena, 2007). With regard to participation, parents face problems such as forgetting the lesson hours; students getting bored, not being able to concentrate, not being able to wake up and not following the lesson.

The research results revealed that some students faced technical difficulties or emotional problems, and learning motivation decreased for some students (Marin, Bocoş, Călin & Cordoș, 2020). In a similar study, it was determined that there are technical barriers in distance education and this situation prevents distance education (Abuhammad, 2020). In another study (Yılmaz et al., 2020), it was found that students also experienced motivation problems. The reason for all these problems can be explained by situation being unusual. Because this is the first time parents have encountered a distance education system. Therefore, it can be said that attempts to recognize the system and adapt to the system lead to the problems mentioned above. Another reason may be due to the uncertainty of the process and the anxiety, fear and limitations of the epidemic process. Regarding planning, parents stated that they faced problems such as short, repetitive and long lecture breaks on television, early and irregular live lessons, and teaching of only certain lessons. Regarding the EIN Platform, parents encounter problems such as not being able to connect to the system, disconnections from the system, and the sound and video not being synchronized. Similarly, Can (2020) stated that access to open and distance education via EIN is limited, Yılmaz et al. (2020) also found that 68% of the students had problems connecting and staying connected to live lessons. In addition, it is observed that parents face problems specific to distance education such as lack of influence, order-discipline and interaction, inefficient lessons and inadequacy of EIN TV. Demirbaş and Koçak (2020) similarly found that the process was evaluated as temporary.

According to the research findings, parents have made various recommendations for distance educational activities during the epidemic process. It is seen that the suggestions they put forward are
related to the infrastructure of the EIN platform, preparation for the process, planning the process, the content used in education and the implementation of the activities. Similarly, Can (2020) stated that during the Coronavirus outbreak, the open and distance education system in Turkey should be strengthened from infrastructure, access, security, content, design, application, quality, legislation and pedagogical aspects, and Özer (2020) stated that it is important to support all educational stakeholders academically and socially. Regarding the infrastructure, parents suggest that the EIN platform be further developed and the infrastructure of the live lessons should be improved. Regarding preparation, parents suggest that the internet problems should be eliminated, free internet and computers should be provided to each student, parents should be informed about the process and a guide should be prepared for parents, disadvantaged children should be included in the process and equal opportunity should be ensured. Regarding planning, parents recommend that the training and course time be extended further, that lessons should not be put in the early hours when planning live lessons, shortening the time of recess, making the student a participant, taking into account socio-economic differences, conducting distance education regional-school-based, increasing live broadcast courses and diversifying the program. Regarding the content, parents recommend giving less homework, organizing EIN TV content more effectively, updating, improving and enriching the lessons. Regarding the implementation, the parents recommend continuing the live lessons, keeping teachers and students in constant interaction, providing more frequent training and making remedial training. According to Arat and Bakan (2011), both individual and institutional demands are increasing in distance education. Because distance education has advantages such as the ability of students to participate in the lesson flexibly whenever they want, and to use different visual and audio sources (Heinich, Molenda, Russell & Smaldino, 2002). Yılmaz et al. (2020) found that 68% of the parents wanted distance education studies to continue after the epidemic period. In this respect, it may be more beneficial to provide distance education together with face-to-face education in the future. During the epidemic, distance education has been a form of education that emerged from the necessity. It is the first time that parents have encountered such an intense and comprehensive distance education system. Despite this, it is observed that the parents adopt the distance education system and make an effort for the healthy functioning of this system. However, parents should take on new and unfamiliar roles and bear instructional responsibility for their children's learning while their children participate in distance education (Liu, Black, Algina, Cavanaugh & Dawson, 2010). Finally, it can be said that despite the uncertainty, anxiety and fear during the epidemic process, parents fulfilled their duties to provide students with an appropriate educational environment during the distance education process. Based on the findings of the research, it is seen that during the distance education process, parents carried out various activities in distance education during the epidemic process. Considering that parents are caught unprepared for this process, it would be beneficial for schools to inform parents about homeschooling and distance education. During this process, it was determined that the parents' level of satisfaction in education was low. Schools can make additional work to solve problems by visiting parents or holding online meetings as much as they can. In this process, it was determined that the parents had insufficient infrastructure (computer insufficiency, internet, etc.) and problems with the EIN platform. Considering that these problems continue to be experienced despite the efforts of the Ministry of National Education and other relevant institutions, it is thought that more cooperation between said institutions is needed.

REFERENCES


Children’s Views Toward Their Peers With Disabilities During Early Childhood

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Abstract

In this study, it was aimed to examine the opinions of preschool children towards their peers with disabilities and the characteristics that affect these views. This research is a qualitative study. In the research in which qualitative data analysis techniques are used, the basic data collection source is the semi-structured interview form. The study group consisted of 68 children between the months of 36 and 72 who attend kindergarten. In the analysis of the research findings, qualitative data were evaluated by content analysis. As a result of the research; In the post-test application regarding the appearance features of dolls with disabilities, the children in the age group of 3, 4 and 5; It was seen that they made definitions in the category of "describing the disability condition". In the post-test application regarding the playmate preference of the children, the majority; It has been observed that they accept dolls with disabilities as playmates on the grounds of "not having experience" and "presence of equipment" in the age group of 3, and "activity content" and "having experience" in the age group 4 and 5. In addition "What games would you like to play?" question’s answers were evaluated, it was seen that all the children gave answers in the "games adapted to the disability condition" category in the post-test application.

Keyword: Disability, Disabled Perception, Professional Development, Preschoolers

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INTRODUCTION

It has been observed that children, fully-abled and disabled alike, spend an increasing amount of time together, playing with each other, developing, adapting to new settings and learning together in various environments (e.g. home, educational settings, informal environments and other social environments). Societal values, children’s sense of societal belonging, and developmental and educational opportunities are all paramount in building the notion that children with disabilities – and families of those children – are all fully-fledged members of a society. Beginning at a young age, children start to become familiarized with – and collect information about – their environments. That the development of pre-school children is multifaceted, flexible, and changeable is highly important in terms of the quality of their relationships in later periods of their lives. Physical, mental, social, and emotional maturation during early childhood has a significant effect on children’s social behavior, and each become a determining factor in the way they interact with their peers.

It is widely expected that children – fully-abled and disabled alike – will begin to socialize with their peers at a young age. Accordingly, the potential of pre-school educational settings in supporting social competency among peers is developed when disabled children have the opportunity to interact with their non-disabled peers (Guralnick et al., 2007). Moreover, when children attend pre-school educational programs during early childhood, they develop socially and academically in multifaceted ways (Diamond & Hong, 2010). This peer interaction process takes place by undergoing various phases parallel to children’s development in the physical, cognitive, ethical, social, and emotional domains (Beyazkürk et al., 2007).

According to Piaget’s ‘Cognitive Development Theory’, for cognitive development to take place in consecutive periods, one needs to reach biological maturation and gain experience through interactions with his/her environment (Angın, 2015). Accordingly, it is highly important to provide individuals with experiences that will help them in adapting to their environment as their brains and neural systems mature (Koçak et al., 2015). From Piaget’s perspective, new experiences offered to children cause children to adapt by changing or updating their existing schemas, and contribute to their enrichment. (Diamond & Hestenes, 1996). Thus, children can develop a new schemata in relation to their peers and develop a positive attitude toward their peers with disabilities.

Accordingly, Kohlberg highlights that children’s development of ethics is not based on age but that the advancement in their cognitive development builds a foundation for their moral development. It can be claimed that there is a parallel between the level characteristics (pre-traditional, traditional, and post-traditional levels) expressed in Kohlberg’s ‘Moral Development Theory’ and the reasons underlying children’s preferences of play friends (Yapıcı, 2015).

In non-selective educational environments, the presence of children with different characteristics is considerably important for the development of peer relationships. Studies that draw interest are those that examine the driving forces behind social interaction between disabled and fully-abled children, and those that seek to analyze children’s understanding of the concept of “disability” at a young age. (Diamond & Hong, 2010; Diamond & Huang, 2005; Meyer & Michaelene, 2013; Ogelman & Sarkaya 2014; Ozokcu, 2018). Research shows that children’s understanding of disability follows the foreseeable developmental progress. Premack and Woodruff (1978) advocate that cognitive and affective structures which affect children’s interpersonal skills begin to develop during early childhood. According to theory of mind children begin to distinguish between their own beliefs and those of others at age four. Theory of mind skills are those defined by understanding the wishes, beliefs and feelings of other people, while the theory emphasizes that this is an important social skill in interpersonal communication. It also states that starting at six years of age, children begin to think of the content of other people’s mental conditions. In a study by Conant and Budoff (1983), it was revealed that preschool children have awareness solely of other children’s emotional and physical obstacles, but could not understand the concept of mental retardation and/or emotional disorder. The study noted that awareness of these kinds of disabilities started to emerge in late childhood and early adolescence. A study by Diamond (1993) which examined preschool-aged children’s awareness of
disabilities revealed that children were mostly aware of obstacles impacting motor and language skills. Accordingly, when preschool aged children were asked to explain possible reasons for another child’s disability, their explanations were generally as follows: “s/he can’t do it as s/he is a baby” (age), “s/he can’t walk due to those teeth braces” (equipment used), “s/he can’t speak as s/he is in class” (environment), or “s/he can’t walk as s/he broke his/her leg” (accident or trauma).

In addition to the developmental characteristics of children in early childhood, factors such as context, educational environment, interaction among friends, and adults’ attitudes affect decisions regarding peer selection, and ultimately determine the quality of peer relationships (Eagly & Chaiken, 1993). Hence, in children’s experiences, ideas and feelings interact with each other and assist in the development of attitudes (Çetin et al., 2002; Gülçay, 2009). Moreover, children’s attitudes toward others can be developed by toys, books, the TV programs they watch, their observations of their peers, their parents, and their teachers.

In addition to all of these, to understand children’s opinions, attitudes, and decisions as regards their peers who possess different traits from themselves, their cognitive developmental characteristics, social behavioral characteristics, individual differences, social status, and family attitudes should be taken into consideration. Studies to be done in this domain will bring about improvement in the quality of preschool education, formation of environments in which children will develop healthy social relationships, provision of timely and full support to children who experience problems with their peers, and prevention of problems before they occur. Moreover, it is believed that teachers will be supported and guided in the development of new educational materials and in the arrangement of educational environments and activity contents. In this case, the most important question should be as follows: ‘What are the views of children showing normal development during preschool period regarding their peers with disabilities and what factors impact this development of views?’ Based on this research question, the present study was conducted with the aim of examining the views of preschool children regarding their disabled peers and the factors that impact these views. To this end, the responses to the following questions were sought:

1. Is there a variation in the children’s responses regarding their peers with disabilities’ physical traits with respect to the scores obtained from the experimental research design?

2. Is there a variation in the children’s decisions regarding their play friend preferences with respect to the scores obtained from the experimental research design?

3. Is there a variation in the children’s game preferences after the experimental research design?

**METHOD**

**Research Design**

The primary source of data collection in the present study, where qualitative data analysis techniques were utilized, was the semi-structured interview form. Qualitative designs focus more on the process rather than the products (Merriam, 1988). This research is a qualitative study. Researchers frequently resort to semi-structured interviews as they remove the limited standardization and flexibility, as well as the limitations present in questionnaires; moreover, they help gain in-depth information about the topic under investigation.

**Sample**

Children aged between 36-72 months and attending an independent kindergarten affiliated with the Ministry of National Education (MoNE) and located in the Konyaaltı district of Antalya in
Turkey the population of the study. The sample group of the study was comprised of randomly selected 68 children aged between 36-72 months and attending kindergarten.

**Data Collection Tools**

*Personal Information Form.* Information regarding the children participating in the study were collected via a “Personal Information Form.” The analysis of the personal information of these children revealed that 19.1% (13), 33.8% (23), and 47% (32) of the children were aged between 36-48 months, 48-60 months, and 60-72 months, respectively. As for their gender, while 53.7% were females, 46.3% were males.

*Dolls with disabilities.* A total of five “dolls with disabilities” were made to be used in the research study as materials to be used in the program and as instruments for analysis. During the process of defining the features of the dolls, the related literature was reviewed to investigate types of disabilities. The dolls were constructed in a way that they could cater to the aim of the study, that is, unveil children’s developmental characteristics and views in the best possible way. Moreover, the dolls were designed to reflect the predetermined type of disability in the best way possible. After a review of studies and the related literature, five dolls were produced to reflect Down’s syndrome, albinism, visual impairment and certain physical disabilities. The designed dolls with disabilities were submitted for expert opinion. Based on the recommendations of the experts, the doll reflecting Down’s syndrome was not included in the study as it could not be distinguished by the children. As a result of experts’ evaluations, a total of four dolls were determined to be used in the research. The dolls to be used in the research were given their final shapes and prepared for the study. The features of four dolls are described below:

1. **Visually Impaired Doll / Ahmet:** Ahmet represents a visually impaired male child. The doll is made of filling material and is approximately 35 cm in size. To reflect the visual impairment, black eyeglasses and a white walking stick were used as accessories.

2. **Physically Disabled Doll / Ayşegül:** Ayşegül represents a female child who does not have either of her legs, and instead uses a wheelchair. The doll is made of filling material and is approximately 20 cm in size. To represent Ayşegül’s disability, a wooden wheelchair was made for her to sit and, thus, it was made ready for the study.

3. **Physically Disabled Doll / Elif:** Elif represents a female child neither of her arms. The doll is made of filling material and is approximately 35 cm in size.

4. **Physically Disabled Doll / Ömer:** Ömer represents a male child who does not have one of his feet. The doll is made of filling material and is approximately 35 cm in height. To reflect Ömer’s disability, a crutch was fixed to the doll.

*‘Evaluation Form of Children’s Views in Early Childhood Toward their Peers with Disabilities’* In order to evaluate the effectiveness of the Program in multiple ways, an ‘Evaluation Form of Children’s Views in Early Childhood Toward their Peers with Disabilities’ was used. Initially, a semi-structured evaluation form was developed to collect data by conducting an in-depth examination of conceptual information.

To ensure the internal validity of the Evaluation Form, it was submitted for expert opinions. The final draft of the form was created based on the experts’ recommendations. The content validity ratio and item reliabilities of the semi-structured interview questions were calculated in accordance with the experts’ opinions. Subsequently, in order to identify whether or not the interview questions were appropriate and comprehensible, a preliminary interview was held with a total of three children - one from each age group (3, 4 and 5 years of age). At the beginning of the interview, the researchers explained to the subjects the aim of
the interviews and how they would proceed. The interview results were recorded on the interview form. The views of the subjects in the study remained limited to the responses they gave to the question in the semi-structured interview form.

The implementation phase of the ‘Evaluation Form of the Views of Children in Early Childhood Toward their Peers with Disabilities: With the aim of identifying children’s views regarding their peers with disabilities, the researchers asked the children whether or not they wanted to participate in the study. The children who were willing to participate in the study were asked the following questions: ‘1. How do you think s/he looks? 2. Would you like to have a play friend? (Answer: Yes/No) Why? 3. Which games would you like to play?’ The researcher asked the children the questions for each doll separately, and their responses were recorded on the form. Each interview was held for approximately 15-20 minutes. In the study, a pre-test / post-test interview was held with a total of 75 students in the 3, 4 and 5-year-old age groups. A total of 68 forms, of which the pre-test/post-test implementation was completed, were evaluated as the data of the study.

The establishment and implementation of the Educational Program: The program for children aged 36-72 months was developed with the aim of positively supporting children’s views of people with different physical characteristics and their social acceptance skills regarding differences. Moreover, it was structured in a way so as to enable the increase in positive experiences affecting a child’s decision to include their peers in playtime activities. The philosophy of applied training programs is structured in the light of leading theories such as Piaget's Cognitive Development Theory, Kohlberg's Moral Development Theory, Premack and Wood-ruff (1978) Theory of Mind. While the content of the Educational Program was being planned, the related literature was reviewed and disabled groups as well as conditions creating different physical characteristics were taken into consideration. Toys that were developed as program materials and best reflecting the disability groups were given place in the learning process. The educational program was structured to include developmental content appropriate for 3, 4, and 5-year-old age groups. During the preparation of the program numerous methods and techniques were used to support children’s development and social skills. Within the scope of the educational program, 32 activities, to be implemented three days a week for at least 20 minutes for eight weeks, and an alternative activity for each week were prepared. Subsequently, the educational program was submitted for expert opinion. In accordance with the recommendations of the experts, the necessary changes were made and the educational program was given its final form.

Data Analysis

In the analysis of the research data, qualitative data were evaluated by means of content analysis. The preference underlying content analysis was based on the need for a systematic analysis of the qualitative data. In the analysis of the data obtained from the responses in the children’s ‘Evaluation Form of the Views of Children in Early Childhood Toward their Peers with Disabilities, the descriptive analysis technique was used and the data were summarized and interpreted. The aim of the descriptive analysis was to present comprehensible data to the readers, who could use them if they wished to do so. In this case, data were formed in accordance with the concepts put forward by the research questions and presented by taking into consideration the questions used in the interview (Yıldırım & Şimşek, 2011). In evaluation of the interviews, the researcher examined the data obtained and categorized them under certain concepts. Subsequent to this process, the data were coded based on the choices that were formed and a code list was established. The reliability of the research study was ensured by comparing the codes formed by the researcher and an expert in the field. At least 70% of agreement needs to be reached between the coders to obtain reliability in a study (Balcı, 2011). The average of the reliability ratios between the coders for all the questions was found to be 90%. In the final stage, children’s views were organized and presented within the framework of the identified concepts and the related literature. The calculations of numbers were based on the total number of children (n:68).
Accordingly, the children were asked the following questions in relation to the dolls that represented the disabled:

1. How do you think s/he looks?
2. Would you like to have a play friend? (Answer: Yes/No) Why?
3. Which games would you like to play?

The responses to the question ‘How do you think s/he looks?’ were evaluated in two categories. These categories were coded as follows: For responses where the disability condition was not realized, No=0 - ‘General description’ (He is wearing sunglasses to avoid the sun etc.), and for responses where the disability condition was realized, Yes=1 - ‘Describing the disability condition’ (His eyes don’t see; he’s using a walking stick to walk).

The responses given to the question ‘Would you like to have a play friend? (Answer: Yes/No) Why?’ were evaluated in three categories. Based on the studies by Killen & Stangor (2001) and Diamond & Hong (2010), each justification were coded within the categories of traditional justifications or ethical justifications reflecting ethical reasoning. Traditional justifications were reflecting social order and traditional expectations, including ‘Differences in talents’ (e.g. “I wouldn’t because she doesn’t have feet; she can’t walk” etc.) or ‘The presence of equipment’ (e.g. ”I would because she is in a wheelchair.”) The justifications based on earlier experiences were coded as ‘Having experiences’ (e.g. “I would because she can play basketball and tennis”) since the child’s attention is implicitly focused on his/her friend’s ability to participate in the activity. Ethical justifications were coded as reflecting adaptation and focusing on the ‘Activity content’ (e.g. ‘we’ll play games; she’ll draw with her feet; she’ll tag with her head’). These responses were coded as reflecting ethical justification as they implicitly focused on the child’s conceptualization of equality.

The responses given to the question ‘Which games would you like to play?’ were evaluated in two categories. ‘General games’ refers to the game preferences made by disregarding the condition of ability or disability. ‘Games adapted to the disability condition’ refers to the games preferred by taking into consideration the disability or the type of disability.

**FINDINGS**

The findings obtained in the study are presented in Tables 1 to 6.

**Table 1. Children’s conditions of encountering disabled individuals**

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (n:13)</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>4 (n:23)</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>5 (n:32)</td>
<td>3</td>
<td>29</td>
</tr>
</tbody>
</table>

It can be observed in Table 1 that 1 child in the 3-year age group (n:13), 1 child in the 4-year age group (n:23), and 3 children in the 5-year age group (n:32) have previously encountered a disabled individual.
As can be observed in Table 2, from the responses given to the question, “*How do you think s/he looks?*” in the pre-test administration, it can be understood that none of the children in the 3-year age group realized the kind of disability Ahmet had (-), while the disabilities of Ayşegül, Elif, and Ömer were realized by 10, 6, and 2 children, respectively. As for the children’s responses in the post-test, it was observed that all the children (n:13) had realized the physical characteristics of the dolls. As for the children in the 4-year age group, it was revealed in the pre-test administration that the type of disability of Ahmet, Ayşegül, Elif, and Ömer were realized by 5, 22, 21, and 16 children, respectively. In the post-test administration, the physical characteristics of Ahmet, Ayşegül, Elif, and Ömer were found to be have been realized by 23, 23, 23, and 22 children, respectively. As for the children in the 5-year age group, 7, 32, 30, and 23 children were found to have realized the disability type of all four dolls: Ahmet, Ayşegül, Elif and Ömer.

Table 3. Children’s Answers Regarding the Physical Characteristics of Dolls with Disabilities

<table>
<thead>
<tr>
<th>Age</th>
<th>Dolls</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ahmet</td>
<td>He wears sunglasses to avoid the sun; he’s going to the beach.</td>
<td>18</td>
</tr>
<tr>
<td>3 (n:13)</td>
<td>Ayşegül</td>
<td>She doesn’t have any feet, nor any legs; she’s sitting in a car.</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Elif</td>
<td>She doesn’t have arms nor hands.</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Ömer</td>
<td>He doesn’t have one foot; he has a crutch.</td>
<td>16</td>
</tr>
<tr>
<td>4 (n:23)</td>
<td>Ahmet</td>
<td>He wears sunglasses to avoid the sun; he’s going to the beach.</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Ayşegül</td>
<td>She doesn’t have any feet, nor any legs; she’s sitting in a car.</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Elif</td>
<td>She doesn’t have arms nor hands.</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Ömer</td>
<td>He doesn’t have one foot; he has a crutch.</td>
<td>16</td>
</tr>
</tbody>
</table>
As can be observed in Table 3, in the pre-test administration, the majority of the students in the 3-year age group used statements within the ‘general definition’ category to respond to the question, ‘How do you think s/he looks?’ for Ahmet (n:13), Elif (n:10) and Ömer (n:11), while they used statements in the category of ‘defining the disability condition’ only for Ayşegül (n:10).

Most of the children in the 4-year age group were found to have used statements in the category of ‘General definition’ in the pre-test administration for Ahmet (n:18), while they used statements in the category of ‘defining the disability condition’ for Ayşegül (n:22), Elif (n:21) and Ömer (n:16). In the post-test administration, it was observed that all the children had used statements in the category of ‘defining the disability condition’ for Ahmet (n:23), Ayşegül (n:23), Elif (n:23) and Ömer (n:23).

The majority of the children in the 5-year age group were observed to have used statements in the category of ‘general definition’ in the pre-test administration for Ahmet (n:25), while their responses fell within the category of ‘defining the disability condition’ for Ayşegül (n:32), Elif (n:30) and Ömer (n:23). In the post-test administration, all the children were found to have used statements in the category of ‘defining the disability condition’ for Ayşegül (n:32), Elif (n:32) and Ömer (n:32).

As presented in Table 4, with respect to the play friend preference of the children in the 3-year age group, it was observed in the pre-test administration that 5, 4, 3, and 4 children had decided to include Ahmet, Ayşegül, Elif, and Ömer, respectively, into their games, while in the post-test administration, it was revealed that Ahmet, Ayşegül, Elif, and Ömer were accepted by 10, 11, 9, and 12 children, respectively, as play friends.
As for the children in the 4-year age group, it was revealed in the pre-test administration that Ahmet, Ayşegül, Elif, and Ömer were accepted as play friends by 8, 6, 7, and 5 children, respectively; in the post-test administration 18, 19, 18, and 20 children were observed to have accepted Ahmet, Ayşegül, Elif, and Ömer as play friends, respectively.

With respect to the children in the 5-year age group, it was observed in the pre-test administration that Ahmet, Ayşegül, Elif, and Ömer were accepted as play friends by 17, 18, 15, and 13 children, respectively, while the post-test administration revealed that Ahmet, Ayşegül, Elif, and Ömer were accepted as play friends by 24, 26, 25, and 26 children, respectively.

### Table 5. Children’s responses in relation to their play friend preferences

<table>
<thead>
<tr>
<th>Age</th>
<th>Dolls</th>
<th>Pre-Test</th>
<th>N</th>
<th>Post-Test</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ahmet</td>
<td>I wouldn’t because I didn’t like his name, clothes, eyeglasses.</td>
<td>11</td>
<td>I would because even though he cannot see, he can play.</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I would because in that way I will have a friend.</td>
<td>2</td>
<td>I wouldn’t because he is visually impaired.</td>
<td>3</td>
</tr>
<tr>
<td>3 (n:13)</td>
<td>Ayşegül</td>
<td>I would because I liked him/her; she has a car.</td>
<td>11</td>
<td>I would because we will play with her car; we will travel.</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because she doesn’t have feet; she can’t play games; she can’t walk like me.</td>
<td>2</td>
<td>I wouldn’t because she doesn’t have feet; she can’t play.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elif</td>
<td>I would because I would play; I liked her a lot.</td>
<td>3</td>
<td>I would because she can play games with her feet.</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because she doesn’t have arms; she can’t play.</td>
<td>10</td>
<td>I wouldn’t because she can’t hold my hand.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Ömer</td>
<td>I would because I liked him/her; I would play.</td>
<td>4</td>
<td>I would because he can play games; I like friends like these.</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because he doesn’t have a foot, so I can’t play.</td>
<td>1</td>
<td>I don’t want to play with him.</td>
<td>1</td>
</tr>
<tr>
<td>4 (n:23)</td>
<td>Ahmet</td>
<td>I would because his eyes can’t see, so I will help him/her.</td>
<td>8</td>
<td>I would because he can play games, sing songs, dance.</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because his eyes are impaired; he is wearing glasses because he can’t see.</td>
<td>15</td>
<td>I wouldn’t because I didn’t like [him].</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Ayşegül</td>
<td>I would because she is very beautiful; I will help when her hands get tired.</td>
<td>6</td>
<td>I would because she has a car; we can go fast; we will play games.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because she doesn’t have feet; she can’t walk, can’t run.</td>
<td>17</td>
<td>I wouldn’t because she doesn’t have feet; no, I didn’t like her.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elif</td>
<td>I would because she should not be left alone; I will feed her.</td>
<td>7</td>
<td>I would because we will play games; she will draw pictures with her feet; she will tag with her head.</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because she doesn’t have hands; how can we play games?</td>
<td>16</td>
<td>I wouldn’t because I didn’t like her. She doesn’t have arms; she can’t do anything.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Ömer</td>
<td>I would because I will find his foot and fix it on; I will help him.</td>
<td>5</td>
<td>I would because though he is different, he can play games; he will dance with one leg.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I wouldn’t because he doesn’t have a foot; I wouldn’t like a friend without a foot.</td>
<td>18</td>
<td>I wouldn’t because I didn’t like him. There will be differences between us; he doesn’t have one; I can’t go near him.</td>
<td>3</td>
</tr>
</tbody>
</table>
As can be observed in Table 5, the pre-test administration responses to the question ‘Would you like to have a play friend? Why?’ showed that the majority of the children in the 3-year age group did not accept the dolls as their play friends and used statements within the category of ‘presence of equipment’ for Ahmet (n:11) and within the category of ‘differences in abilities’ for Elif (n:10) and Ömer (n:9); yet, they accepted Ayşegül (n:11), using statements falling in the category of ‘presence of equipment’. On the other hand, in the post-test administration, the majority of the children accepted all the dolls as their play friends and used statements in the category of ‘having experience’ for Ahmet (n:10), Elif (n:12) and Ömer (n:12) and statements within the category of ‘presence of equipment’ for Ayşegül (n:10).

In the pre-test administration, the majority of the children in the 4-year age group were observed not to have accepted the dolls as their play friends based on statements in the ‘presence of equipment’ category for Ahmet (n:15) and in the ‘differences in abilities’ category for Ayşegül (n:17), Elif (n:16) and Ömer (n:18). On the other hand, in the post-test administration, the majority of the children were found to have accepted the dolls as their play friends and used statements in the category of ‘having experience’ for Ahmet (n:21), statements in the ‘presence of equipment’ for Ayşegül (n:20), and statements in the ‘content of activity’ category for Elif (n:18) and Ömer (n:20).

In the pre-test administration, the majority of the children in the 5-year age group were observed to have accepted Ahmet (n:17) and Ayşegül (n:18) as play friends and used statements within the categories of ‘differences in abilities’ and ‘presence of equipment’, respectively. On the other hand, they did not accept Elif (n:17) nor Ömer (n:18) as play friends based on statements falling in the category of ‘differences in abilities’. In the post-test administration, the majority of the children were observed to have accepted all the dolls as their play friends; they used statements in the category of ‘content of activity’ for Ahmet (n:27), Elif (n:28), and Ömer (n:27) and statements in the ‘having experience’ category for Ayşegül (n:29).
Table 6. Children’s responses regarding their game preferences

<table>
<thead>
<tr>
<th>Question 3: Which games would you like to play?</th>
<th>Age</th>
<th>Dolls</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 (n:13)</td>
<td>Ahmet</td>
<td>Hide and seek, house, will throw away my toys</td>
<td>Hide and seek, tag, touch and find</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ayşegül</td>
<td>Hide and seek, tag, house, card game</td>
<td>Hide and seek, playing with toys in a sitting position</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elif</td>
<td>Drawing, tag</td>
<td>Foot games, hide and seek, doing legos by foot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ömer</td>
<td>Drawing, house</td>
<td>Hide and seek, hopscotch, we’ll play ball, fixing a foot and running</td>
</tr>
<tr>
<td></td>
<td>4 (n:23)</td>
<td>Ahmet</td>
<td>Hide and seek, tag, house</td>
<td>Walking methods, tag, obstacle game, football or he’ll hit the ball with his walking stick</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ayşegül</td>
<td>House, dancing, chair race, hide and seek</td>
<td>Basketball in a wheelchair, tennis, running by car</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elif</td>
<td>House, musical chairs, face to face game, hide and seek, tag</td>
<td>Football, hide and seek - can tag with her foot, foot boxing, tag</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ömer</td>
<td>Hide and seek, tag, dancing, play sitting games</td>
<td>Hopscotch, football, basketball, tennis, swimming</td>
</tr>
<tr>
<td></td>
<td>5 (n:32)</td>
<td>Ahmet</td>
<td>Hide and seek, tag, hopscotch, blind man’s buff (his eyes are already closed)</td>
<td>Tag (he’ll always be the tagger), I can play whatever he can play, can draw pictures, hide and seek (can see with his walking stick)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ayşegül</td>
<td>Tag, musical chairs, ball bouncing by hand</td>
<td>Playing in sitting position, playing tennis in a wheelchair, basketball, swimming, can draw</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elif</td>
<td>House, musical chairs, throwing stones into the sea (will throw with her foot)</td>
<td>Hide and seek; she’ll tag with her foot/head, food game without a hand, drawing with feet, feet boxing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ömer</td>
<td>Holding and walking him, house, tag, can play in sitting position</td>
<td>Hopscotch, football, tennis, swimming, hopping</td>
</tr>
</tbody>
</table>

As can be observed in Table 6, in the pre-test administration the children in the 3-year age group preferred to play the games in the category of ‘general games’ with Ahmet (n:13), Ayşegül (n:13), Elif (n:13), and Ömer (n:13), while in the post-test administration, they were found to have preferred to play the games in the category of ‘games adapted to the disability condition’ with Ahmet (n:13), Ayşegül (n:13), Elif (n:13) and Ömer (n:13).

In the pre-test administration, the children in the 4-year age group were found to have preferred the games in both the ‘general games’ and ‘games adapted to the disability condition’ categories with Ahmet (n:23), Ayşegül (n:23) and Ömer (n:23), while they preferred to play only the games in the ‘general games’ category with Elif (n:23). In the post-test administration, it was observed that the children preferred to play the games in the category of ‘games adapted to the disability condition’ with Ahmet (n:23), Ayşegül (n:23), Elif (n:23) and Ömer (n:23).

As for the children in the 5-year age group, it was observed in the pre-test administration that they preferred to play the games in both the ‘general games’ and ‘games adapted to the disability condition’ categories with Ahmet (n:32), Ayşegül (n:32), Elif (n:32), and Ömer (n:32). In the post-test administration, it was found that they preferred to play the games in the ‘games adapted to the disability condition’ category with Ahmet (n:32), Ayşegül (N:32), Elif (n:32), and Ömer (n:32).

DISCUSSION

There are various developmental factors that shape children’s views of other people, influence their decisions, and affect their peer relationships during early childhood. During this period, crucial development stages (social development, ethical development, and mental development etc.) shape children’s thought processes and impact peer relationships. Furthermore, periodic differences in children’s mental development, which are in direct correlation with their age, shape their views and judgements of other people. Teacher implementations and educational approaches during early childhood can also have an impact on children’s social relationships and decisions regarding peer selection.
As one of the sub problems of the research study, the answer to the question “How do you think s/he looks?” was sought in order to identify the children’s views regarding the disabled dolls’ physical characteristics. The evaluations in the ‘general definition’ category of all the dolls of the three-year age group children’s pre-test administration in the study revealed that none of the physical characteristics of any of the disability groups were noticed. As for the children in the 4 and 5-year age group, it was noticed in the pre-test administration that only Ahmet’s (18) disability condition was unnoticed; as they used statements like “He’s worn eyeglasses to avoid the sun, he’s going to the beach/ cowboy” etc. and made definitions in the ‘general definitions’ category. In the post-test administration, it was observed that all the children in all age groups had noticed the physical features of the disability group and made definitions in the ‘defining the disability condition’ category (“He has a walking stick, it helps him to walk / visually impaired / he does not have one foot” etc.)

According to Piaget’s ‘Cognitive Development Theory’, children in the 3, 4 and 5-year age groups are in the pre-operational stage. In this stage, children are still not able to organize their thoughts. To construct their own thoughts and realities, children develop symbols. Mental symbols are cognitive structures of events, people, and objects (Angın, 2015, Schunk, 2011). Thus, when the research findings were examined accordingly, it could be observed that when the children confronted a visually-impaired individual wearing black glasses and holding a walking stick, their evaluations in the pre-test were expressed based on their existing symbols, as “He’s wearing eyeglasses to avoid the sun, old man” etc., and they developed thoughts independent of the disability conditions. In children’s experiences, black eyeglasses were coded as sunglasses, while a walking stick was coded as a tool used by elderly people only. Thus, when children are faced with such conditions, their evaluations of the disability conditions vary based on their existing symbols. Based on the results obtained from the research findings, it was revealed that children in all the age groups had made evaluations in the ‘general definitions’ category for Ahmet, who was visually impaired, in the pre-test administration, but did not use statements associating Ahmet’s equipment (eyeglasses, walking stick) with the disability condition. However, it was observed that in accordance with older age characteristics and educational program implementations, children of older ages had a higher level of awareness in relation to disability groups that could be associated with their own experiences.

Evaluation of the research findings based on the ‘Theory of Mind’ indicate that between the ages of 2.5 and 5 years “children experience a significant conceptual change in their understanding of people”. This developmental change emerges in their ability to notice themselves and others from different perspectives, which is defined as “mental skills” (Şahin et al., 2019). Hence, children who develop theory of mind skills can distinguish individual differences and can evaluate others’ knowledge, beliefs, and needs within the scope of a certain task (Wellman, Cross & Whatson, 2001; Miller, 2002). Moreover, there is consistent research evidence indicating that children of pre-school age have a basic understanding of physical and affective incompetencies (Diamond & Hong, 2010). In their studies, Diamond and Hestenes (1996) showed photos of different disability groups to pre-school aged children. While these children defined the child with a hearing aid and a wheelchair as ‘disabled’, they did not define the child with Down’s syndrome as being disabled. Moreover, Diamond (1993) asked the children some questions regarding the disability condition. The responses children gave in relation to the disability condition were focused on concrete and observable physical characteristics (e.g. equipment) or the reason underlying the disability; for example, “it happened as a result of an accident.” These results demonstrate that in relation to physical disability, children focus on observable features and, to decide whether a child is disabled or not, they can only focus on one or two certain features. In addition, it was highlighted that if a disabled child in class were not using any special equipment, children were not able to notice the disability condition of their peer at first sight (Diamond & Hestenes, 1996).

When the findings obtained in relation to the first aim of the present research, the above-mentioned research results, and the related literature are all taken into consideration, it is observed that there is consistency among the children’s responses to the question ‘How do you think s/he looks?’ Accordingly, the disabled dolls presented to the children in the educational program and the new experiences obtained in relation to types of disabilities can be reported as the reasons underlying the
positive variance in children’s post-test administrations. Accordingly, the different methods and techniques in the educational program, children’s recognition of disability types and features, their development of a common understanding regarding disabled children’s lives, their development of empathy through learning processes, and the activities focused specifically on the difficulties experienced by disabled children and specifically on what they ‘can do’ can be shown as the factors contributing to the development of children’s higher level of awareness of their peers with physical disabilities. Moreover, the arrangement of inviting a guest into the classroom and implementing participatory activities has expanded children’s experiences with respect to obtaining a detailed perspective regarding the physical characteristics of individuals who use a wheelchair, who are visually-impaired, or who are missing limbs.

The examination of children’s responses to the question “Would you like to have a play friend? Why?” was identified as the second sub-problem of the present research study. The examination of the research findings showed that there was an increase in the post-test scores in all the age groups, when compared to the pre-test scores, in relation to the children’s responses regarding preferences of play friends. Accordingly, it was observed in the pre-test administration that the majority of the children in the 3-year age group did not accept disabled dolls as their play friends based on ‘presence of equipment’ (“I did not like his eyeglasses” etc.) and on ‘differences in abilities’ (“She doesn’t have arms; she can’t play” etc.); they only accepted Aysegül, who used a wheelchair, as a play friend by presenting the ‘presence of equipment’ as a justification (“I liked her, she has a car” etc.). On the other hand, in the post-test administration, it was observed in children’s responses regarding their preferences of play friends that the majority of the children accepted all the disabled dolls as their play friends with justifications based on ‘having experience’ (“He can play although his eyes can’t see” etc.) and ‘presence of equipment’ (“We can play with her car, we can travel” etc.). The majority of the children in the 4-year age group were observed not to have preferred disabled toys as play friends in the pre-test administration with justifications based on ‘differences in abilities’ (“He does not have feet; he cannot walk. / She doesn’t have hands; how can we play? etc.) As for the children in the 5-year age group, it was observed in the pre-test administration that they accepted as play friends both (visually impaired) Ahmet based on the category of ‘differences in abilities’ (“He can’t see; he has no friends at all” etc.) and Aysegül (with a wheelchair) based on the category of ‘presence of equipment’ (“She has a car, we’ll travel” etc.), while they did not accept as play friends both Elif (“She has neither arms”) and Ömer (“He doesn’t have one foot”) with justifications based on the category of “differences in abilities” (“I can’t play football with him, he’ll walk slowly” etc.). However, in the post-administration of the children in the 4 and 5-year age group, it was revealed that the majority of the children accepted all the dolls as their play friends with justifications based on the categories of ‘content of activity’ (“She can do an activity with her feet” / “She can dance” etc.) and ‘having experience’ (“He can play even if he can’t see, he can see with his walking stick” etc.).

Based on Piaget’s ‘Constructivist Theory’, the importance of interaction with peers in a child’s development of multiple perspectives was focused on during the evaluation of the findings obtained in relation to the second aim of the present research study. From Piaget’s perspective, conflicts arising from peer relationships within a group cause children to experience an imbalance, forcing children to make adjustments (Soares & Serrano, 2014). Accordingly, children’s play friend preferences can be influenced by the symbols they possess in relation to peer selection. In social development, peer relationships can shape children’s relationships and experiences as well as their future social-emotional adaptations. The examination of peer relationships reveals that peer relationships display different characteristics at different ages. These characteristics are shaped based on the social environment the child is in (peer relationships, classroom rules, teacher behaviors etc.), individual characteristics (social skills, aggressive social behaviors etc.) and peers’ interactions with each other (Buysse, Goldman & Skinner, 2002; Soares & Serrano, 2014; Yazgan İnanç & Yerlikaya, 2011).

In terms of the Moral Development Theory, Kohlberg expanded Piaget’s views regarding cognitive development and sought to reveal the relationship between cognitive skills, social perception and skills, and moral reasoning. Accordingly, Kohlberg highlights that children’s development of ethics is not based on age but that the advancement in their cognitive development builds a foundation
for their moral development (Yapıcı, 2015). It can be claimed that there is a parallel between the level characteristics (pre-traditional, traditional, and post-traditional levels) expressed in Kohlberg’s ‘Moral Development Theory’ and the reasons underlying children’s preferences of play friends. From this viewpoint, it is noticed in the present study that in the pre-traditional level, children’s decisions on the consequences of events or those based implicitly on personal interest and mutual tendencies (Deniz, 2008; Yapıcı, 2015) use traditional justifications (‘differences in abilities, presence of equipment’) in relation to friend preferences: “I wouldn’t want a play friend because she doesn’t have arms, she can’t play” / “I would like to have a play friend because she has a car” etc.).

Furthermore, in Piaget’s ‘Moral Development Theory’ the first period is defined as the heteronomous period. In this period, while deciding whether a behavior/condition is favorable or unfavorable, children take into consideration the consequences of the behavior or condition in subject. If the behavior/condition leads to negative outcomes, that behavior/condition is considered unfavorable. As an example from the present research data, the statement “I wouldn’t want to be friends because she doesn’t have arms; she can’t play” can be regarded as a feature of the heteronomous period. It is notable that the pre-test statements of specifically the 3-year age group children regarding play friend preference display heteronomous period characteristics. When the pre-test responses in the category of ‘differences in abilities’ of the 4 and 5-year age group children (e.g. “I wouldn’t want to be friends because she doesn’t have hands, how can we play?” or “He can’t play because he can’t walk, I wouldn’t be able to play football, he will walk slowly”) are evaluated in light of Kohlberg’s ‘Moral Development Theory’, it can be deduced that play friend preferences are impacted by personal interest that is observed in the purely self-centered stage and by the characteristic of basing everything in life on reciprocal relationship (Aslan, 2015).

Thus, upon the examination of various study findings, it has been observed that when normally developed children include their peers in their games, they notice the features impacting a physically disabled child’s participation in daily activities (Diamond & Hestenes, 1996). Moreover, Diamond and Hong (2010) state that during the pre-school period, children start to understand the effects of physical disability on participating in activities requiring motor skills, whereas the understanding of disability impacting cognitive development develops during final childhood and teenage periods. Similarly, in a study by Buyysse (1993), it was revealed that most children had at least one common friend and that the child’s identification, level of development and specific behavior features (e.g. being target-oriented, the ability to respond, the activity level) impact children’s friendship condition. In addition, friend characteristics, similarities between a child and a friend, spending pleasant times together, and inclusive educational environment have also been reported. Similarly, in a study by Dietrich (2005), it was observed that the primary factors that affected childhood friendships were similarities in play styles, opportunity to engage in similar activities, similar knowledge and areas of interest, closeness, and parental factors. In a study conducted by Beyaztürk, Anlıak and Dinçer (2007), it was reported that the educational program, educational environment, the teacher, and parents’ attitudes played a significant role in children’s relationships with their peers. Another study, conducted by Çulhaoğlu, İmrák, and Sığırtmaç (2017), revealed that normally-developing children found children displaying incapabilities as capable, and accepted their participation in all activities and helped each other, but did not accept them in activities that they believed they could not do.

In the above-mentioned research studies, it was observed that children in early childhood period have the tendency to establish positive friendships, act mutually in actions and emotions, enjoy spending time together, develop social skills and interactions, play games, display mutual emotional support and establish friendships based on commonalities. Accordingly, there were striking parallels between the related literature presented above, theories of development, and the present study’s research results.

The following can be listed as some factors accounting for the variation in the results in the educational program implemented in the present study: children’s participation in similar activities to their peers with disabilities, sharing based on common interests, the preparation of activities adaptable
to a given disability, and disabled children’s desire to share similar experiences with their able-bodied peers. Furthermore, the variation in the findings can also be accounted for with the teacher’s use of active strategies in the educational environment to enable the participation of able/disabled children, the teacher’s positive attitude, and implementations that bring cooperation and collaboration skills to the fore and mutually supporting/meeting needs. In addition, disabled dolls were placed in different centers where they assumed different roles during the program to ensure that children saw them frequently (e.g., assuming the role of a science person in the science center, assuming the role of child reading a book in the library etc.). All these may have had a positive impact on the children’s preferences of play friends.

The last sub-problem of the present study was based on the examination of the responses given to the question “Which games would you like to play?”, which was asked in relation to the disabled dolls. In the pre-test implementation of the children in the 3-year age group participating in the study, it was observed that they preferred the games within the ‘general games’ category, while in the post-test implementation, they gave responses within the ‘games adapted to the disability condition’ category. As for the children in the 4-year age group, it was observed that they preferred to play the games in both ‘general games’ and ‘games adapted to the disability condition’ categories in the post-test with the dolls named Ahmet (n:23), Ayşegül (n:23) and Ömer (n:23), while they preferred to play the games in the ‘general games’ category with Elif (n:23). In the post-test implementation, however, all the children were observed to have given responses in the category of ‘games adapted to the disability condition’. The children in the 5-year age group preferred to play the games within the categories of ‘games adapted to the disability condition’ and ‘general games’ in the pre-test implementation, while all the children gave responses within the category of ‘Games adapted to the disability condition’ in the post-test implementation.

As no study examining preschool children’s views regarding their preferences of games with their peers with disabilities was found in the related literature, comparisons in relation to this finding could not be made. However, the findings of the present study have been evaluated in light of the symbol concept, the organization of symbols and adaptation concepts highlighted in Piaget’s ‘Cognitive Development Theory’. Accordingly, as children interact with each other in early childhood, they start to acquire new knowledge in their process of making sense of the world. Moreover, as children’s symbols start to become more detailed, the process of organizing symbols continues (Trawick-Smith, 2018). Consequently, new symbols are formed for the information that cannot be explained with old symbols, via adaptation. When the findings of the present study were evaluated, it was observed that in the post-test after the implementation of the educational program, the children changed their existing symbols of the games they knew based on the disability condition and implicitly made adaptations. To illustrate, the 3-year age group children provided the following response for a doll that did not have arms: “She can make lego with her feet”. The same age group children said, “We can fix a foot and play” for a doll that did not have one foot. Similarly, children in the 4 and 5-year age group were observed to have defined the games in ‘games adapted to the disability condition’ category in the post-test implementation in more detail. For example, they defined suggested a “running with a car” game for the doll in a wheelchair, and children in the 5-year age group suggested a ‘feet boxing game’ for a doll with no arms.

RECOMMENDATIONS

The present study added a new chain to the limited number of studies on research problems revealing preschool children’s views regarding their peers with disabilities. However, there are numerous areas that need to be uncovered in relation to evaluating preschool children’s views of their peers with disabilities. In this section, based on the findings of the present study, certain recommendations are made for further studies.

Upon the evaluation of the findings obtained in the present study and other research results, it has been noticed that children’s physical participation, in relation to learning contents, should be at the utmost level since it is one of the most influential factors in children’s choice of friends and games.
Accordingly, ensuring that the activity contents to be produced and implemented encourage the physical participation of all children — disabled or not — will play an important role. Various studies (Buysse, Goldman & West, 2008; Çulhaoğlu-İmraş & Sağırtaç, 2017; Diamond & Hestenes, 1996; Diamond & Hong, 2010; Dietrich, 2005; Soares & Serrano, 2014; Yazgan İnanç & Yerlikaya, 2011) report that no problems are experienced in peer relationships when children participate in activities with their disabled friends as long as the disabled children overcome the given challenges; however, problems are experienced in peer relationships when there are conditions that impede physical participation in activities. Moreover, these studies highlight the positive impact of participating in similar activities on peer relationships. Accordingly, it can be recommended that teachers, in light of Piaget’s ‘Cognitive Development Theory’, arrange activity contents in the most appropriate way in order to create positive schemata for disabled children and, thus, provide them with positive experiences.

The most important means through which children express their dreams, feelings, and opinions are the toys they play with (Özyürek & Erzurumluoğlu, 2016). In addition, the role of toys in shaping children’s gender roles, peer relationships, and social perceptions is considerably important (Güney, 2012). Evaluating the toys present at preschool educational institutions in Turkey, it is notable that there are no toys with physical disabilities. Thus, children tend only to gain experience of physical disabilities when they meet or see a disabled person in their social environment. In the present study, the fact that children met disabled children in their learning centers had a positive impact on their awareness, peer preferences, and game selections. It can be extrapolated that it would be effective for teachers to expose children to dolls that represent not only normatively-abled, but also disabled physical characteristics. In this way, it is possible to conclude that when children meet people with different appearances in their social environments, they will develop a more innate acceptance.

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An Analysis of Preservice Teachers’ Opinions About Micro Teaching Course*

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Abstract

The aim of this study is to examine the opinions of the preservice teachers about the micro teaching course. Study group consists of the preservice teachers who study at the Faculty of Education of a state university and have taken the micro-teaching course and study in the Foreign Languages Education Department. Qualitative research method was used in this study. Semi-structured interview technique, one of the qualitative research data collection techniques, was applied in the study. Content analysis was used in the analysis of the research data. Criterion sampling, one of the purposeful sampling types, was used for the study group included in the sample of this study. As a criterion, preservice teachers who took the optional micro teaching course were selected for the study. As a result of the study, the preservice teachers stated that the micro-teaching course helped gaining experience, increased professional skills and facilitated classroom management regarding the contribution of the education they received in the micro teaching course to the professional life. In addition, the preservice teachers who participated in the study expressed their views that they would like to take the micro teaching course again in the future.

Keywords: Preservice Teachers, Micro Teaching Technique, Micro Teaching Course

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INTRODUCTION

Micro teaching is said to be a widely used and effective technique that enables cultivation and the development of preservice teachers. Although micro teaching technique primarily trains teachers, it is also applied in many different sciences such as medicine, psychology and law (Yolcu & Turhan Türkkan, 2019: 72). It especially contributes to preservice teachers to practice efficiently before starting the profession. It can be stated that it is a useful teaching technique that helps preservice teachers how and in what way a pre-designed course will be applied and directly affects preservice teachers cohesion. In addition, with the widespread use of micro teaching technique in recent years, it has started to take place in the curriculum of the education faculties of the university under the name of micro teaching course (Higher Education Council, 2018).

Although micro-teaching technique is an effective tool in training preservice teachers, it is quite a critical technique for preservice teachers that enable them to make real applications for their professional life in a minimized classroom environment (Bhatta, 2013: 95). Micro teaching first emerged in line with the Secondary Education Project, which was implemented at Stanford University in the United States (Baird, Belt & Webb, 1967: 7). According to Amobi and Irwin (2009: 29), micro teaching technique has been applied in the USA since 1963. With the development of a qualified and original technique in the training of preservice teachers, at Stanford University, micro teaching was first shown to the students as a lecture practice with a group of four students. In addition, the places where micro teaching technique was primarily applied by Germany and England in Europa. Zifferung was the person who carried out the first application studies of micro teaching technique in Europe (Yolcu & Turhan Türkkan, 2019: 72).

In addition, unlike Europe, it is seen that micro-teaching technique is becoming increasingly common in different countries such as Australia, India, Indonesia and Nigeria (Yolcu & Turhan Türkkan, 2019: 71). Micro-teaching is used not only in preservice education, training preservice teachers, but also in different fields of science, especially in medicine, and psychological counseling (Yolcu & Turhan Türkkan, 2019: 72). However, in our country, it was first applied as a doctorate course for one semester at Firat University Faculty of Technical Education in 1991 with the implementation of new education faculties’ programs (Kazu, 1996: 45). In the following years, it became widespread and in undergraduate programs, micro-teaching technique started to be given for teaching practice in many universities. It has also been used by researchers in different fields since the beginning of the 21st century. Especially since 2018, in education programs that train teachers in education faculties in our country, “micro teaching course” has become widespread in undergraduate programs (Higher Education Council, 2018).

Micro-teaching is said to be a technique that contributes to the development of preservice, in-service and post-service teachers’ teaching skills, and especially those of related the affective characteristics of the profession (Bars & Kinay, 2019: 29). Micro teaching can also be explained as a preservice teacher education tool that allows preservice teachers to carry out teaching activities and practices in the light of controlled and simulated conditions in the natural environment to eliminate the complexity of the teaching environment (Mahmud & Rawshon, 2013: 70).

According to the statements made by different researchers, micro-teaching is explained as a technique that helps educators achieve what should be done in schools and dissolves the difficulties in the natural classroom in order to disseminate the results of the application through feedback (Demirel, 2009: 116). In addition, micro-teaching is a teaching approach that aims to provide students with important and basic teaching qualifications that can be used before, in-service and post-service and have been standardized in an inspected place (Sönmez, 2010: 40).

Micro teaching technique, which is defined as a minimized course application that tries to gain experience in education, is a technique designed to improve the profession-related competencies of preservice teachers, during their candidacy education process. At the same time, preservice teachers in micro-teaching technique apply the technique by explaining the course to their preservice teachers.
friends in the classroom, and evaluations are made with feedback at the end of the course (Tok, 2008: 184). On the other hand, micro-teaching, which is expressed as a technique applied in the training of pre-service teachers and gaining important educational qualifications, offers the individual the opportunity to re-watch the activities individual has done while applying the micro-teaching technique. It may be an effective technique for the development of pre-service teachers’ teaching skills with the help of the necessary evaluations and criticisms made by the other students in the classroom while re-watching their microteaching lesson on video (Gözütok, 2006: 286).

In general, micro teaching techniques, pre-service teachers of the acquired theoretical run implementation by helping them to gain experience in research enables skills development, self-confidence increased, anxiety and negative attitudes that reduces against the occupation and the teachers’ self-assessment opportunity is described as a teaching approach offering (Galanouli, Murphy & Gardner, 2004: 66). In addition to being an efficient and student-centered technique by linking theory and practice in teacher training, micro-teaching contributes significantly to the professional and personal development of pre-service teachers (Ekşi, 2012: 268).

Micro teaching technique also contributes to the development of pre-service teachers’ cognitive, affective, and kinesthetic skills during teaching in general. For example, the pre-service teachers is recorded with a video camera while lecturing. Then, the pre-service teachers examine the records together with the instructor of the course and try to determine the mistakes made in the application. In this way, it is ensured that the pre-service teachers can detect their own mistakes and corrections are made with the instructor and other students by discussing them. The skills of teachers through recordings made in this way in the implementation of micro-teaching techniques’ have been made possible the development and performance (Ocak, 2017: 323).

This study is important in terms of the increase of studies on micro teaching technique in the literature with the application of micro teaching technique in the training of pre-service teachers in recent years. Micro-teaching has now begun to be included in the programs of education faculties as an elective course. This study we conducted is thought to be beneficial for pre-service teachers’ future applications by increasing the efficiency of the optional micro teaching technique course. In our study, it is thought that taking the opinions of the pre-service teachers who took the optional micro teaching course will contribute to the applications of micro teaching technique in teacher education in the future.

**Purpose of The Research**

The purpose of the study, is to examine the opinions of the pre-service teachers about the micro teaching course. For this purpose, answers were sought for the following sub-purposes:

1. What are the opinions of the pre-service teachers regarding the contribution of the education they receive in micro teaching course to their professional life?
2. What are the opinions of the pre-service teachers about use of technological tools in micro teaching course?
3. What are the opinions of the pre-service teachers about the problems encountered in the practices they do in the micro teaching course?
4. What are the suggestions of the pre-service teachers regarding the teaching of micro teaching course?
5. What are the opinions of the pre-service teachers about their willingness to take the micro teaching course again?
METHOD

Research Model

The basic qualitative research design, one of the qualitative research models, was used in this study in which the opinions of the preservice teachers about the micro teaching course were tried to be determined. Qualitative research is a research method in which qualitative data collection methods specified as observation, interview and document analysis are used, and a process of determining the events naturally is real and complete (Yıldırım & Şimşek, 2016: 41).

Basic qualitative research is to evaluate, interpret and try to make sense of an existing event or situation in line with the opinions of the participants in the research. Data in basic qualitative research is obtained through means such as interview, observation or document analysis. In the context of the theoretical framework, the researcher decides on the questions to be asked to the participants, the phenomenon to be observed, or the documents related to the research. While analyzing the data in basic qualitative research, they are separated from each other and categorized accordingly. Themes are created from the data obtained in the findings section, and finally, the researcher tries to make sense of the participants' comments (Merriam, 2013).

Participants

Criterion sampling, one of the purposeful sampling methods, was used in this study. The main thing in criteria sampling method is that it is a sampling that fulfills the previously determined features. While determining the criteria, it can be prepared by the researcher or a previously prepared criteria list can also be used (Yıldırım & Şimşek, 2016: 122). In this study, preservice teachers who took “Micro Teaching Course” in the 2019-2020 academic year were determined as a criterion. According to the number of preservice teachers who can be reached, the study group consists of a total of 26 preservice teachers studying in the foreign language education department, 20 of whom are female and 6 males. The data regarding the personal information of the preservice teachers are shown in Table 1:

<table>
<thead>
<tr>
<th>Personal Information</th>
<th>Groups</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>6</td>
<td>23.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>20</td>
<td>76.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td>Field</td>
<td>English Teaching</td>
<td>11</td>
<td>42.3</td>
</tr>
<tr>
<td></td>
<td>German Teaching</td>
<td>15</td>
<td>57.7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td>Age</td>
<td>18-23</td>
<td>22</td>
<td>84.6</td>
</tr>
<tr>
<td></td>
<td>24-29</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td>30 and above</td>
<td>1</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>

When Table 1 is examined, 6 (23.1%) of the preservice teachers participating in the study are male and 20 (76.9%) are female teachers. It is understood that 11 (42.3%) of the preservice teachers were studying English and 15 (57.7%) were educated in the branch of German teaching. It is seen that 22 (84.6%) of the preservice teachers were in the age range of 18-23, 3 (11.5%) 24-29 and 1 (3.9%) 30 and over.

Data Collection And Analysis

The data of this study were obtained by semi-structured interview technique, one of the interview technique types of qualitative research method. First, open-ended interview form questions consisting of eight questions in draft form were formed by reviewing the scientific research literature.
on micro teaching technique. Before finalizing the interview form of the research, two experts in the field of curriculum and instruction and an expert in linguistics were asked for their opinions. In line with the feedback received from experts in the relevant fields, three questions were removed from the form and necessary arrangements were made. Later, the interview questions were finalized and it was decided to include five questions in the interview form. The answers given by the teacher candidates to the questions at the interview form were coded separately by the two researchers. The reliability formula suggested by Miles and Huberman (1994) was used to calculate the reliability of the coding. Reliability = Agreement / (Agreement + Disagreement). The reliability coefficient of the coder for interview form was calculated as .81. The interviews in the study lasted between 25 and 45 minutes, and the participants were asked to transfer their opinions in written form to the interview form after their opinions were taken in line with the questions asked. Content analysis was used in the analysis of the data obtained as a result of the interview. While determining the opinions of the preservice teachers about the Micro Teaching Course, the common features of the opinions they have announced were determined and the themes related to the interview were prepared. The themes prepared were divided into sub-themes and the opinions of the preservice teachers were explained. In addition, the opinions of the preservice teachers are given under the tables in order to support the findings.

**FINDINGS**

The findings obtained from the opinions of the preservice teachers on the research questions were expressed by dividing them into themes and sub-themes according to the sub-purpose of the research.

**Findings Regarding The First Sub-Purpose**

**Table 2. Preservice Teachers’ Opinions Regarding How the Education Received in Micro Teaching Course Will Contribute to Their Professional Life**

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub Themes</th>
<th>Frequency (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Skill</td>
<td>Developing presentation skills</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Ensuring classroom management</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>The possibility of real classroom environment</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Learning the use of materials</td>
<td>1</td>
</tr>
<tr>
<td>Self-improvement</td>
<td>Gaining experience</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Self-confidence</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Problem solving skills</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Eliminate fear towards profession</td>
<td>1</td>
</tr>
</tbody>
</table>

When Table 2 is examined, preservice teachers expressed their views on how the education they received in micro teaching course would contribute to their professional life as categorized under two themes. It is seen that the highest frequency among the preservice teachers who gave an opinion on the professional skill theme is in the sub-theme of “developing presentation skills” (f=12). It is seen that the sub-themes of developing presentation skills are followed by the sub-themes, “providing classroom management” (f=8), “real classroom environment opportunity” (f=4) and “learning to use material” (f=1), respectively. It is seen that the highest frequency among the preservice teachers who gave opinions about the personal development theme is in the sub-theme “gaining experience” (f=15). It is seen that the subtheme of gaining experience is followed by the subthemes of “self-confidence” (f=12), “communication” (f=10), “problem solving skill” (f=2) and “eliminating fear about the profession” (f=1).

According to the themes in Table 2, the opinions of some of the preservice teachers are given below in order of sub-themes:
PT2: I think it contributed to gaining information about presentation skill. Getting concrete information about how to start the presentation and involve the student in the course is one of the biggest advantages of the course.

PT5: During my teaching life, it is a course in which there is a good teaching method to dominate the course, to dominate the class and to be myself.

PT13: It gives students (preservice teachers) the chance to go up to the blackboard in the classroom and give courses. And thus, students (preservice teachers) learn by experiencing how they should conduct the course. I think the large class size is also a plus against the possibility of teaching in crowded classes in the future.

PT3: Thanks to the micro teaching course, when we become a teacher, we will learn to attract the attention of our students, to explain the subject effectively, to master the class and the use of materials. Our probability of having problems while lecturing is minimized.

PT19: I think it is a very important course especially in terms of gaining experience. In addition, micro-teaching is a very useful course in getting to know the classroom environment, overcoming shyness, using language effectively and using body language effectively.

PT24: I think I can be more prepared and more confident for my future professional life.

PT25: It is a course that aims to have information about how to communicate with students in the classroom, to relieve the intense stress and excitement, as well as to facilitate our professional life.

PT15: First of all, I think that it is a course that every preservice teachers should take. It gives the individual the ability to cope with problems that may arise other than gaining knowledge.

PT1: I was afraid of teaching. I have no fear now. I have no fear of teaching right now. I will apply the training I received when I became a teacher. Micro teaching course became like an internship. I overcame that fear.

Findings Regarding The Second Sub-Purpose

Table 3. Preservice Teachers’ Opinions About Using Technological Tools in Micro Teaching Course

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub Themes</th>
<th>Frequency (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological Tools</td>
<td>Smart board</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Video camera</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Computer</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Projection</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Smart phone</td>
<td>3</td>
</tr>
</tbody>
</table>

When Table 3 is examined, the preservice teachers expressed their opinions about using technological tools in micro teaching course as the theme of technological equipment. It is seen that the highest frequency among the preservice teachers who gave their opinions on the theme of technological equipment is in the “smart board” (f = 21) sub-theme. It is seen that the sub-theme of the smart board is followed by the sub-themes of “video camera” (f = 11), “computer” (f = 6), “projection” (f = 4) and “smart phone” (f = 3).
According to the themes in Table 3, some of the preservice teachers' opinions are given below in order of sub-themes:

**PT2**: Today, we use the smart board very often because it is one of the most frequently used tools, and this provides a great convenience. However, since the conditions are not the same in every school, I believe that some attention should be paid to how to use non-technological material.

**PT12**: We help them understand the subject more by using visuals and videos in lecturing.

**PT24**: I tried to give my presentation to the students with the slide I made from the computer. I mostly benefited from images and words that would attract the attention of students. By including them in the work, I ensured their participation in the course. This course has made a great contribution to my profession in my future life.

**PT13**: As we use technology actively in every field today, we are now actively using technology in education. We teach courses by creating or finding videos, using various visuals and audio elements. Projectors, smart boards and computers have become our primary technological tools.

**PT17**: We use smart boards during lecture. We make use of the video player and slides on the smart board. We use smart phones while filming our friends who are lecturing with the camera.

### Findings Regarding The Third Sub-Purpose

#### Table 4. Opinions of Preservice Teachers Regarding the Problems They Encounter in Their Practices in Micro Teaching Course

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub Themes</th>
<th>Frequency (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems Caused by Classroom Environment</td>
<td>Large class size</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Noise</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>The need for presentation evaluation</td>
<td>2</td>
</tr>
<tr>
<td>Problems Arising from Preservice Teachers</td>
<td>Lack of theoretical knowledge</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Low self esteem</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Lack of lecture</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Inadequate use of technology</td>
<td>2</td>
</tr>
<tr>
<td>No problem</td>
<td>No problems experienced</td>
<td>5</td>
</tr>
</tbody>
</table>

When Table 4 is examined, preservice teachers views on the problems they encountered in the practices they did in the micro teaching course were categorized under three themes. It is seen that the highest frequency among the preservice teachers who gave their opinions on the theme of problems arising from the classroom environment is in the sub-theme of “crowded class size” (f =18). It is observed that the subtheme of crowded class size is followed by the subthemes of “noise” (f =5) and “need for presentation evaluation” (f =2), respectively. It is seen that the highest frequency among the preservice teachers who gave their opinions on the theme of problems arising from preservice teachers is in the sub-theme “lack of theoretical knowledge” (f =3). Lack of theoretical knowledge subthemes are followed by “lack of self-confidence” (f =2), “lack of lecturing” (f =2) and “lack of technology use” (f =2), respectively. The opinions of the preservice teachers who gave their opinions about the “no problem” theme were explained as the sub-theme “not having a problem” (f =5).

According to the themes in Table 4, some of the preservice teachers' opinions are given below in order of sub-themes:
PT3: We had difficulties in making presentations or criticizing because the class was crowded. It was very difficult to get the attention of the crowded class.

PT17: Sometimes there is noise. Because there are more students than they should be for the micro teaching course.

PT21: In addition, the evaluation criteria are not given in written form (for example, the requirements of the friend who will make the presentation during the application and the criteria that will enable the friends in the class to make a healthy critical observation in written form).

PT14: The course does not contain enough theoretical information.

PT4: We often encounter the problem of getting on the board. Students have a lack of self-confidence. And that’s because we didn’t make any presentations.

PT5: Since we teach theoretically rather than practically throughout our lives, we first fear the board and have some difficulty in the courage to make presentations or speak in front of the whole class. We do not know what to pay attention to while making a presentation or lecturing.

PT15: Unexpected malfunctions could occur when technological materials were used.

PT11: I did not encounter any problems.

Findings Regarding The Fourth Sub-Purpose

Table 5. Preservice Teachers’ Suggestions Regarding the Instruction of Micro Teaching Course

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub Themes</th>
<th>Frequency (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving the Application Environment</td>
<td>Reducing class size</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Practicing in schools (real classroom environment)</td>
<td>8</td>
</tr>
<tr>
<td>In-Class Activities</td>
<td>Ensuring the participation to course of the preservice teachers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Repeat the presentation</td>
<td>2</td>
</tr>
<tr>
<td>Tools</td>
<td>Use a textbook</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Increasing the materials</td>
<td>1</td>
</tr>
</tbody>
</table>

When Table 5 is examined, preservice teachers' suggestions regarding the instruction of micro teaching course was categorized under three themes. It is seen that the highest frequency among the preservice teachers who gave their opinions about the theme of improving the practice environment is in the sub-theme “reducing the classroom size” (f=11). The sub-theme of decreasing the class size is followed by the sub-theme “practicing in schools (real classroom environment)” (f=8). It is seen that the highest frequency among the preservice teachers who gave their opinions on the theme of classroom activities is in the sub-theme of “ensuring the participation of the preservice teacher in the course” (f=3). The sub-theme of ensuring the participation of the preservice teachers in the course is followed by the sub-theme of “repeating the presentation” (f=2). It is seen that the highest frequency among the preservice teachers who gave their opinions about the materials theme is “using a textbook” (f=2). It is understood that the sub-theme of using a textbook is followed by the sub-theme of “increasing the materials” (f=1).

According to the themes in Table 5, the opinions of some of the preservice teachers are given below in order of sub-themes:
PT25: I think the number of students should be low. I believe it will be more efficient in this way.

PT16: Preservice teachers should be taken to the real classroom environment. I believe it will be more effective.

PT24: I think that the course should be taught in a practical way by including the student in the work rather than a method based on rote, while teaching the course, that is, while transferring the subject to the other party.

PT3: It would be better if we had the chance to make a presentation again after giving the presentation and after receiving the criticism.

PT7: If the micro teaching course is taught together with the book, the subjects will be regular and more permanent.

PT4: The course is handled well. Just like a preservice teachers should do. But I wish we had some extra material. For development and creativity.

Findings Regarding The Fifth Sub-Purpose

Table 6. Preservice Teachers’ Opinions Regarding Their Wish to Retake Micro Teaching Course

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub Themes</th>
<th>Frequency (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Take the course again</td>
<td>23</td>
</tr>
<tr>
<td>No</td>
<td>Take the course not again</td>
<td>3</td>
</tr>
</tbody>
</table>

When Table 6 is examined, the preservice teachers expressed their views on their willingness to take the micro teaching course again categorized under two themes. The opinions of the preservice teachers who gave their opinions about the yes theme were explained as the subthemes “take the course again” (f=23), and those who express their opinions as “take the course not again” (f=3).

According to the themes in Table 6, some of the preservice teachers’ opinions are given below in order of sub-themes:

PT7: Yes, I would like to get it. Because I think it will be very useful for me in teaching. It is recorded while making a presentation. It is monitored later and we see the errors that have occurred. For this reason, I believe that when we become a teacher, we can be successful in lecturing and classroom management.

PT19: I would like to get it again. Because this course contains information and techniques that will help me not only in my school life but also in my daily life. In addition, our course is very efficient and effective.

PT17: I do not want. I think it is enough for me to take this course once.

DISCUSSION AND CONCLUSION

In this section, discussions about the findings obtained as a result of the research are given in order according to the sub-purpose of the research.

When the findings regarding the first sub-purpose of the study were examined, the preservice teachers stated that the micro teaching course improved their presentation skills by increasing their professional skills, provided classroom management, had the opportunity to practice in a real
classroom environment, and learned the use of materials effectively. In addition, preservice teachers stated that micro-teaching course contributed to their personal development and that they gained experience, their self-confidence improved, their communication and problem-solving skills increased, and their fear of the profession decreased. The reason for this is that micro teaching technique gives preservice teachers the opportunity to practice close to the real classroom environment. Thus, as this situation enabled many students to practice lecturing with micro teaching technique for the first time and to have feelings close to their teaching experience, the preservice teachers generally expressed a positive opinion about micro teaching technique. When the related studies were examined, as stated in the study of Gürses, Bayrak, Yağış, Açık, and Doğar (2005: 9), the preservice teachers stated that micro-teaching technique made a positive contribution to the development of their professional skills.

Similar to our research, in the study of Sevim (2013: 310), preservice teachers explained that micro teaching improves their communication skills. In the same study, it was stated that practicing in a real classroom environment helped preservice teachers to gain a positive attitude towards the profession by increasing their participation and interest in the course. In addition, as stated in our research, it was stated that micro-teaching course improves the classroom management skills of preservice teachers. In the research of Karataş & Cengiz (2016: 578), it was explained that preservice teachers gained experience similar to the results of our study through micro teaching. Similar to our study, the teaching experiences of the pre-service teachers related to the micro teaching technique can be said to increase their attitudes towards classroom management (Sokal, Smith & Mowat, 2003: 14). Thus, micro-teaching course helps preservice teachers to improve themselves by increasing their professional development. Semerci (2000: 6) stated in his research that the implementation of techniques that improve criticism skills such as micro teaching technique enabled preservice teachers to generate ideas. Regarding Semerci's (2000: 6) research, it can be said that he also developed problem-solving skills close to the opinions of the preservice teachers who participated in our study. In his study, Oliveira (2009: 870) concluded that applications related to micro-teaching technique, which support the findings of our study, improved the presentation skills and communication skills of preservice teachers. In the research conducted by Ralph (2014: 24), it is seen that the application of micro-teaching technique, like the results in this study, helps preservice teachers to eliminate their fears about the profession and gain experience and self-confidence. (Ping, 2013: 169; Ramasubramaniam & Renganathan, 2014: 246; Mergler & Tangen, 2010: 17) stated in their research, the positive effects of micro-teaching technique on preservice teachers professional skills and personal development in general. Also, Allen & Ryan (1969: 2-3) explained that doing micro teaching in a real classroom environment would be effective and efficient.

When the findings regarding the second sub-purpose of the study were examined, the preservice teachers stated that they used technological tools such as smart boards, video cameras, computers, projectors and smart phones in the micro teaching course. In addition, in the study conducted by Karataş & Cengiz (2016: 579), similar to the results of our study, it is seen that preservice teachers frequently benefit from technological tools while applying micro teaching technique. Similarly, Warnock, Boykin & Tung (2011: 6) in their study found that the use of smart boards in classrooms in the undergraduate degree had a positive and satisfactory effect on the communication between student-instructor and the learning environment. Babacan & Şaşmaz Ören (2017: 204) stated in their study that they mainly used smart boards in their course presentations. Thus, preservice teachers stated that they also gained experience in using smart boards before the application. At the same time, in the research of Babacan & Şaşmaz Ören (2017: 204), preservice teachers mention of the positive effects of using technological tools in micro teaching practice supports the results of our study.

In the study of Koehler & Mishra (2009: 66-67), they stated that the use of projection and computer provided active participation of students in the application of teaching techniques such as micro-teaching, similar to the views of the preservice teachers in our study. In the study of Akyüz, Pektaş, Kurnaz & Kabataş Memiş (2014: 8), expressing the importance of the use of technological tools such as smart boards in teaching practices is similar to the results of our study, and in the same way, in Wu & Kao (2008) research, preservice teachers used technological tools such as computers.
and smart boards. The fact that they stated that teaching techniques such as micro-teaching are useful in their application support the results of our study. (Goldwaite, 1968:102; Saban & Çoklar, 2013: 239) in their study, the preservice teachers explained that the use of technological tools such as video cameras have significant contributions in the application of micro-teaching technique coincide with the findings of our research.

When the findings regarding the third sub-purpose of the study were examined, the preservice teachers stated that they experienced some problems arising from the classroom environment in their applications in micro teaching course. The preservice teachers stated that there was noise due to crowded class sizes, the high number of students during the implementation, and the lecture presentations made need to be re-evaluated. In addition, they explained that the problems arising from the preservice teachers were their lack of theoretical or theoretical knowledge about micro-teaching technique, their lack of self-confidence, lack of lecturing due to their lack of lecture and some inadequacy in the use of technological tools. However, some of the preservice teachers stated that they did not encounter any problems while practicing. At the same time, when the research results of Dere (2019: 51) were examined, similar to the findings in this study, preservice teachers encountered some problems arising from the artificiality of the classroom environment. Zhou, Xu & Martinovic (2017: 95) stated in their study that it is important to practice in a real classroom environment, but in this way, preservice teachers will gain experience and self-confidence.

In addition, in the study conducted by Peker (2009: 365), it was observed that similar to the results we reached in our research, the excitement of the preservice teachers who made presentations for the first time with the micro-teaching technique and their lecturing to their classmates also caused some problems arising from the lack of experience. At the same time, in the research of Kavas & Özdemir (2012: 1221), similar to our study, preservice teachers explained that some difficulties were encountered during teaching due to crowded class sizes in micro teaching practices. In Çakır's (2010: 71) study, preservice teachers stated that they needed to evaluate presentations and feedback should be given after the presentations. Also, according to Subramaniam (2006: 675) the use of microteaching technique may improve pre-service teachers' performances.

When the findings regarding the fourth sub-purpose of the study were examined, the preservice teachers made suggestions regarding the teaching of the micro teaching course. These contributions and suggestions are explained as reducing the number of classrooms depending on the development of the application environment, and applying in schools, that is, in a real classroom environment. In addition, it was stated that the active participation of the preservice teachers in the class should be ensured while performing in-class activities and the presentation should be repeated. On the other hand, preservice teachers explained their suggestions for using textbooks on micro teaching and increasing the number of materials with regard to tools and materials. Similarly, Benton-Kupper (2001: 834) stated that microteaching practices should be included in pre-service teacher education programs as a useful teaching tool. Kablan (2012: 251) mentioned the importance of developing materials and activities in micro teaching while applying the teaching principles and methods in his study. According to the research of Bilen (2014: 197), micro teaching has positively affected the preservice teachers ability to teach in the classroom. It can be said that the positive effect of lecturing in the classroom is similar to the fact that the preservice teachers' participation in the course in our study. The opinion of the most of the preservice teachers regarding the use of micro-teaching technique in schools, that is, in real classroom environments, in the study conducted by Karsan (2017: 197) is similar to the results of our study. In the study of Karaman (2014: 171), most of the preservice teachers stated that they want to practice in a real classroom environment while applying micro teaching technique. In the research of Christian (2017: 18), the fact that the preservice teachers stated that it is important to benefit from the materials while preparing to make micro teaching application supports our study. On the other hand, Allen & Ryan (1969: 2-3) also stated the necessity of using materials in the application of micro teaching technique in their study. In addition, in the study conducted by Karakaya & Yazici (2017: 263), preservice teachers pointed out that it is positive to develop and increase the materials used for micro teaching. However, in the study of Peker (2009: 369), preservice teachers stated that similar to the data we obtained, it is important to reduce the
class size in the application of micro-teaching technique. Veenman (1984: 160) explained in his study that, similar to the results of our study, preservice teachers' use of materials should be increased in applying teaching techniques such as micro teaching. In addition, (Leal-Rodriguez & Albort-Morant, 2018: 2; Meutia, Elyza & Yusnila, 2018: 110; & Undiyaunudeye-Inakwu, 2012: 101) stated in their research that micro-teaching technique should be applied in schools and real classroom environments.

When the findings regarding the fifth sub-purpose of the study were examined, the preservice teachers stated that they would like to take the micro teaching course again. However, very few preservice teachers stated that they do not want to take the micro teaching course again. In Şen (2009: 169)’s research, it may be possible for the preservice teachers to state that they want to practice micro-teaching again, similar to the results in our study, by taking this course again. It can be said that this situation can only be achieved by taking the micro teaching course again. In addition, in the study carried out by the Kuran (2009: 398), the preservice teachers explained their opinions on the repetition of this course by taking the micro teaching course in more than one semester.

Based on the research results, the following suggestions can be made:

- Practicing micro teaching technique mostly in real classroom environments can increase the effectiveness of micro teaching technique.
- The use of technology in micro teaching course can be expanded by using different technological tools and materials.
- Classroom sizes can be reduced for more effective and efficient application of micro teaching technique.
- In the future, studies can be conducted using different research models for preservice teachers who take the micro teaching course.

REFERENCES


Views of the School Principals about the Inclusive Education and Practices

Tansel Yazıcıoğlu
Nevşehir Hacı Bektaş Veli University

Abstract

School principals restructure the school to cope with social changes and needs, fulfill the functions of the school to meet the needs of the society and improve the social quality of the school by providing organizational effectiveness. In this study, it is aimed to reveal the views of the school administrators working at pre-school education institutions and at the primary and secondary schools about the inclusive education. This study is designed as a case study, one of the qualitative research approaches. The participants of the study are the school administrators working at pre-school education institutions and primary and secondary schools in Çankaya and Yenimahalle districts of Ankara. The data were collected using the “Semi-structured interview form” which was developed by the author. The findings of the study indicate that the opinions of the school principals about the inclusive education are generally positive. However, the suggestions of school principals should be taken into account about increasing teachers' knowledge and skills regarding the inclusive education and making objective and impartial educational evaluations and diagnoses.


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INTRODUCTION

Inclusive education in Turkey was started with the decree dated 1983 and numbered 2916, namely the “Law on Children in Need of Special Education”. Inclusive education became much more widespread through the “Decree Law on Special Education” dated 1997 and numbered 573 and through the “Special Education Services Regulation” dated 2000 (Ministry of National Education, [MONE], 2010). Inclusive education is generally considered to be as a multidimensional concept and as a socio-political education model that includes certain values such as human rights, social justice and social equality, but also includes other significant points, including the children’s right in regard to the access to education, their educational rights and school transition process (Kozleski, Artilès & Waitoller, 2011; Loreman, Deppeler & Harvey, 2011; Mitchell, 2005; Slee, 2011; Smith, 2010; Topping, 2012). Akcamete (2009) defines the inclusive education as educational programs in which children with special needs are educated in a part-time or a full-time manner with normally developing children. Akcamete (2009) argues that the definition and scope of inclusive education contain a wide range of issues from the lack of interaction between children with special needs and children with normal development to the participation of children with special needs in general education classrooms through the social and educational activities. In another definition, the inclusive education is regarded as the education of children with and without special needs in general education classes by making necessary arrangements and adaptations, and it is aimed that students who are diagnosed with disabilities receive education together with students with normal development as long as the special education support services are provided (Sucuoglu & Bakkaloglu, 2013). In the Regulation on Special Education Services of the Ministry of National Education (2018) the inclusive education is considered to be a kind of education as a part-time education in special education classes that is provided to individuals with special education needs to interact with other individuals at all levels and to make it possible for them to achieve their educational goals at the highest level, by providing support services to these individuals with their peers.

For successful inclusive education, all school staff, particularly the school principal, should adopt an accepting and supportive attitude towards students with special needs. Children with special needs and their parents frequently interact with the school principal, vice school principal, guidance teachers, other teachers, civil servants and other school personnel, starting from the enrollment stage (Kargin, 2010, p. 64). Therefore, it can be argued that in order to make this interaction genuine cooperation and to practice the inclusive education successfully at schools administrative approach of school administrators and their administrative information and skills are all critical. The duties and responsibilities of the school principals regarding the implementation of special education services at schools are specified in Article 49 of the Ministry of National Education Special Education Services Regulation (2018). In the regulation, some of the duties and responsibilities of the school principals are listed as follows: taking the necessary measures for the provision of special education services for students with special education needs and their parents, and ensuring the formation of the necessary boards and units for the execution of special education services. In addition, the article states that school principals should ensure the cooperation among teachers within the scope of special education service and the work-related health and safety of the staff at the school.

As can be seen, school principals have important roles and responsibilities in the implementation of special education services. It can be argued that these roles and responsibilities should known and practised by school principals in that they will guide the inclusive education at the school. As a matter of fact, the school administrator has to follow the development of the school in terms of its goals. An administrator who does not have the necessary knowledge concerning the educational process cannot report the situation to higher authorities and cannot make a healthy evaluation (Aydin, 1994, p. 191). School principals restructure the school to cope with social changes and needs, fulfill the functions of the school to meet the needs of the society and improve the social quality of the school by providing organizational effectiveness. In other words, school administrators improve the school environment and manages the school’s interaction with its environment (Basaran, 2000, p. 80). They should be familiar with the valid criteria for the selection and continuous evaluation of the desired learning activities and be able to guide those concerned (Aydin, 1994, p. 195). Based on
these definitions, it can be said that school principals are an important building figures in the realization of the goals of the school and meeting the educational needs of all students.

There are many studies dealing with the views of the school principals regarding the inclusive education (Avissar, Reither & Leyser, 2003; Bailey & Plessis, 1997; Balo, 2009; Barnett & Monda Amaya, 1998; Graham & Spandagau, 2011; Jahnukainen, 2015; Mattson & Hansen, 2009; Ramirez, 2006; Salisbury, 2006; Uysal, 1995, Uzun, 2009, Yikilmış & Sazak Pinar, 2005; Valeo, 2008; Yılmaz Bolat & Ata, 2017). A study was conducted by Uysal (1995) in which the opinions of teachers and school administrators about the problems encountered in the integration of children with intellectual disability were determined. In the study it was found that when students with intellectual disabilities were placed in inclusive classrooms, neither their behavioral nor learning characteristics were adequately described and that the characteristics of the classroom teachers had negative effects as well as positive effects on the inclusion practices. In the study conducted by Uzun (2009), most of the principals reported that the most common problems they experienced were related to the parents of the students with special education needs. In addition, they stated that they had also problems with the parents of other students and with the students requiring special education, and that the class sizes were crowded. Balo (2009) concluded that school administrators are not competent in regard to the implementation of the inclusive education. In the study by Yikilmış and Sazak Pinar (2005) the views of the school administrators about the inclusive education were analysed and it is found that they do not have sufficient knowledge about the concept of inclusive education, what should be done in order for the inclusive education to be successful. It is also found that most of the school administrators have a negative attitude towards the inclusive education. Yılmaz Bolat and Ata (2017) carried out a study on a sample of twelve school administrators of the pre-school education institutions and the participants emphasized that the inclusive education does not serve its purpose, but it is a useful practice for children with special education needs if appropriate conditions are provided. They also reported that they do not have enough information about the inclusive education, and that professional development is important for both school administrators and teachers suggesting that it should be supported with in-service training. School administrators stated that the students who attend the inclusive education are not socially accepted by teachers, students and parents. They also emphasized the crowded classrooms together with the physical and hardware inadequacy of the school and that the students who are attending the inclusive education have more than one disability which causes various problems in the classrooms. In addition, they offered various suggestions such as conducting in-service training activities, providing personnel and equipment support, including preliminary studies and part-time inclusive education activities in order to successfully implement inclusive education.

Although the first study on the views of the school administrators on the inclusive education in Turkey was carried out in 1995 (Uysal, 1995) the number of such studies is not very high (Uzun, 2009, Yikilmış & Sazak Pinar, 2005; Yılmaz Bolat & Ata, 2017). It increases the significance of the study. The changes made in the regulation on special education services dated 2006 of the MONE modified the inclusive education practices in the period 2009-2018, and these changes made the school administrators as the sole authority in shaping these educational practices. Another relevant point is the high number of students with special needs who continue inclusive education at the primary and secondary schools. When the data of the Ministry of National Education for the school year 2017-2018 are examined, it is seen that there are 2,601 students in pre-school inclusive education, 105,098 students in primary school inclusive education, 108,753 students in secondary school inclusive education and 41,318 students in secondary inclusive education (MONE, 2018). This situation increases the role and significance of the school administrators working at primary and secondary schools where the number of students in the inclusive education is at the highest level. Therefore, the opinions of school principals, who are responsible for the education of primary and secondary schools, which make up the majority of the number of students attending inclusive education, are important. In this study, it is aimed to reveal the views of the school administrators working at pre-school education institutions and at the primary and secondary schools about the inclusive education. Based on this aim the study attempts to answer the following research questions:

1. What are the views of the school principals about the inclusive education?
2. What are the views of the school principles about their authority, tasks and responsibility in regard to the inclusive education?

3. What are the major problems that the school principals come across during the inclusive education?

**METHOD**

**Design of the study**

The qualitative research is a study in which the data are collected through several methods such as observation, interviews and document analysis, and a qualitative process is followed to reveal the perceptions of individuals and events in a realistic and holistic manner in their natural environment (Yıldırım & Simsek, 2013). It is a form of research that involves collecting in-depth data about the topic at hand (Gay, 1987). This study is designed as a case study, one of the qualitative research approaches. According to Patton (2014), the case study provides the researcher with a detailed and in-depth data collection process on the subject. In the study the qualitative approach aimed at directly learning the individual perceptions, experiences and perspectives of the participants and understanding and explaining their current situations.

**Participants**

The participants of the study are the school administrators working at pre-school education institutions and primary and secondary schools in Çankaya and Yenimahalle districts of Ankara. The participants were selected using the criterion sampling technique which is part of the purposeful sampling. Marshall and Rossman (2014) define the criterion sampling as the selection of study participants using a pre-determined criterion. The criterion can be developed by the author, or a list of criterion can be employed. The criteria used in the study are as follows: having at least four years experience of working as a school administrator and having at least one inclusive student at the school. The reason for the first criterion is that school administrators were appointed to the post following the implementation of the Regulation on the Assignment of the Administrators of Educational Institutions affiliated to the Ministry of National Education dated 10 June 2014 which was entered into force on September 2014. It is thought that those school administrators who have at least four years of working experience in the post and who have certain experience in teaching would have sufficient qualifications to express their opinions on education through inclusion. Therefore, a list of schools with students who were attending the inclusive education was obtained from the Counseling Research Centers of the related districts. Six schools were randomly selected from the list of each district, and an appointment was requested from the administrators of the selected schools by telephone. They were informed about the study during the meetings, and they reported that they wanted to contribute to the research and filled out the voluntary consent forms. The direct quotations of their views are given in the article using codes for them such as “SA1, SA2, SA3...”. Table 1 presents the demographical information about the school administrators participated in the study.
Table 1 indicates that four of the participants are female while eight of them are male. In addition, two of them are working at the pre-school education institutions, four at primary schools, two at secondary schools and four at basic education schools which contain both primary and secondary education levels. In regard to the experience of the participants as a school administrator their grouping is given as follows: three of them have four years of experience in this post, two of them have five years of experience in this post, two of them have eight years of experience in this post, one of them has nine years of experience in this post, one of them has fifteen years of experience in this post, one of them has twenty-eight years of experience in this post and one of them has thirty years of experience in this post. Teaching experience of the participants varies between 12 years and 41 years. The number of students in the inclusion classes at the schools are found as follows: at three schools there are three such students, at three schools there are five such students, at two schools there are seven such students, at one school there is one such student, at one school there are nine such students, at one school there are twelve such students and at one school there are twenty-five such students.

Data collection tool

The semi-structured interview forms were developed in order to collect data on the views, authorities, duties and responsibilities of school administrators regarding the inclusive education, the problem they experienced in the process of the inclusive education and their suggestions for these problems. For this purpose, five open-ended questions were asked to school principals during the interviews, and a demographic information form was prepared in order to obtain general information about them. The interview form was reviewed by three faculty members working in the field of special education. Based on their feedback, the following item, “What are your duties regarding inclusive education? What is your authority regarding inclusive education? What are your responsibilities in inclusive education?” was rewritten as follows: “What are your views about your authority, tasks and responsibility in regard to the inclusive education?” The questions asked to the school principals are as follows:

1. What are your views about the inclusive education?

2. What are your views about your authority, tasks and responsibility in regard to the inclusive education?

3. What are the major problems that you come across during the inclusive education?
4. How can these problems be solved?

5. What are your views about the successful inclusive education?

The final interview form was used in a pilot study on a sample of three school administrators working at a primary school and at two secondary schools in Nevşehir. They signed a confirmation before the start of the interviews. The findings of the pilot study indicated that interview items are understandable and their contents are consistent with the aims of the study.

**Data analysis**

The data were collected in February and March 2019 and recorded using the mobile phone's voice recording application. One of the authors made an appointment by calling them a few days before the interviews. All of the interviews were conducted by one of the authors in the office of the participants. A total of 34 pages of data was obtained from the interviews. Information on the interviews with the school administrators is given in Table 2.

**Table 2. Information on the interviews with the school administrators**

<table>
<thead>
<tr>
<th>Date</th>
<th>Code of the interviewee</th>
<th>Interview period</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 February 2019</td>
<td>SA1</td>
<td>15 minutes 20 seconds</td>
</tr>
<tr>
<td>22 February 2019</td>
<td>SA2</td>
<td>18 minutes 53 seconds</td>
</tr>
<tr>
<td>22 February 2019</td>
<td>SA3</td>
<td>13 minutes 08 seconds</td>
</tr>
<tr>
<td>23 February 2019</td>
<td>SA4</td>
<td>17 minutes 03 seconds</td>
</tr>
<tr>
<td>25 February 2019</td>
<td>SA5</td>
<td>20 minutes 36 seconds</td>
</tr>
<tr>
<td>25 February 2019</td>
<td>SA6</td>
<td>17 minutes 11 seconds</td>
</tr>
<tr>
<td>25 February 2019</td>
<td>SA7</td>
<td>10 minutes 25 seconds</td>
</tr>
<tr>
<td>01 March 2019</td>
<td>SA8</td>
<td>16 minutes 06 seconds</td>
</tr>
<tr>
<td>01 March 2019</td>
<td>SA9</td>
<td>09 minutes 22 seconds</td>
</tr>
<tr>
<td>04 March 2019</td>
<td>SA10</td>
<td>15 minutes 58 seconds</td>
</tr>
<tr>
<td>04 March 2019</td>
<td>SA11</td>
<td>10 minutes 49 seconds</td>
</tr>
<tr>
<td>04 March 2019</td>
<td>SA12</td>
<td>17 minutes 39 seconds</td>
</tr>
</tbody>
</table>

As can be seen in Table 2 the interviews were conducted between 22 February 2019 and 04 February 2019. Except for in 23 February 2019 and 01 March 2019 the interviews were made with three participants each day. The shortest interview period is 09 minutes 22 seconds whereas the longest interview period is 20 minutes 36 seconds.

The data were analyzed with the content analysis, one of the qualitative data analysis techniques. The data obtained with the voice recording program of the mobile phone were numbered depending on the order in which the interviews were made without any changes, and were transformed into a transcription by giving a code to the school administrators. During this process each voice in the recording was written. Before the data analysis, three of randomly selected interview recordings (at least 25% of the data) were listened to by the author and a faculty member working in the special education department, and the written forms of the recordings were verified. The reliability was found to be 100%. The data set was developed to include a descriptive index. On the right side of the document there were the interpretations of the participants and on the bottom of it there were additional information. The data set was organized and divided into themes and coded. The themes developed were reviewed by a faculty member working in the special education department. This review also included the coding files, and the sub-themes related to the two data sets randomly selected. The themes that were agreed by the author and the interrater were left unchanged, and the themes of disagreement were discussed. At the end all consensus was achieved.
FINDINGS

The findings of the study were presented by taking into account the themes and sub-themes that emerged as a result of the analysis of the data obtained from the interviews conducted with the school administrators.

Views of the school administrators about the inclusive education

The views of the school administrators about the inclusive education are presented in Table 3.

Table 3. Views of the school administrators about the inclusive education

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views</td>
<td>Positive</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

As Table 3 indicates of twelve participants nine have positive views about the inclusive education while the remaining three have negative about it. One of the participants, SA3, reported the following positive views: “I am very keen on inclusive education because I think it is the education that every individual can benefit from.” Another participant’s, SA4, views about the inclusive education are as follows: “I am very positive about inclusive education. I believe that a lot of attention should be given to the inclusive education in every institution, especially in educational institutions.” The views of the participant SA1 are given as follows: “I believe that no matter what disability the children have and regardless of the degree of their disability, I believe that they should definitely be in the same environment with their peers.” Another positive views were reported by the participant SA10 as follows: “The inclusive education is a must. I also like the term ‘inclusive’.”

One of the participants, SA2, reported the following negative views about the inclusive education: “I do not have very favorably views concerning the inclusive education in kindergarten or pre-school education. The reason for this is that the Ministry of National Education does not provide support staff and kindergarten teachers show incredible resistance to the inclusive education.” Similarly, SA5 has negative views about it: “Since we have been functioning as a primary and secondary school for many years, we more or less know the practices related to the inclusive education. However, we cannot achieve efficiency in it. In fact, there is no inclusive education at the school. Therefore, I can not look very positively at it in this respect.” A third participant, SA12, expressed the following negative views about the inclusive education: “I do not believe that public schools can offer inclusive education correctly.”

Views of the participants about their tasks in regard to the inclusive education

The views of the participants about their tasks in regard to the inclusive education are given in Table 4.

Table 4. Views of the participants about their tasks

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views about tasks</td>
<td>Preparing the students in inclusion classes for the adaptation process</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Asking the teachers to implement the individualized education plans</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Helping the students in inclusion classes during the enrollment in schools</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Warning teachers about the approach to inclusive students</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Facilitating the inclusive education at schools</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Enabling the inclusive students to receive supportive education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>We do not have enough information about it</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No idea</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Carrying out all the work and procedures related to the enrollment of the mainstreaming students</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Distributing the students with special education needs to classes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Solving problems encountered with parents</td>
<td>1</td>
</tr>
</tbody>
</table>
Provision of a better classroom environment for inclusive students 1
Being able to integrate the student in inclusive classes with their peers 1
Organizing the inclusive education 1
Preparing suitable educational environments for inclusive students 1
Preparing the necessary materials for inclusive education 1
Acting with the school guidance service 1

Table 4 shows that three participants reported their task in regard to the inclusive education as enabling the inclusive students to receive supportive education. Two of them stated that asking the teachers to implement the individualized education plans is one of their tasks concerning the inclusive education. The other tasks reported by the school administrators are found as follows: Preparing the students in inclusion classes for the adaptation process; helping the students in inclusion classes during the enrollment in schools; warning teachers about the approach to inclusive students; facilitating the inclusive education at schools; acting with the school guidance service; preparing the necessary materials for inclusive education; organizing the inclusive education; provision of a better classroom environment for inclusive students; solving problems encountered with parents; carrying out all the work and procedures related to the enrollment of the mainstreaming students; distributing the students with special education needs to classes; being able to integrate the student in inclusive classes with their peers and preparing suitable educational environments for inclusive students. In addition, one of the participants reported that he does not know his tasks very well concerning the inclusive education whereas the other one stated that he has no idea about it.

The views of the participant SA7 are given as follows: “Sometimes, our students in inclusive classes request special support education. In this support education, I make sure that they can receive support training by considering school opportunities.” The participants, SA11 and SA6, reported the following views, respectively: “First of all, planning support programs for the implementation of support trainings.” and “To persuade teachers to provide supportive training.” The views of SA1 and SA9 are as follows: “I want IEPs to be implemented” and “We have to ensure that the IEP plans are implemented.”

Another participant, SA1, reported “We have a duty to prepare the mainstreaming students for the integration process.” The participant SA3 stated “I think it is our primary duty to enroll all children with inclusive education needs to our school.” the participant SA12 reported their task is “To prepare suitable educational environments for these children.”

Views of the school administrators about their authorities in the inclusive education

Table 5 presents the views of the school administrators about their authorities in the inclusive education.

Table 5. Views of the school administrators about their authorities

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views about authority</td>
<td>We are not authorized to choose teachers</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Our powers are limited</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I do not know anything about it</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>We do not know the limits of our authority</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5 shows that the participants reported various statements about their authority in regard to the inclusive education practices: Our powers are limited; we do not know the limits of our authority and we are not authorized to choose teachers. For instance, the participant SA4 stated the following: “In particular, we should have the authority to find qualified personnel. We should have the chance to find and choose qualified teachers. In this sense, I do not see myself and other teachers as competent.” Another participant’s, SA5, views on this topic are as follows: “Our powers are limited. There is a belief that a special education student may attend any school he wants, but there are some complications. First, the student may attend a school in a district where his parents reside. If
there is no school in his own district, that is, he cannot be placed in a class, he can request to attend a school in another district. But the parents do not follow these steps. Instead, they think that my child should attend this school so I can send him there. However, we are obliged to accept these students.”

The views of the participant SA1 are given as follows: “Students come to the school with or without a diagnosis. They want to enroll at the school. We either admit those children to the school based on the conditions of the school or we cannot. If there is no other inclusion student in the class, we cannot admit the student. The legislation does not exactly tell us to do in such conditions or that I do not know, if there are data about numbers.” Another participant, SA9, reported the following views: “We do not know how far we are authorized in this regard. There seems to be no clear distinction concerning it. I wonder how far is our authority? We do our job without challenging it.”

Views of the school administrators about their responsibility in the inclusive education

Table 6 presents the views of the school administrators about their responsibility in the inclusive education.

Table 6. Views of the school administrators about their responsibility

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views on responsibility</td>
<td>Responsibility in regard to teacher training</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Responsibility in regard to students</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>We do not know</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Conscientious responsibility</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6 shows that the participants produced several views about their responsibility based on distinct topics, including responsibility in regard to students and teacher training. One of the participants reported that he does not know anything about such responsibilities. Another one talked about conscientious responsibility concerning the inclusive education. The participant SA2 reported the following views: “We, the administrators, have a great responsibility in this regard. It is the responsibility of school administrators to include them in an inclusive class and to allow for them to continue their studies.” The participant SA4 explained the topic as follows: “These children also have the right to learn. It is always necessary to pave the way for them to receive this education at every school. As school administrators, our responsibility is to ensure that these children receive education at our schools.” Another participant SA3 stated the following views: “I believe that in the last decade there have been improvements in the inclusive education in Turkey, but school administrators and teachers do not think they know enough on the subject of their duties and responsibilities.” The views of the participant SA9 are as follows: “Our responsibility is great. These children should not be sufferers. First of all we have a conscientious responsibility towards them.”

Views about the problems faced during the inclusive education

The views of the participants about the problems faced during the inclusive education are presented in Table 7

Table 7. Views about problems

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems</td>
<td>Problems related to measurement and diagnosis</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Problems caused by school administrators</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Problems caused by teachers</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Parental problems</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Problems caused by the physical conditions at schools</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Problems caused by the inability to provide support services</td>
<td>3</td>
</tr>
</tbody>
</table>

As can be seen in Table 7 nearly all participants reported that the problems experienced during the inclusive education are due to teachers and parents. There are other participants who reported such problems based on diagnosis and assessment activities, the physical conditions at schools, the lack of
support services and school administrators. For instance, the participant M11 who considered the diagnosis and assessment activities as the source of problems reported the following views:

“Sometimes there are students who have to go to a special education class under the name of inclusion. These students damages the routines of the classes. It can be explained as follows: They are preventing their peers from studying. Turkey has improved the inclusive education, but there are actually 24 students in our inclusion classes. This number is far below the existing one. Because there are students who are included in the special education classes even though there should be placed there.”

Another participant MA5 who also considered the diagnosis and assessment activities as the source of problems reported the following views: “We have trouble with diagnoses. Sometimes we found that children who are called inclusion students are not inclusive, but we have seen that children who are said to be not inclusive students, can be in fact inclusive students.” The views of the participant SA3 are as follows: “Twenty of the thirty forty students who attend our school have nothing to do with inclusion.” The participant SA8 reported the following views: “There are things that are overlooked in the evaluations. Those students with higher levels of disability are evaluated as inclusion students. I think such decisions have been made without sufficient examination.”

The views of the participant SA5 emphasized the problems that occur due to the school administrators and reported the following views: “Unfortunately, some of school administrators are not aware of their legal duties and responsibilities in this regard. They do not want to enroll inclusive students into their schools. I think the problem starts from here.” Another participant SA12 also emphasized the school administrator-based problems and expressed the following: “School administrators do not want to admit these children to their schools.”

As stated above nearly all participants reported that the problems experienced during the inclusive education occur due to teachers. Table 8 presents the views of the participants about the teacher-related problems in the inclusive education.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems</td>
<td>Not accepting inclusive students</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Inadequacy of the methods and techniques teachers employ</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Focus more on academic achievement</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Being prejudiced</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Excluding inclusive students</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not giving the necessary time for inclusivestudents</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Failure to evaluate the inclusive students in accordance with the Individualized Education Plans</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Perceiving the practices of the Ministry on inclusive education as unnecessary</td>
<td>1</td>
</tr>
</tbody>
</table>

As can be seen in Table 8 the participants reported several problems relating them with the teachers. For instance, the views of SA1 are as follows: “If there is prejudice in the teacher, whatever the situation of the child, there is a difficulty from the beginning. Otherwise, if the teacher is completely positive, it is much easier from the beginning.” Another participant SA2 stated the following: “Teachers show an incredible resistance to admit the inclusive students in their classrooms.”
I persuade them to accept such students.” The views of SA3 are as follows: “Unfortunately, teachers do not want inclusive students in their class. I think that’s the biggest problem.” The participant SA8 expressed the following views: “I do not want to give inclusive students to some teachers. Because some of our teachers exclude or do not give the necessary time to these students.”

The participant SA4 explained the problems related to teachers as follows: “The teachers do not want the inclusive students in the class. He does not look at them warmly.” Another one, SA5, reported the following: “First of all, the state should use force or give a serious response to the teachers who do not accept these children in their class.”

All of the school administrators participated in the study stated that the problems experienced in inclusive education are mostly caused by the parents. These problems arising from parents are grouped under two sub-themes: problems arising from the parents of the students with normal development and the parents of the students in the inclusive classes. The views of the participants about these two categories are presented in Tables 9 and 10.

Table 9. Problems arising from the parents of the students with normal development

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent-related problems</td>
<td>Not wanting any inclusive student in the class</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not being sensitive</td>
<td>1</td>
</tr>
</tbody>
</table>

In Table 9, it is seen that three of the school administrators stated that the parents of the students with normal development did not want inclusive students to continue their education in their children’s class, and one of them stated that these parents were not sensitive to the others. For instance, the participant SA2 stated “Other parents may have reactions. They do not want to see their children in the same group with inclusive students.” Another one, SA8, reported “However, thirty percent of the parents who do not have children with special needs have a negative view of these students, and there are parents with negative thoughts who argue that these students should not be in these classroom environments because these students disrupt the classroom environment.”

Table 10. Problems related to the parents of the students in the inclusive classes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent-related problems</td>
<td>Not acknowledging their children's incompetence</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not being convinced about the educational evaluation and diagnostic process</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not following the recommendations</td>
<td>1</td>
</tr>
</tbody>
</table>

In Table 10, it is seen that three of the school administrators stated that the parents of students with special needs did not accept the incompetence of their children. Three of the participants argued that these parents were not convinced about the educational evaluation and diagnosis process, and one participant stated that the parents did not comply with the recommendations.

For instance, the participant SA9 produced the following views: “The biggest problem in inclusive education is that it is difficult for the parents to accept their child's condition until the diagnosis is made.” Another participant SA2 argued “Also, in some cases, the parents do not accept the situation of their child. When they cannot accept the situation, there occurs a communication problem between teachers and parents.”

The views of the participants SA10 are as follows: “Despite our guidance, parents do not go to the doctor. Instead, the teacher fills a form. The counselor is dealing with the situation. We show these documents to the parent. Despite this, the parents do not want to send their child to the doctor. There are parents we convince, but there are also those who are not.” The participant SA11 argued “It is a big problem to get the parent to accept the
situation of their child and to convince them to apply for the guidance research center. Our counselors suffer from this problem."

The views of the participant SA10 are as follows: “Sometimes there are parents who do not want to follow the doctor’s recommendations about their children. They do not go to the doctor again. There may be parents who do not follow the advice of the doctor or the counselor and make inferences on their own.”

Solutions to the problems experienced in the inclusive education

Table 11 presents the solutions developed by the participants to the problems experienced in the inclusive education

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solutions</td>
<td>Increasing teachers’ knowledge and skills regarding inclusive education</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Providing necessary training and consultancy services to parents</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Objective and impartial educational evaluations and diagnoses</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Improving the cooperation between school counseling service, school administrator and teacher</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Establishing appropriate physical environments at schools</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Making and implementing individualized education plans in accordance with their purpose</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Making preschool education compulsory</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Making arrangements for support training</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 11 shows that 10 of the school administrators participated in the study presented the increase of teachers’ knowledge and skills regarding the inclusive education as a solution. Five of them suggested that the educational evaluations and diagnoses should be made objectively and impartially whereas two of them suggested the provision of parents with the necessary education and counseling services. Another two participants suggested that the school counseling services should be in cooperation with school administrators and teachers, and the other two of them argued that there should be appropriate physical environments at schools. One participant argued that the IEPs should be designed and implemented in accordance with their purpose, while another one of them suggested that pre-school education should be compulsory. Yet another one proposed arrangements for supportive education as a solution. For instance, the participant SA2 argued “I think the state should raise awareness of teachers on this issue. For example, since I attend seminars on autism, I can look more favorably at children with differences.” Another participant, SA3, expressed the following views: “First of all, teachers need to be trained on this subject, it is necessary to explain them the purpose of the inclusive education.” Another participant, M4, stated “All teachers should be given adequate training on this subject.” The participant, SA5 reported “Teachers need extensive training in this regard.” and SA6 stated “I want teachers who teach the inclusive students to participate in-service training activities.”

The participant SA6 emphasized the significance of objective diagnosis of children and stated “Tanılamalar da uzman kişilerle birlikte yapılması gereklidir” The views of the participants SA11 and SA12 are as follows, respectively: “Diagnoses should not be left to the parents’ request,” and “The inclusive students who will be sent to schools by the guidance research centers should be eligible for receiving education at that school.” Another participant, SA10 reported the following: “Guidance research centers need to develop objective and correct assessments about the children.”

The school administrator, SA3, offering suggestions for the provision of necessary education and counseling services to parents stated “Parents should be made conscious about the topic.” Another participant, SA7, suggested the following: “It would be beneficial to raise the awareness of parents and to increase their awareness about inclusive education.”
participant SA3 argued “The guidance service and the school administration should work in cooperation and harmony.” and another participant SA9 reported the following: “Counseling teachers and teachers of inclusive classes should work collaboratively.” The participant SA2 reported the following views emphasizing the need for the improvement of the physical conditions at schools: “For example, our school is a five-classroom school and the whole area is that. We reorganized the tiny library as a support education room. We can also make the school principal’s room a support education room. OK we did it. Well, we also have some administrative work to do. Where should we do them? The deputy director and the officer are in the same room. We have nowhere to meet. Where will you do your administrative affairs? It depends on fully physical conditions of the schools.”

The participant SA1 argued that physical conditions at the school should be improved and added the following: “For example, the kindergarten where I work now has two floors as you can see. You can go up to the ground floor by stairs. Again, there is a ladder inside the school. There is currently no physically disabled student at the school, but we may have in the future. If a physically disabled student attends this school and has a wheelchair, it will be very difficult for him to get into the school. The dining hall is downstairs, and there is a multi-purpose hall on the same floor. It would very difficult for such students to get down there. How can we help children in this regard? Since children are physically small, we can move them to these areas.”

Views about the effective inclusive education

Table 12 presents the views of the school administrators about the effective inclusive education.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective inclusive education</td>
<td>Working with experienced and expert staff</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Proper classroom management</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Improvement of the social activities in and out of school</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Increased the time allocated to mainstream students and individualized education</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Informing the school staff about inclusive education</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Monitoring the development of students in inclusive classes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Making the school environment compatible with the inclusive education</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Increasing the authority of school administrators and teachers in regard to the inclusive education</td>
<td>1</td>
</tr>
</tbody>
</table>

As can be seen in Table 12, four of the school administrators stated that the school environment should be made compatible with the inclusive education. There are three participants who suggested that working with experienced and expert staff will produce successful inclusive education. The other three participants argued that improvement of the social activities in and out of school would contribute to have efficient inclusive education activities. Each of the following suggestions is reported by one participant: using the proper classroom management practices, increased the time allocated to mainstream students and individualized education, informing the school staff about inclusive education, monitoring the development of students in inclusive classes and increasing the authority of school administrators and teachers in regard to the inclusive education.

For four of the participants the effective inclusive education is possible only when the school environment is consistent with it. For instance, SA9 reported the following views: “Materials for students in inclusive classes need to be enriched.” Another participant, SA11, argued “The environment must be prepared, and the systems approach must be adopted. School administrators must be well prepared.” The participant SA3 emphasized the necessity of “experienced and expert personnel” for the successful inclusive education: “Students should act together with their peers, but I think the efficiency of education will increase with the effects of trained staff.” Similarly, SA4
suggested the following: “We and teachers need to be better equipped and specialized concerning the inclusive education.”

Concerning the effective inclusive education three participants suggested the improvement of social activities in and out of the school. For instance, the SA8 reported the following views: “I think social relations outside of school should be developed between the parents of the inclusion students and the parents of other students. In addition, inclusion students should be included more in social activities.” Another participant, SA10, stated “Objectives given to the inclusive students should be clearly defined, and classroom activities should be organized around these objectives.”

**DISCUSSION AND CONCLUSION**

In this section, the findings obtained from the interviews with the school administrators are discussed under the themes within the framework of the findings reported in the previous studies.

**Views about the inclusive education**

When the findings of the study are evaluated, it is seen that the opinions of the school principals about the inclusive education are generally positive. It can be said that this situation is very positive for the education of students with special needs. Because they have a status that can direct all educational processes of the school and manage these processes effectively and efficiently. When the negative views of the participants are taken into consideration, it is understood that this situation is actually caused by the current problems of the inclusive education in practice. As a matter of fact, the school principals with negative opinions emphasized problems such as the lack of readiness of teachers, the lack of supportive education environments, and insufficiency of physical conditions at schools. These findings of the study differ from the findings reported by Ruined and Pinar Sazak (2005). Their results revealed that the school administrators attitudes towards the inclusive education are negative and that they do not have sufficient knowledge about the inclusion. In the findings of this study, most of the school principals showed a positive approach towards the inclusive education. This difference may have resulted from the process by the introduction of the Special Education Services Regulation published in 2006 and the special education policies followed. In addition, the circular numbered 2008/60 “Education Practices through Integration” was published four months after the publication of the regulation and has become an important regulation regarding the measures to be taken at schools and institutions by school administrators and teachers. In addition, it can be said that the Why, Why, How Inclusion (3N Inclusion) guide sent to schools by the Ministry of National Education regarding the inclusive education practices is an important resource guide for school administrators, teachers and parents. Apart from these, the amendments made in the Constitution, legal regulations on access rights of individuals with special needs, trainings given to school administrators and teachers on special education and inclusion, awareness studies of non-governmental organizations may have caused a positive difference in this process. Lastly, the circular entitled "Education Practices Through Integration / Inclusion" numbered 28 published on 19 September 2017 and the Special Education Services Regulation published on 7 July 2018 may have increased the sensitivity or awareness of school administrators about the inclusive education. Although this process is very positive, it is thought that it is necessary to monitor how the positive attitudes and knowledge of the school principals are transmitted into the educational practices, and the systematic continuation of guidance and supervision activities at schools should be ensured.

**Views about tasks, authority and responsibility**

When the opinions of the school administrators regarding their duties, authorities and responsibilities towards the inclusive education are considered, it is seen that there are different views about these points. The school administrators stated that it is among their duties to ensure that students with special needs receive supportive education and to ask teachers to implement Individualized Education Plans. It is also seen that a common job description is not expressed by the participants, and their views differ. However, in the 49th article of the Special Education Services Regulation (2018)
issued by the Ministry of National Education the duties and responsibilities of the school administrators regarding the implementation of special education services are governed by four articles. Considering these items, the duties and responsibilities of school administrators include taking the necessary steps regarding the provision of special education services for students with special education needs and their parents, establishing the necessary committees and units for the implementation of special education services and ensuring that they fulfill their duties and responsibilities in relation to the special education services for the teachers in the school. All staff at the school should work in cooperation and in an environment in which work-related health and safety are provided. Although the school administrators participated in the study do not make a definition similar to the statements given in the regulation, it can be said that their opinions coincide with the legal definition in many ways. For instance, the school administrators participated in the study emphasized the significance of the training to be offered to students with special needs in inclusive classes which was seen by them among their duties and responsibilities regarding inclusive education practices. However, they did not mention a duty such as heading the Individualized Education Program Development Unit or assigning one of the relevant deputy directors to the head of this unit. However, the Individualized Education Program Development Unit has a vital importance in providing quality education services to individuals with special needs, and the Individualized Education Plan (IEP) of the children with special needs should be developed by this unit. Only one principal stated that asking teachers to develop the IEPs is one of their duties. However, in the Article 47 of the Special Education Services Regulation, published by the Ministry of National Education on July 7, 2018, it is stated that the IEP unit would meet headed by the school administrator or by any other personnel appointed by the school administrator. From this point of view, given that the participants do not mention such a duty, it is possible to argue that the school administrators do not have sufficient information about their authorities. Similarly, very few of the school principals expressed their views on their authority. On the other hand, those participants who expressed their opinions in this regard stated that they did not know their authorities or that their authorities were limited. The findings also differ in many respects from the results reported in the study by Yılmaz Bolat and Ata (2017) which was conducted on a sample pre-school education school administrators. The results reported in the study conducted by Yılmaz Bolat and Ata (2017) indicate that school administrators have a task of providing guidance and organizing educational environments. In addition, the participants of the study stated that preparing the Individualized Education Programs (IEPs) are among their duties. However, in the findings of this study, it is seen that the school administrators do not express any opinion on the preparation of the IEPs. Based on these findings of the study, it can be said that the school administrators have limited information about their duties, authorities and responsibilities regarding the inclusive education.

**Views about the problems experienced in the inclusive education**

When the opinions of the school administrators regarding the problems experienced in the inclusive education are evaluated, a remarkable issue emerges: all school administrators see teachers and parents as the major source of the problems. It is seen that the main problems arising from teachers include that they are not accepting inclusive students, they are prejudiced against these students and they are not making evaluations in accordance with the Individualized Education Plans. It can be said that these findings are important for the inclusive education. As a matter of fact, it is stated in the related studies that it is important for teachers to be accepting and to have a positive attitude to students with special needs to achieve the successful inclusive education (Batu, 2000; Battal, 2007; Sahbaz, 1997; Temir, 2002). Ataman (1996) states that teachers are a very important factor that can affect children in inclusion programs and that all children should feel the teachers’ positive attitude in an inclusive class. When the findings of the study regarding the problems caused by the parents of inclusive education are evaluated, it is seen that these problems are caused by both parents of students with normal development and those of students with special needs. The participants’ perception of parents as the source of problems is similar to the findings of the study conducted by Uzun (2009). In the results of the study conducted by Uzun (2009), most of the school administrators stated that the most common problems they experienced were related to the parents of the students with special needs and the families of other students. Considering these findings, it is understood that the primary
problem arising from the parents of students with normal development is that these parents do not want inclusive students in the classroom. The main problems arising from the parents of students with special needs is that they do not readily accept their children’s inadequacies and cannot be persuaded to join the educational evaluation and diagnosis process. These results are similar to the results reported in the study conducted by Kocyigit (2015). The study revealed that parents do not accept the situation of their children in need of special education, parents’ participation in the process is limited, and parents of students with normal development exhibit behaviors of not accepting students who attend inclusive classes. Experiencing these negative situations will negatively affect the success of the inclusive education. In this process, parents should be supported by school administrations in a planned and programmed manner, and their lack of knowledge and skills related to inclusive education should be eliminated.

Suggestions to eliminate the problems in the inclusive education

When the suggestions of school principals regarding the problems experienced in inclusive education are evaluated, it is seen that the school administrators mostly offer suggestions about increasing teachers’ knowledge and skills regarding the inclusive education and making objective and impartial educational evaluations and diagnoses. The suggestions by the participants to increase teachers’ knowledge and skills related to the inclusive education are consistent with the findings reported in previous studies (Anilan & Kayacan, 2015; Akalin, 2015; Atay, 1995; Babaoglan & Yilmaz, 2010; Battal, 2007; Diken, 1998; Gokdere, 2012; Guven, 2009; Kargin, Acarlar & Sucuoglu 2003; Kaya, 2005; Kuz, 2001; Onder, 2007; Ozbaba, 2000; Sanır, 2009; Temir, 2002; Unal, 2010; Yikmıs & Bahar, 2002; Yilmaz, 2015). The results of the studies revealed that teachers have incomplete knowledge and skills about inclusive education. The suggestions of the school administrators regarding educational evaluation and diagnosis should be taken into consideration. In fact, the results of this study revealed that there are problems arising from educational evaluation and diagnosis of the children with special needs. A similar finding is reported in the study by Uysal (1995). In the study in which the opinions of teachers and school administrators about the problems encountered in the inclusion of children with intellectual disability were analysed, it was concluded that none of the behavior and learning characteristics of students with intellectual disabilities were adequately diagnosed when they were placed in inclusive classes. The educational evaluation and diagnosis process is a process that directly affects the education of students with special needs and determines the appropriate educational environments they will receive. This process should be continued based on the competence and ability of the individual as much as possible. As a matter of fact, in the fifth article of the Special Education Services Regulation issued by the Ministry of National Education lists the basic principles of special education, and it is stated that education services should be provided by taking into account individual differences, developmental characteristics and training needs.

School administrators also offered some suggestions such as developing school counseling services and the cooperation between school administrators and teachers, creating appropriate physical environments at schools, making and implementing individual education plans in accordance with their purpose, making preschool education compulsory, making arrangements for supportive education activities and providing necessary training and counseling services to parents. It can be said that these suggestions also indicate the current problems of the inclusive education. Therefore, these suggestions should be taken into consideration and reflected into the inclusive education practices.

Views about effective inclusive education

When the views of the school administrators about the effective inclusive education are taken into consideration, it is seen that there are different views about it. The frequently expressed views in this regard include the preparing the school environment, working with experienced and expert staff, and increasing social activities in and out of school. These findings are similar to the previous findings reported by Bilen (2007) and Sanır (2009). The results in the study by Bilen (2007) indicate that the unsuitability of the physical environment at the school and the classroom and insufficient qualified
personnel in the field of special education were mentioned as negative factors that prevent a successful inclusion education. The results reported in the study by Sanır (2009) reveal that the failure to make the necessary arrangements for the students in inclusive classes prevents these students from fully participating in the education process and therefore, the desired results from the inclusive education cannot be achieved.

Although it was stated by only one school administrator that the time allocated to students in inclusive classes should be increased and the education should be individualized, this opinion is considered to be very important. In the study by Gurgur, Kıs and Akcamete (2012), the opinions of the pre-service teachers about the individual support services offered to the students in inclusive classes were examined. The study concluded that individual support services improve the academic success of students in inclusive classes and contribute to the development of their social skills.

In conclusion, based on the findings obtained from this study, it can be stated that the positive approach of school principals concerning the inclusive education is a positive development in terms of the success of inclusive education. Considering the current problems of the inclusive education in Turkey, it is thought that the findings obtained from this study are important. For this reason, it is necessary to conduct similar studies with more participants, and future studies should focus on the opinions of secondary school principals on the inclusive education due to the fact that the compulsory education is 12 years in Turkey.

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Investigation of Story Writing Skills In Elementary School Students (4th-8th Grades)*

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Abstract

The aim of this study was to examine elementary school students’ story writing skills according to grade level within the framework of certain variables. The study was designed with a cross-sectional research model, one of the developmental research methods. The study group of the research consisted of 319 students attending 4th, 5th, 6th, 7th and 8th grades. A Story Writing Form developed by the researchers was used as the data collection tool in the research. In the data collection process, the students were given the story writing form and asked to write a story within a certain period by choosing one of the topics included in the form. To evaluate the stories written by the students, the 6+1 Analytic Writing and Assessment Scale was used. The research results revealed that the great majority of students used a title in their stories and that they created their stories with a single paragraph. On the other hand, it was seen that the grade level and gender variables had an effect on the quality of the stories. Generally, the quality of the stories improved as grade level increased, and girls wrote better quality stories than boys. However, this effect was not significant at every grade level.

Keywords: Writing Skills, Story Writing, Elementary School Students

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INTRODUCTION

The story is a type of writing that has been used for various purposes for centuries. It can be defined as a fictional type of writing that deals with events that humans experience or can experience within the framework of elements such as place, time or people. The story is a genre that children from preschool onwards frequently use in their experiences and refer to in their narrations.

Children’s ability to transform events that occur in both their real and imaginary worlds into stories is a skill that emerges at around the age of two (McCabe & Peterson, 1991). Later, as a literary style in which they gradually begin to take an interest together with age, children can learn all the story elements at around the age of eight (Pellegrini & Galda, 1982). After the ages of 10-12, their interest in this style of writing gradually increases further (cited in Temizkan, 2011). The story concept develops in children progressively over time by listening to the things they are told, and narrating and writing the things they read (Tompkins, 2008). Stories are important in terms of children’s personal development and use of language. The child personally enables his/her emotions to develop by establishing a relationship between the hero of the story and him/herself. Akyol (2014) emphasised the importance of stories by stating that through stories, children enrich their vocabulary and recognise the power of language, and that they are a tool for children to convey their messages. The instruction of story writing is one of the learning outcomes included in curricula especially for students from elementary school onwards both in Turkey (Ministry of National Education [MoNE], 2019) and in other countries (e.g., CCSS, 2010, OMOE, 2006). Stories have an important place in writing skills as well as in reading and comprehension skills, and are used in written expression activities (Arıcı, Ungan & Şimşek, 2012).

A story should be written according to a certain plan and in such a way as to include specific features. In the mental design process, which is the first stage, the title is written first (Temizyürek & Çevik, 2017). In story writing activities, the title can also be added after the story is completed. The structure of the story includes the skill of ordering the paragraphs and the appropriate transition between the paragraphs, that is, organisational skill (Paquette, 2002). A good quality story will appear as the result of good organisation of ideas. While doing this, the writer’s style also plays an important role. To be successful in the skill of story writing, the writer should have an accumulation of knowledge, and a vocabulary wide enough to express his/her feelings and thoughts (Yılmaz, 2019). Furthermore, in terms of cohesion in the story, it is important for the sentences created to be orderly and fluent, and for the transition between paragraphs to be consistent. Punctuation marks and spelling rules also enable the story to be understandable and effective. In sentences containing spelling mistakes, a change and differentiation of meaning may occur (Genç, 2017). Similarly, legibility of handwriting, page layout, and appropriate spaces between words are important for understanding of the story and achieving the message intended to be given to the reader. Although all these features/criteria are regarded as a complex skill due to the nature of written expression, teachers need to encourage their students to write stories (Ballard & Glynn, 1975) and to assess them, since assessment of writing lies at the core of effective writing instruction and learning (Jones, 2002). According to the analytic rubrics most frequently used globally for assessment of story writing skills, stories are evaluated with regard to style and content with certain criteria (e.g., Dunsmuir et al., 2015; Rezaei & Lovorn, 2010).

When studies conducted on the subject of story writing skills in the literature are examined, it is seen that they are mostly quasi-experimental and descriptive studies. Examination of the descriptive studies reveals research studies that examine story writing skills at different grade levels (Ulu, 2019; Duran & Yılmaz, 2019; Taş, 2019; Eğilmez & Berber, 2017; Kaynaş, 2014; Yasul, 2014; Yılmaz, 2008). When the results of studies made at elementary school level (Ulu, 2019; Duran & Yılmaz, 2019) are examined, students’ stories were evaluated according to certain dimensions (sentence fluency, word choice, grammar, etc.) and it was concluded that students’ levels were similar to each other and that their story writing levels were moderate. On the other hand, it was reported that when choice of topic was left to students, they created more successful stories. In story writing studies conducted at secondary school level, different grade levels were studied (e.g., fifth grade: Eğilmez &
Berber, 2017; sixth grade: Kaynaş, 2014; Yasul, 2014; Yılmaz, 2008; eighth grade: Taş, 2019), and as a common result of the studies, it was seen that students’ story writing skills were not at the desired level. In these studies, the stories were discussed in terms of levels of self-efficacy and use of story components.

In experimental studies aimed at developing story writing skills, it was determined in studies conducted with fourth grade elementary school students (Başkan, 2019; Özkan & Karasakaloğlu, 2018; Kaya, 2016) that implementations made in line with the story writing curriculum improved students’ written expression skills and increased their writing knowledge. In Kaya’s (2016) study, it was reported that a writing approach based on metacognitive skills developed fourth grade students’ story writing skills and that students gained some metacognitive skills (planning, editing, preparation, etc.) in their writing. McDonnell and Ludlow (2015) revealed that preparation of a written draft, which allowed children to create a mental schema related to their story writing skills, facilitated story writing in second grade elementary school students. As a result of quasi-experimental studies that were made, it was stated that students’ story writing skills improved after they had received planned instruction related to story writing skills.

Similar results are seen in studies in which the 6+1 Analytic Writing and Assessment Scale was used for investigating the development of story writing skills (Coe, Hanita, Nishioka & Smiley, 2011; Paquette, 2002; Özkara, 2007). When students’ story writing skills were examined, significant differences were determined in relation to ideas, organisation, voice, word choice, sentence fluency, conventions and presentation after they had received instruction. In the study by Williams and Larkin (2013), a strong correlation was found between fluent reading skills and story writing skills. It was seen that students who had difficulty in correct pronunciation ability wrote poorer quality texts than students who could read normally. According to the results of that study, the fact that there is a strong correlation between reading skill, which is one of the most important language skills, and story writing skill is one of the reasons why students’ story writing skills need to be examined developmentally.

When previous studies are examined, the lack of studies that discuss elementary school students’ story writing skills developmentally in terms of grade level is striking. It is clearly seen that the majority of studies were conducted in relation to a single grade level (e.g., Ulu, 2019; Taş, 2019; Duran & Yılmaz, 2019; Başkan, 2019; Eğilmez & Berber, 2017; Kaynaş, 2014), and that according to the research findings, problems related to students’ correct story writing skills continued from elementary school onwards towards higher grade levels. Furthermore, in studies related to story writing skills, (Kaynaş, 2014; Coşkun, 2005; Sallabaş, 2007; Kılıç, 2012; Küreci, 2017; Özkan, 2016), the story elements were generally considered for assessing these skills. Story writing is a writing activity that includes many features within it. Starting from this point, story writing skills should be evaluated in terms of both style and content.

Aim of the Study

The aim of this study is to examine the development of elementary school students’ story writing skills according to grade level within the framework of certain variables. In line with this aim, answers were sought to the following questions:

1. To what extent do elementary school (4th-8th grade) students use titles in their stories?
2. To what extent do elementary school (4th-8th grade) students use paragraphs in their stories?
3. Does the total number of words used by elementary school (4th-8th grade) students in their stories differ significantly according to gender and grade level?
4. Do elementary school (4th-8th grade) students’ stories differ significantly in terms of quality (ideas, organisation, voice, word choice, sentence fluency, conventions and presentation) according to gender and grade level?

**METHODOLOGY**

**Research Model**

In this study, a cross-sectional research model, one of the developmental research methods, was used. Studies in which the data related to the research process are collected at one specific point in time, and which serve to reveal the state of the phenomenon examined at that moment, are known as cross-sectional studies (Gürbüz & Şahin, 2014). This method was chosen for examining the development of story writing skills in students from fourth grade of elementary school to eighth grade of secondary school because it offered the researchers the opportunity to examine and compare the development and changes in students at different grade levels by allowing them to access individuals in different age groups (Çiğdem, 2015).

**Study Group**

The study group of the research consisted of 319 students attending elementary school (4th grade) and secondary school (5th, 6th, 7th and 8th grades). For determining the study group, the convenience sampling method was used, and three different state schools were chosen by taking account of transport conditions and the suitability of the schools (number of students, distance, etc.). In this sampling technique, the aim is to include participants who are suitable and willing to take part in the study (Creswell, 2005). Therefore, an effort was made to access a certain number of students from each class at 4th grade of elementary school and 5th, 6th, 7th and 8th grades of secondary school. By considering the fact that in the final years of elementary school, students have to a significant extent acquired fluent writing skills, the study was begun from the fourth-grade level. Furthermore, another factor in beginning to collect the research data from the fourth grade of elementary school was the fact that the students’ story writing performances were analysed according to an assessment tool (the 6+1 Analytic Writing and Assessment Scale) that includes high level writing skills (sentence fluency, organisation of ideas, word choice, etc.). These students attended three state schools with a middle socioeconomic level in three different provinces (Ankara, Trabzon and Giresun). Data for the distribution of the study group according to gender and grade level are included in the table below.

Table 1. Distribution of students participating in study according to gender and grade level

<table>
<thead>
<tr>
<th>Gender</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>41</td>
<td>29</td>
<td>40</td>
<td>22</td>
<td>22</td>
<td>154</td>
</tr>
<tr>
<td>Male</td>
<td>40</td>
<td>37</td>
<td>29</td>
<td>30</td>
<td>29</td>
<td>165</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>66</td>
<td>69</td>
<td>52</td>
<td>51</td>
<td>319</td>
</tr>
</tbody>
</table>

As seen in Table 1, a total of 319 students at elementary and secondary levels were included in the study group. It is seen that approximately 48% (N=154) of the students were girls, while about 52% (N=165) of them were boys.

**Data Collection Tools**

A “Story Writing Form” developed by the researchers was used as the data collection tool in the research. For evaluation of the students’ stories, the 6+1 Analytic Writing and Assessment Scale developed by Özkara was utilised.

**Story Writing Form:** The story writing form was developed by the researchers with the aim of determining the students’ story writing skills. The form consists of three sections. In the first section, in order to gather personal information, questions related to students’ grade levels and gender
are included. In the second part of the form, a story writing guideline consisting of four different
topics for the students’ story writing is given. First of all, by examining local and foreign story writing
guidelines, ten topics for story writing were specified. Care was taken to select topics that were suited
to the students’ interests and levels, that they would be able to associate with their own lives, and by
which they would be able to reflect the things they had read, their observations, ideas and
imagination. While writing texts or stories, students will mostly choose their ideas based on their own
living environments, experiences, accumulations of cognitive knowledge and thinking skills
(imagination) (Wang, Chang, Lin & Chen 2018; Tompkins, 2008). The views of domain experts were
consulted for selection of the topics. A form related to the subject was given to four academicians in
the field of Turkish education and four classroom teachers. The experts were asked to give their ideas
as to which topics would be more appropriate for the stories that elementary school students would be
required to write, and to evaluate each topic with a score between 1 and 10. After the average scores
were obtained, four topics were selected, starting with the highest score, and the other topics were
eliminated. The third section of the form consists of two blank lined pages for students to write their
stories. The topics included in the guideline are stated below. The students’ topic choices are shown in
Table 2.

**Story Writing Topics:**

**Topic 1.** Write a story about a good or bad day that happened at school to a student who is the same
age as you.

**Topic 2.** Write a story about events that happened to a kitten that was stuck in the street on a cold
winter’s day.

**Topic 3.** Imagine that you are a bird. Write a story about the events that happened to you during
journeys you made to distant lands.

**Topic 4.** Write a story about events that happened to a child who has just moved to a new
neighbourhood.

**Table 2. Elementary School Students’ Choices of Writing Topic**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Topic Choice</th>
<th>Topic 1</th>
<th>%</th>
<th>Topic 2</th>
<th>%</th>
<th>Topic 3</th>
<th>%</th>
<th>Topic 4</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th grade</td>
<td>10</td>
<td>3.1</td>
<td></td>
<td>32</td>
<td>10</td>
<td>11</td>
<td>3.4</td>
<td>28</td>
<td>8.8</td>
</tr>
<tr>
<td>5th grade</td>
<td>4</td>
<td>1.3</td>
<td></td>
<td>27</td>
<td>8.5</td>
<td>5</td>
<td>1.6</td>
<td>30</td>
<td>9.4</td>
</tr>
<tr>
<td>6th grade</td>
<td>5</td>
<td>1.6</td>
<td></td>
<td>24</td>
<td>7.5</td>
<td>12</td>
<td>3.8</td>
<td>28</td>
<td>8.8</td>
</tr>
<tr>
<td>7th grade</td>
<td>6</td>
<td>1.9</td>
<td></td>
<td>13</td>
<td>4.1</td>
<td>9</td>
<td>2.8</td>
<td>24</td>
<td>7.5</td>
</tr>
<tr>
<td>8th grade</td>
<td>10</td>
<td>3.1</td>
<td></td>
<td>10</td>
<td>3.1</td>
<td>11</td>
<td>3.4</td>
<td>20</td>
<td>6.3</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>11</td>
<td></td>
<td>106</td>
<td>33.2</td>
<td>48</td>
<td>15</td>
<td>130</td>
<td>40.8</td>
</tr>
</tbody>
</table>

Table 2 reveals that most students (40.8%) chose the writing topic, “Write a story about events
that happened to a child who has just moved to a new neighbourhood”, which is the fourth writing
topic. This selection was followed by the topic, “Write a story about events that happened to a kitten
that was stuck in the street on a cold winter’s day” (33.2). In third place came the topic, “Imagine that
you are a bird. Write a story about the events that happened to you during journeys you made to
distant lands” (15%), while the topic, “Write a story about a good or bad day that happened at school
to a student who is the same age as you” came in last place (11%).

**6+1 Analytic Writing and Assessment Scale:** Developed by Education Northwest (2006) as
the 6+1 Trait Writing Model of Instruction and Assessment, the scale was adapted to Turkish by
Özkara (2007). The characteristics required for a good quality piece of writing are given under 7
headings. The headings included in the scale are ideas, organisation, voice, word choice, sentence
fluency, conventions and presentation. The products obtained from the students were assessed by the
two researchers, who gave them scores of 5, 3 and 1 by considering the criteria for the characteristics
included in the 6+1 Analytic Writing and Assessment Scale. According to the scale, the highest score that a story can obtain is 35.

Before beginning the implementation, for the reliability of the scale, 30 students from each grade level were asked to write a story. The stories were evaluated independently by two domain experts using the analytic writing and assessment scale. For inter-rater reliability, calculation was made using Cohen’s kappa coefficient. According to the findings obtained, a reliability coefficient of .89 was determined between the scores given by the two domain experts.

**Data Collection Process**

The research data were gathered from three state schools with a middle socioeconomic level in three different provinces during the spring semester of the 2015-2016 academic year. The data collection process was carried out by the researchers. Prior to the data collection process, the students were given information about the implementation. First of all, the students answered the questions included in the first section of the story writing form. Next, the story writing topics included in the second part of the form were read aloud by the researchers. The students were asked to choose one of these topics and indicate their choice on the form. The students were given a period of 25 minutes and asked to write a story on the topics they had chosen. The data collection lasted two weeks.

**Data Analysis**

Data were collected from a total of 330 students for the study. By performing outlier analysis following the initial examination, the data took their final form with 319 students. During the scoring process for the stories, firstly, the researchers gave separate scores independently of each other and then the obtained data were compared. After comparisons of the scores, the cases on which the researchers disagreed were reviewed, and the researchers scrutinised their analysis until they reached agreement on conflicting cases. Reliability of the study was calculated using the formula Reliability = Number of Agreements / (Number of Agreements + Number of Disagreements) X 100, and it was seen that reliability was enabled with a 90% rate of agreement. According to this formula, values of 70% and over are accepted as adequate (Miles & Huberman, 1994).

For analysis of the data obtained during the research, the SPSS 16.0 statistical software program was used. The stories were evaluated in two dimensions, namely quantitatively and qualitatively. In the quantitative dimension, analysis was made according to whether students had written a title for their stories, the number of paragraphs in their stories, and the number of words that they used in their stories. In the analysis of these data, frequency (f) and percentage (%) distributions were calculated. In the qualitative dimension, the state of inclusion of the story features in the stories the students had written was examined. The quality of the stories was analysed according to the features included in the “6+1 Analytic Writing and Assessment Scale” (ideas, organisation, voice, word choice, sentence fluency, conventions and presentation). Each characteristic was given a score of 5, 3 or 1 depending on its inclusion in the story. The conformity of the data to normal distribution was examined from the descriptive statistics and parametric test assumptions. Arithmetic means, standard deviation values, skewness and kurtosis coefficients for the story writing scores were taken into consideration. The measures of central tendency and normality values for the story writing scores are shown in Table 3.

**Table 3. Measures of Central Tendency and Normality Values for Story Writing Scores**

<table>
<thead>
<tr>
<th>Grade</th>
<th>n</th>
<th>Lowest</th>
<th>Highest</th>
<th>(X)</th>
<th>(Ss)</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>81</td>
<td>0</td>
<td>33</td>
<td>15.3</td>
<td>7.3</td>
<td>.018</td>
<td>-.972</td>
</tr>
<tr>
<td>5</td>
<td>66</td>
<td>7</td>
<td>35</td>
<td>19.2</td>
<td>7.1</td>
<td>.055</td>
<td>-.448</td>
</tr>
<tr>
<td>6</td>
<td>69</td>
<td>7</td>
<td>35</td>
<td>19.2</td>
<td>8.2</td>
<td>.409</td>
<td>-.619</td>
</tr>
<tr>
<td>7</td>
<td>52</td>
<td>7</td>
<td>35</td>
<td>18.6</td>
<td>6.5</td>
<td>.216</td>
<td>-.317</td>
</tr>
<tr>
<td>8</td>
<td>51</td>
<td>7</td>
<td>35</td>
<td>19.6</td>
<td>7.9</td>
<td>-.249</td>
<td>-.828</td>
</tr>
</tbody>
</table>
Examination of Table 3 reveals that according to grade level, skewness and kurtosis values for story writing scores range between -1 and +1, and that therefore, distribution is normal. The test results for homogeneity of variance are given in Table 4.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>sd1-sd2</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story Writing</td>
<td>4-314</td>
<td>1.00</td>
<td>.40</td>
</tr>
</tbody>
</table>

According to Table 4, the results of Levene’s test show that there are no significant differences between groups in distribution of error variances of the dependent variables (F=1.00, p>.05), and that therefore, the variances are homogeneous. The normal distribution variances of the data were examined, and since normal distribution was observed, the scores for the features of the stories and the number of words in the stories were calculated with the two-way ANOVA test according to grade level and gender.

**FINDINGS**

In this section, findings obtained from the analysis of the research data are presented in line with the research questions.

1. **Findings Related to the First Research Question**

Findings related to the research question about the extent to which elementary school (4th-8th grade) students used a title in their stories according to the grade level variable are given in Table 5.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Title</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>4th grade</td>
<td>68</td>
<td>84</td>
<td>13</td>
</tr>
<tr>
<td>5th grade</td>
<td>52</td>
<td>78.8</td>
<td>14</td>
</tr>
<tr>
<td>6th grade</td>
<td>57</td>
<td>82.6</td>
<td>12</td>
</tr>
<tr>
<td>7th grade</td>
<td>27</td>
<td>51.9</td>
<td>25</td>
</tr>
<tr>
<td>8th grade</td>
<td>20</td>
<td>39.2</td>
<td>31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>224</strong></td>
<td><strong>70.2</strong></td>
<td><strong>95</strong></td>
</tr>
</tbody>
</table>

As shown in Table 5, it was determined that 224 (70.2%) of the students participating in the study wrote a title for their stories, while 95 (29.8%) of students did not write a title. Considering grade levels, it can be seen that the fourth grade was the grade in which students used a title the most (84%), while the eighth grade was the grade in which students used a title the least (39.2%). It is seen that as grade level increased, the case of students’ using a title in their stories decreased.

2. **Findings Related to the Second Research Question**

Findings related to the research question about the extent to which elementary school (4th-8th grade) students used paragraphs in their stories according to the grade level variable are given in Table 6.
Table 6. Findings Related to Extent to which Elementary School Students Used Paragraphs in their Stories

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>One paragraph</th>
<th></th>
<th>Two paragraphs</th>
<th></th>
<th>Three or more paragraphs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>4th grade</td>
<td>71</td>
<td>87.7</td>
<td>4</td>
<td>4.9</td>
<td>6</td>
<td>7.4</td>
</tr>
<tr>
<td>5th grade</td>
<td>56</td>
<td>84.8</td>
<td>6</td>
<td>9.1</td>
<td>4</td>
<td>6.1</td>
</tr>
<tr>
<td>6th grade</td>
<td>53</td>
<td>76.8</td>
<td>6</td>
<td>8.7</td>
<td>10</td>
<td>14.5</td>
</tr>
<tr>
<td>7th grade</td>
<td>42</td>
<td>80.8</td>
<td>2</td>
<td>3.8</td>
<td>7</td>
<td>15.4</td>
</tr>
<tr>
<td>8th grade</td>
<td>40</td>
<td>76.5</td>
<td>2</td>
<td>3.9</td>
<td>10</td>
<td>19.6</td>
</tr>
<tr>
<td>Total</td>
<td>261</td>
<td>81.8</td>
<td>20</td>
<td>6.3</td>
<td>38</td>
<td>11.9</td>
</tr>
</tbody>
</table>

According to Table 6, it is seen that that 261 (81.8%) of the students participating in the study formed a single paragraph in their stories, while 38 (11.9%) students wrote three or more paragraphs, and 20 (6.3%) students wrote their stories with two paragraphs. When grade levels are considered, it can be said that the grade in which students completed their stories with a single paragraph the most was the fourth grade (87.7%), while the number of students in eighth grade who completed their stories with three or more paragraphs was greater than that in the other grade levels (19.6%).

3. Findings Related to the Third Research Question

Findings related to the research question about the total number of words found in the elementary school (4th-8th grade) students’ stories according to the gender and grade level variables are given in Table 7.

Table 7. Arithmetic Mean and Standard Deviation Values for Number of Words in Elementary School Students’ Stories

<table>
<thead>
<tr>
<th>Grade</th>
<th>Gender</th>
<th>N</th>
<th>Arithmetic Mean (X)</th>
<th>Standard Deviation (SS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Female</td>
<td>41</td>
<td>120.951</td>
<td>37.823</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>40</td>
<td>98.650</td>
<td>45.977</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>81</td>
<td>109.938</td>
<td>43.263</td>
</tr>
<tr>
<td>5</td>
<td>Female</td>
<td>29</td>
<td>142.862</td>
<td>47.294</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>37</td>
<td>117.270</td>
<td>44.841</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>66</td>
<td>128.515</td>
<td>47.339</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
<td>40</td>
<td>163.725</td>
<td>39.563</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>29</td>
<td>121.310</td>
<td>43.593</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>69</td>
<td>145.898</td>
<td>46.097</td>
</tr>
<tr>
<td>7</td>
<td>Female</td>
<td>22</td>
<td>186.863</td>
<td>53.243</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>30</td>
<td>119.700</td>
<td>46.470</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52</td>
<td>148.115</td>
<td>59.311</td>
</tr>
<tr>
<td>8</td>
<td>Female</td>
<td>22</td>
<td>177.954</td>
<td>52.004</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>29</td>
<td>121.551</td>
<td>48.313</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>51</td>
<td>145.882</td>
<td>56.911</td>
</tr>
</tbody>
</table>

Examination of the values included in Table 7 reveals that when the total number of words written by the students in their stories is considered on the basis of gender, female students used a greater number of words than male students in all grade levels. When examination is made on the basis of the grade level variable, it is seen that as grade level increased, the total number of words used by students in their stories also increased.
Table 8. Two-Way ANOVA Results Related to Grade, Gender and Total Number of Words

<table>
<thead>
<tr>
<th>Variable</th>
<th>sd</th>
<th>F</th>
<th>p</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>4</td>
<td>10.315</td>
<td>.00</td>
<td>.118</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>67.821</td>
<td>.00</td>
<td>.180</td>
</tr>
<tr>
<td>Grade*Gender</td>
<td>4</td>
<td>2.750</td>
<td>.02</td>
<td>.034</td>
</tr>
<tr>
<td>Error</td>
<td>309</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 8, as a result of the two-way ANOVA test that was performed, when the total number of words used by students in their stories (5 grades X 2 genders) was compared, a significant difference between scores was determined with regard to grade, gender and the joint effect of grade*gender [$F_{(S)}= 10.315$, $p=.00$; $F_{(C)}= 67.821$, $p=.00$; $F_{(S*C)}= 2.750$, $p=.02$). That is, as grade level increased, the number of words used by students in their stories increased and female students used a greater number of words than male students in their stories. Furthermore, the interaction between grade and gender also had a significant joint effect on the total number of words ($p<0.05$).

The graph showing the mean total numbers of words written by students in their stories according to grade level and gender is presented in Figure 1.

![Figure 1. Development of number of words used in stories according to grade level and gender](image)

When Figure 1 is examined, it is seen that the mean total number of words used by the elementary school children in their stories according to grade level and gender steadily increased in female students up to seventh grade, whereas it decreased in eighth grade. Considering male students, however, it is seen that a large improvement/increase in the number of words did not occur, although there was an improvement, albeit small, as grade level increased. When the graph is examined as a whole, it can be seen that in terms of the number of words used in their stories, female students were better than male students at all grade levels.

4. Findings Related to the Fourth Research Question

Findings related to the features (ideas, organisation, voice, word choice, sentence fluency, conventions and presentation) of elementary school (4th-8th grade) students’ stories according to the gender and grade level variables are given in Table 9.

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According to the values included in Table 9, when the scores obtained from the “6+1 Analytic Writing and Assessment Scale” are evaluated in terms of gender, it can be said that female students’ mean scores are higher than those of male students at all grade levels. When examined on the basis of the grade level variable, it is seen that the highest scores belong to female students in eighth grade.

Table 9. Arithmetic Mean and Standard Deviation Values for Quality of Elementary School Students’ Stories

<table>
<thead>
<tr>
<th>Grade</th>
<th>Gender</th>
<th>Ideas (X) (Sd)</th>
<th>Organisation (X) (Sd)</th>
<th>Voice (X) (Sd)</th>
<th>Word Choice (X) (Sd)</th>
<th>Sentence Fluency (X) (Sd)</th>
<th>Conventions (X) (Sd)</th>
<th>Presentation (X) (Sd)</th>
<th>Scale Total Score (X) (Sd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>F (41)</td>
<td>2.80 1.24</td>
<td>2.75 1.11</td>
<td>2.80 1.32</td>
<td>2.65 1.80</td>
<td>2.41 1.11</td>
<td>2.60 1.28</td>
<td>2.70 1.30</td>
<td>18.75 6.65</td>
</tr>
<tr>
<td></td>
<td>M (40)</td>
<td>1.87 1.13</td>
<td>1.80 1.24</td>
<td>1.90 1.41</td>
<td>1.85 1.16</td>
<td>1.77 1.09</td>
<td>1.32 .88</td>
<td>1.37 .92</td>
<td>11.90 6.40</td>
</tr>
<tr>
<td>5</td>
<td>F (29)</td>
<td>3.55 1.29</td>
<td>3.20 1.23</td>
<td>3.06 1.25</td>
<td>3.34 1.07</td>
<td>3.06 1.46</td>
<td>3.13 1.30</td>
<td>3.00 1.19</td>
<td>22.37 6.95</td>
</tr>
<tr>
<td></td>
<td>M (37)</td>
<td>3.00 1.24</td>
<td>2.62 1.31</td>
<td>2.29 1.26</td>
<td>2.56 1.06</td>
<td>2.29 .96</td>
<td>1.97 1.11</td>
<td>1.97 1.01</td>
<td>16.72 6.32</td>
</tr>
<tr>
<td>6</td>
<td>F (40)</td>
<td>3.05 1.53</td>
<td>3.00 1.50</td>
<td>2.82 1.46</td>
<td>3.15 1.23</td>
<td>3.00 1.28</td>
<td>2.70 1.60</td>
<td>2.90 1.46</td>
<td>20.62 6.88</td>
</tr>
<tr>
<td></td>
<td>M (29)</td>
<td>2.79 1.11</td>
<td>2.93 1.36</td>
<td>2.31 1.33</td>
<td>2.44 1.18</td>
<td>2.37 1.32</td>
<td>2.10 1.26</td>
<td>2.31 1.22</td>
<td>17.27 7.34</td>
</tr>
<tr>
<td>7</td>
<td>F (22)</td>
<td>3.27 1.66</td>
<td>3.00 1.23</td>
<td>3.00 1.06</td>
<td>2.81 .85</td>
<td>3.18 1.22</td>
<td>2.81 1.22</td>
<td>3.09 1.15</td>
<td>21.18 6.73</td>
</tr>
<tr>
<td></td>
<td>M (30)</td>
<td>2.80 .96</td>
<td>2.60 .96</td>
<td>2.46 1.38</td>
<td>2.20 1.12</td>
<td>2.46 1.38</td>
<td>1.86 1.13</td>
<td>2.33 1.09</td>
<td>16.73 5.81</td>
</tr>
<tr>
<td>8</td>
<td>F (22)</td>
<td>3.81 1.33</td>
<td>3.45 1.37</td>
<td>2.81 1.05</td>
<td>2.90 .97</td>
<td>3.09 1.30</td>
<td>3.36 1.77</td>
<td>3.54 1.10</td>
<td>23.00 6.61</td>
</tr>
<tr>
<td></td>
<td>M (29)</td>
<td>2.51 1.15</td>
<td>2.37 1.32</td>
<td>2.31 1.33</td>
<td>2.37 1.32</td>
<td>2.58 1.45</td>
<td>2.44 1.40</td>
<td>2.44 1.05</td>
<td>17.06 7.95</td>
</tr>
</tbody>
</table>

Table 10. Two-Way ANOVA Results Related to Grade, Gender and Features of Stories

<table>
<thead>
<tr>
<th>Variable</th>
<th>sd</th>
<th>F</th>
<th>p</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>4</td>
<td>5.163</td>
<td>.00</td>
<td>.063</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>42.402</td>
<td>.00</td>
<td>.121</td>
</tr>
<tr>
<td>Grade*Gender</td>
<td>4</td>
<td>.655</td>
<td>.62</td>
<td>.008</td>
</tr>
<tr>
<td>Error</td>
<td>309</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 10, as a result of the two-way ANOVA test that was performed, when the students’ stories (5 grades X 2 genders) were compared in terms of the features they included, a significant difference between scores was determined with regard to grade and gender separately, but a significant difference was not found according to the joint effect of grade*gender [F(5,29) = 5.163, p=.00; F(C)= 42.402, p=.00; F(S*C)=.655, p=.62]. That is, as grade level changed, the extent of the students’ inclusion of the story features also changed. Furthermore, female students’ use of the story features was greater than that of male students. However, it was seen that the interaction between grade and gender did not have a joint effect on the extent of inclusion of story features (p>0.05).

The graph showing the mean scores obtained by elementary school students from the “6+1 Analytic Writing and Assessment Scale” according to grade level and gender is presented in Figure 2.
Development of story quality (6+1 Analytic Writing and Assessment Scale) according to grade level and gender

Examination of Figure 2 reveals that scores obtained by elementary school students from the “6+1 Analytic Writing and Assessment Scale” according to grade level and gender increased in both genders until fifth grade. In the first year of secondary school (fifth grade), it is seen that female students’ scores decreased but that an increase occurred in male students’ scores. Between sixth and seventh grades, however, scores increased in female students but decreased in male students. In the final years of secondary school (seventh and eighth grades), it is seen that students’ scores continued to increase in both genders. When the graph is examined as a whole, it can be seen that the scores obtained by female students from the “6+1 Analytic Writing and Assessment Scale” were higher than those of male students at all grade levels.

CONCLUSION AND DISCUSSION

In this study, which aimed to examine story writing skills of elementary school students (4th-8th grade), the extent of using a title, paragraphing, total number of words and story features in students’ stories were examined according to students’ grade level and gender. In the stories written by the students, first of all, the extent to which they used a title was examined. It was concluded that over half (70%) of the students used a title in their stories. Considering the grade level variable, it was seen that the grade in which students used a title the most was the fourth grade, while the eighth grade was the grade in which students used a title the least. It was concluded that as grade level increased, the frequency of using a title decreased. This situation shows similarity with the results of the study by Arıcı and Ungan (2008), in which they evaluated secondary school students’ written narratives.

Secondly, the organisation of paragraphs formed by the students while writing their stories was examined. It was seen that the great majority of students (82%) created their stories with a single paragraph, and that even if the number of words used in their stories changed, the paragraphing (single paragraph) remained the same. In the study conducted by Duran and Yılmaz (2019) at elementary...
school level, it was concluded that fourth grade students’ paragraph knowledge in the stories they wrote was inadequate. In studies carried out with secondary school students, too (Ari, 2010; Bahşi & Sis, 2019), it was reported that students were unsuccessful in forming paragraphs in their stories. In Ari’s (2010) study related to assessment of narrative texts written by sixth and seventh grade students, it was concluded that students generally wrote stories by using a single paragraph. In the study by Bahşi and Sis (2019), in which they examined fifth and eighth grade students’ levels of creating sentences, paragraphs and texts, it was also determined that students’ paragraphing skills were not at the desired level.

It was concluded that according to grade level and gender, the mean total number of words used in the elementary school students’ stories increased as grade level advanced, and that female students were ahead of males in this regard. In other words, the number of words used in the elementary school students’ stories showed a significant difference when considered in terms of gender, grade level and both variables together. Moreover, significant differences were also found between students at the same grade level in terms of the number of words they used in their stories. For example, in sixth grade, there was a student who wrote a story consisting of 39 words and another student who wrote a story made up of 324 words. This finding may be due to situations such as students’ individual differences and different writing skills. In some studies conducted in the literature, it is seen that word types and number of sentences are generally calculated rather than comparisons based on grade level, and it is stated that the number of words is an important criterion for defining the quality of students’ writing (stories) (e.g., Cameron, et al., 1995; Nelson & Van Meter, 2007).

When the stories written by the students were examined in terms of quality, it was found that the separate effect of the grade and gender variables was significant, but that the joint effect of the two variables together was not significant. When the elementary school students’ story features (ideas, organisation, voice, word choice, sentence fluency, conventions and presentation) were evaluated according to grade level and gender, a graph that is non-linear but that shows development appeared. When the elementary school students’ stories were assessed according to the “6+1 Analytic Writing and Assessment Scale” on the basis of grade and gender, it was seen that their quality increased between fourth and fifth grade in both genders, that between fifth and sixth grades, it increased in male students but decreased in female students, that between sixth and seventh grades, it increased in female students but decreased in male students, and that between seventh and eighth grades, it increased in both groups. In general, in terms of inclusion of the story features, it is seen that female students were at a higher level than male students at all grade levels. This finding corresponds with the findings of research examining the effects of gender on story writing performance (Şimşek, 2000; Pearson, 2007; Bölükbaş, 2006; Arıcı & Ungan, 2008; Ari, 2010; Bağcı, 2011; Yalınkılıç, 2010; Kaynaş & Amlan, 2015; Özkan & Karasakaloğlu, 2018; Akyol & Aktaş, 2018; Ulu, 2019; Duran & Yılmaz, 2019).

It was concluded that in terms of story features, the students were most successful in the idea generation category, while the area in which they were weakest was conventions. This finding of the study differs from the previous research findings made by Eğilmez and Berber (2017). As a result of their study, in which they examined fifth grade elementary school students’ story writing skills, Eğilmez and Berber (2017) determined that the area in which students were most successful when writing stories was the “language and expression” dimension, while the area in which they had the most difficulty was the “content” dimension, which included the story elements. In the conducted studies, it is stated that students placed emphasis on the quantity of their written texts rather than on their quality (Kirmızı & Beydemir, 2012; Tabak & Göçer, 2013; Yekeler, 2015). Moreover, a need is felt for serious writing instruction in order to obtain texts in which the ideas that are created do not repeat themselves or consist of random combinations, and the main idea is supported by auxiliary ideas (ideas); in which introduction, development and conclusion sections are included, and there is a title that is appropriate for and specific to the text and that reflects the main idea (organisation); in which the students are not indifferent to the topic (voice); which is easy to understand by including appropriate words (word choice); in which the writing is compelling and the reader is not bored while reading (sentence fluency); in which the rules of grammar are observed (conventions); and in which the handwriting is legible (presentation).
When the findings of the study are evaluated in general, it is seen that according to grade level, the increase in scores and number of words in the students’ story writing performances showed a non-linear development. Since the students’ writing experience increased as grade level increased, they had an understanding/belief that they would write better stories. However, with regard to the Turkish Curriculum (2019), it is seen that the learning outcomes related to students’ story writing tasks do not show an improvement even though grade level increases, and that the same things are emphasised with different expressions. Furthermore, rather than expressions related to the content or quality of the stories, quantitative features are at the forefront (e.g., the 7th grade learning outcome: “[students] will specify a title appropriate to the content of what they write”; 8th grade learning outcome: “Students will be enabled to design realistic or imaginary items according to the type of expression and topic, create a coherent time and space fiction, and include exposition, conflict and resolution sections”).

Studies conducted in our country reveal that with regard to writing, students have many deficiencies in areas such as spelling and punctuation, planning, writing a title suited to the text, paragraphing, and sentences (Alkan, 2007; Ayyıldız & Bozkurt, 2006; Kirbaş, 2006; Arıcı & Ungan, 2008). Indeed, in the report published by the Ministry of National Education (MoNE) in 2020, it is seen that with regard to the results of the Turkish Language Exam for the Four Skills, the scores obtained by students in the writing skill were lower than the scores obtained in the other language skills (reading, speaking and listening). In a pilot study in which 1850 seventh grade students participated, it was seen that in the exam for determining writing skills, which also included a story writing task, students’ writing achievement was very low. This situation supports the idea that writing instruction given to students is inadequate. The lack of a detailed and progressive story writing instruction that takes grade level into account has a negative effect on the development of story writing skills.

Recommendations

Students’ writing activities can be structured as process-based activities aimed at developing their story qualities. For example, using example stories, students can be enabled to include an introduction, development and conclusion in the stories they create, thereby enabling them to associate paragraphing with these sections in their written texts. By not limiting their writing activities to a single topic, several story writing topics, which are within students’ field of interest and in which they will take pleasure from writing, can be included. Göçer (2010) stated that the path to making writing enjoyable for students lies through equipping them in the subject of writing methods and techniques and defining interesting writing topics that will activate their imaginations. A cross-sectional research model was used in this study. In terms of seeing the development of students’ story writing skills more clearly, a longitudinal research model which includes the same students can be used. Regarding the quality of students’ stories, the number of sentences can be calculated by examination in the grammar dimension. The quality of writing in their stories can be examined by analysing the number of words according to the variety and types of words used.

Limitations

The most important limitation of this study is that the research data were collected from different provinces (Ankara, Trabzon and Giresun). Furthermore, the study is limited to 319 elementary school students, and these students’ story writing performances are limited to the variables of grade level, gender, using a title, paragraphing and number of words. Moreover, the story writing performances were limited by the four topics that were given to the students.

REFERENCES


Experiences of Primary School with Students with Reading and Writing Difficulties*

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Abstract

This study aims to examine in-depth the practices and the problems of primary school teachers in identifying and eliminating reading and writing difficulties. The current study employed phenomenology method, one of the qualitative research designs and the data of the study were collected through observation and interview techniques. Criterion sampling, one of the purposeful sampling methods was utilized in determining study group. Six primary school teachers were selected in accordance with the determined criteria to collect the interview data. To collect observation data, 3 primary schools were selected and a total of 16 hours of observation was made. According to the findings, most of the teachers did not receive education about identifying students with reading and writing difficulties, conducting studies with these students, and preparing materials, activities, and etc. suitable for them. Moreover, primary school teachers expressed that although there were some disadvantages of inclusive education, students with reading and writing difficulties should continue their education in inclusive classes. However, the necessity of providing supplementary support to these students in addition to inclusive education was frequently emphasized. When the practices of primary school teachers with students having reading and writing difficulty were examined, it was observed that they generally used letter/syllable trinkets, gamification, letter cards, individual syllable work, memorization assignments, dictation work, story reading, drama and colored syllables. On the other hand, it was determined that methods, techniques or strategies that stated to be effective in the literature were either used very little or not at all in classrooms.

Key words: Reading Difficulty, Writing Difficulty, Specific Learning Difficulty, Phenomenology

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INTRODUCTION

Reading is the process of creating meaning from written texts. It is a complex skill which requires the coordination of inter-related knowledge sources (Anderson, Hiebert, Scott, & Wilkinson, 1985). Writing is defined as a complex action consisting of cognitive, kinesthetic and perceptual motor components (Rosenblum, Weiss, & Parush, 2003). Reading and writing skills are the basic requirements of the 21st century. Social media tools such as e-mail, messaging, facebook, etc. and other applications that require reading and writing skills are now widely used for communication. Individuals now frequently use reading and writing skills to read or take notes on billboards, vehicles, medicine and food boxes in their daily lives (Graham & Hebert, 2001; Bayraktar, 2013).

Reading and writing skills seriously affect the education life of individuals. Reading and writing skills form the basis for other courses such as Social Studies, Science and Mathematics in addition to Turkish Language lessons (Baştuğ & Demirtaş Şenel, 2019; Yılmaz, 2019), and students who cannot develop these skills may not succeed in most of the other courses (Akyol, 2018). In addition, problems with reading and writing can negatively affect students not only academically but also socially (Yıldız, 2004). For this reason, it should be ensured that every student who studies at primary school gains these skills at an adequate level, and in the event of a problem, the support of all stakeholders (family, special education teacher, school administrator, lecturer, etc.) should be taken to solve the problem.

Although reading and writing skills have such a great importance in the lives of individuals, students who have problems in acquiring and using these skills effectively can be seen in every school. Thus, it is especially important for Primary school to know what the reading and writing difficulties are and what the characteristics of students who have this problem are. Yılmaz (2019) defines reading difficulty as a student's reading skill below expected despite having a normal or higher intelligence level, having appropriate teaching conditions and socioeconomic level, and not having a physical impairment such as sight, hearing, etc. (p.25). In students with reading problems, mistakes can be seen in reading too fast or too slowly, using gestures and mimics excessively or too little, not paying attention to punctuation marks, repeat, pause, mispronounce, add, skip, finger follow, shuffle, flip, spelling, reading word by word, murmur, misreading (Taşkaya, 2017, p.235-236). Difficulty in writing is the problem of not being able to write the shapes that make up the handwriting in the appropriate size, irregularly or at an angle. Problems such as holding the paper in the wrong position, wrong wrist position, slow writing and getting tired quickly, not being able to use the space on the paper, not being able to fully form the words, skipping, not leaving appropriate spaces between letters and words can be seen in students with writing difficulties (Doğan, 2012, p. 24).

Students who have problems in reading and writing develop a negative attitude towards reading and writing because they cannot overcome these problems after a while. Because of this negative attitude, students avoid works that require reading and/or writing, thus they fall behind their peers academically. In addition to teacher support, effective methods are needed to overcome these problems of students. Teachers should evaluate the areas in which these students lack, using formal or informal tools, and decide on the most appropriate method for them (Akyol & Sever, 2019). In studies to be conducted with students who have problems in reading and writing, activities such as using different senses such as vision, hearing and touch, doing attention and memory studies, developing motor skills, supporting the development of concepts and thoughts as well as other language skills (listening, speaking, etc.) should be included. Therefore, teachers should be made experts in this field so that they can overcome all these efforts. Teachers who specialize in this subject will become more competent in identifying the shortcomings of the students, designing an education to eliminate this deficiency, and evaluating the student (Koç, 2012, p.2-3). However, although teachers have such a great importance in solving reading and writing problems, they have difficulties in identifying and solving the problems (Ketenoğlu Kayabaşı, 2019; Kuruyer & Çakiroğlu, 2017).

The incomplete or insufficient knowledge of teachers about detecting and overcoming reading difficulties causes them to misunderstand the concept of learning disability and prepares an
environment for them not to know how to guide these students (Foreman-Sinclair, 2012). At this point, when the relevant literature was examined, it was determined that teachers and lecturers did not have sufficient information about children with learning disabilities, they could not define learning disabilities, their knowledge about learning disabilities was limited and they could not guide students. (Aladwani & Al Shaye, 2012; Altun & Uzuner, 2016; Altuntaş, 2010; DeSimone & Parmar, 2006; Doyran & Canca, 2013; Ghimire, 2017; Kirby, Davies, & Bryant, 2005; Moothedath & Vranda, 2015; Saravanabhavan & Saravanabhavan, 2010; Sezer & Akın, 2011; Shetty & Rai, 2014; Yangun, Yangun, Önder and Şavlıg, 2016). However, when the studies on the subject are examined, it is seen that in order to overcome these problems, methods and techniques such as repetitive reading, echo reading, pre-listening to the paragraph, harmonious reading, peer reading, choral reading, word box strategy, reading theater as well as individual reading-writing exercises, large and small muscle exercises to improve writing skills, sitting on the desks in a proper position, keeping the notebook correctly, studies on the way of holding the pencil, copying and dictation exercises have been carried out and successful results have been achieved in majority of them (Akyol & Sever, 2019; Eber & Miller, 2003; Kaya, 2016; Ketenoğlu Kayabaşı, 2019; Kodan, 2016; Kuşdemir, Kurban & Bulut, 2018; Meyer & Felton, 1999; Yıldız, 2013; Yüksel, 2010).

Primary school have a great role in the acquisition and development of reading and writing skills. Therefore, it is the primary school who are the first to encounter students who have problems with this issue, work with them or direct them to relevant places. On the other hand, since school is the environment where students spend the most time after their families, it can be said that classroom teachers are the most influential people after families. Thus, it is required that how primary school identify students who have problems with reading and writing, what the characteristics of these students are, what kind of work they do to solve students’ problems, how successful they are, whether they received an education in identifying students’ problems, doing studies and elimination of the same, and what their recommendations to other teachers or prospective teachers about these students are. In this direction, it was tried to determine in the study what the current practices are about students who have problems in reading and writing, whether there are methods/techniques/strategies that have been found in the literature and proven effective in these practices, and what the deficiencies are. In addition, it was aimed to determine the teachers’ opinions, recommendations and expectations on this subject.

**METHOD**

**Study Model**

In this study, since it was aimed to determine the opinions of primary school about students with reading and writing difficulties by using their experiences, phenomenology, which is one of the qualitative research designs, was used. With this qualitative research method, it is tried to discover what individuals know, what they do, what they feel or think by making observations and interviews or by analyzing documents (Patton, 2018, p. 145). Phenomenology, a qualitative research design, “focuses on phenomena that we are aware of but do not have an in-depth and detailed understanding”. In fact, we encounter these phenomena in different ways in daily life. However, although we have encountered facts, we cannot fully understand them. Phenomenology appears as the most appropriate design for studies aiming to investigate these phenomena (Yıldırım & Şimşek, 2016, p. 69).

**Working Group**

Criterion sampling, which is one of the purposeful sampling types, was used to determine the study group of the study. Since the opinions of teachers about students with reading and writing difficulties will be taken, the elected classroom teachers should have encountered and worked with such students. Therefore, criterion sampling was used in the study to obtain rich data.
In purposeful sampling, rich data sources are determined in line with the aims of the study planned by the researcher, and these sources, which are rich in information, are studied in detail (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2014). In the criterion sampling type, the basic understanding is to form a study group by taking into account the criteria determined beforehand or formed by the researcher based on the study and to carry out the study with this group (Yıldırım & Şimşek, 2016).

In this context, the researchers established the criteria of (1) "having a student with reading or writing difficulties before", (2) "teaching for at least five years" and (3) "being a primary school" and determined 6 primary school as participants. 2 of the participants are male and 4 of them are female. In addition, the researchers determined 3 primary schools to make observations within the framework of certain criteria. Then, 6 lesson hours in 2 classes and 4 lesson hours in 1 class with students having difficulty in reading and writing (total 16 hours) were observed.

Data Collection and Analysis

In the study conducted to determine the opinions of primary school about students with reading and writing difficulties, interview and observation forms were used as data collection tools.

According to Karasar (2017), interview is the name given to data collection through verbal communication. It is used as the shortest way to learn the opinions, knowledge, attitudes, behaviors, etc. of individuals on different subjects and their possible reasons. Observation “defines the process of collecting the data needed in the study by focusing on certain targets such as human, society or nature and monitoring it with the naked eye or by using a tool” (Büyüköztürk et al., 2014, p.140).

The researchers prepared the interview and observation form by first examining the conceptual framework and sent the forms to three faculty members with a doctorate in classroom education and a lecturer with a special education doctorate for expert opinion. In line with expert opinions, the forms were finalized. Then, face-to-face interviews were made with 2 teachers for the preliminary application and the expression defects, unclear parts or differently understood parts in the forms were corrected.

During the study process, all participants were asked whether they allow voice recording. Three of the participants gave permission for audio recording. Since other three responded as "It would be better not to take it", no audio recording was taken and notes were taken during the interview process. The interviews were generally conducted in an environment that the principal deemed appropriate. In total, 50 minutes of interviews were conducted with teachers (3 people) who allowed voice recording. All sound recordings were carefully transcribed and checked. Then, 3 interview data, which were noted, were transferred to the computer environment. Also, observations were made during the study process. A total of 16 hours (6+6+4) of observations were made in three different primary schools. Observation data were likewise transcribed and transferred to computer media.

Within the scope of the study, the data obtained through the interviews were transferred to the computer media and analyzed by content analysis. The main purpose in content analysis is to reveal the concepts and principles that can explain the data obtained. For this purpose, firstly, the collected data is conceptualized. Then, it is organized in a logical way according to the concepts formed and the themes that explain the data are obtained (Yıldırım & Şimşek, 2016). The data set prepared in this direction was coded separately for each teacher. While coding, the aims of the study were taken into account. Then the codes obtained were tabulated and the themes were determined by working on this table. Finally, the findings were interpreted in line with the codes and themes and supported with the data obtained from the observation technique. Also, the teachers interviewed were given a code name, and the observed students were given a different name, and their information was kept confidential.
Studies Conducted to Ensure Validity and Reliability

Table 1. Measures taken for the validity and reliability of the study

<table>
<thead>
<tr>
<th>Validity and Reliability Type</th>
<th>Works carried out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Validity (Credibility)</td>
<td>Long-term interaction, Variation, Expert review</td>
</tr>
<tr>
<td>External Validity (Transferability)</td>
<td>Detailed description, Purposeful sampling</td>
</tr>
<tr>
<td>Internal Reliability (Consistency)</td>
<td>Examination by an experienced expert at all stages of the research</td>
</tr>
<tr>
<td></td>
<td>Examination of codes and themes by different researchers</td>
</tr>
<tr>
<td>External Reliability (Verifiability)</td>
<td>Transferring and saving data to computer environment, Recording of data with a voice recorder</td>
</tr>
</tbody>
</table>

Yıldırım and Şimşek, adapted from Erlandson, Harris, Skipper and Allen (1993), (2016, p.277)

According to Table 1, researchers should stay in the field for a long time and make more than one observation in order to increase the internal validity of the study. The prolongation of the data collection process and its extension over time will also contribute to internal validity. For this reason, observations were made an average of 3 times in each school. Observations were made for a total of 16 hours. Also, care was taken to ensure that the interview data were face-to-face and an atmosphere of trust was created before the interview. Regarding internal validity, it was also aimed to obtain data with different methods and observation-interview techniques were used. Finally, expert opinions were taken from 4 individuals about the data collection tools and the research was examined in all dimensions by a faculty member who attended the first reading and writing teaching course and was experienced in qualitative research.

In order to ensure external validity, it is aimed to present the findings obtained clearly to the reader. Here, the concepts, themes, and direct quotations from the statements of the interviewees are presented to the reader. In this way, the validity of the data was tried to be ensured by detailed description. In the second step, purposeful sampling method was used in the study. Thus, it is aimed to reveal the variable characteristics of events and facts.

For internal reliability in the study, the creation of data collection tools, data collection, analysis, report writing process, etc., was examined by one expert faculty member whose name is not given in the study. In addition, the codes and themes were prepared by two individuals and were worked on and finalized. For external reliability, audio-recording or face-to-face interviews and observations made were transferred to the computer environment. Thus, other researchers were enabled to operate and examine the confirmation mechanism whenever they wanted.

FINDINGS AND INTERPRETATION

In this section, there are findings obtained as a result of interviews and observations. First, the findings collected by the interview technique were given and then the findings were supported by the data collected by the observation technique.

1. Findings on whether primary school were trained for reading or writing difficulties

In this title, the findings about whether the primary school received any training to solve these problems of students with reading and writing difficulties (course, seminar, in-service training, etc.), and if so, the content of the training were included.
Table 2. Information on whether or not class teachers receive training

<table>
<thead>
<tr>
<th>Participant</th>
<th>Whether or not to Receive Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1</td>
<td>I did not</td>
</tr>
<tr>
<td>P-2</td>
<td>I did not</td>
</tr>
<tr>
<td>P-3</td>
<td>I did (Training to diagnose dyslexia and dysgraphia)</td>
</tr>
<tr>
<td>P-4</td>
<td>I did (courses at the university, in-service training, seminar)</td>
</tr>
<tr>
<td>P-5</td>
<td>I did (Seminar)</td>
</tr>
<tr>
<td>P-6</td>
<td>I did (In-service training)</td>
</tr>
</tbody>
</table>

When Table 2 is examined, it is seen that 2 primary school did not receive training to solve the problems of students with reading and writing difficulties, while 4 teachers took a course on this subject during in-service training, seminars or university education. The training that only one of the four primary school received is more detailed than the others. The content of the training received by the participant is listed below:

- The importance of one-to-one, regular and continuous study,
- How are students diagnosed,
- How to be guided after diagnosis,
- What kind of applications are made?
- How to prepare materials for these types of students?

The other 3 teachers stated that training was generally related to the mentally disabled, autistic students and gifted students, but also the subjects related to students who have reading and writing difficulties, even if a little, were mentioned. P-4, one of the primary school, said, “There are some trainings we received at the university within the scope of the course. We also have in-service training. We took our special education seminars or counseling practices under subtitles within it. For example, in the special education seminar, it is under the name of general mentally disabled, autistic students, and then as a subheading of it, students with dyslexia problem. For example, we took 3 hours of a 20-hour course on this subject.” P-6 said “Generally, operations for gifted people were explained. In the other, there was a lot of emphasis on autism. Learning difficulty was not explained much.”

When the findings above are examined, it is seen that two of the teachers have not received any training, while the others do not receive sufficient training in determining students with reading and writing problems, working with these students, preparing materials, activities, etc. suitable for them, monitoring and evaluating their academic development. Today, it is very important to support teachers in this regard, as there is a high probability of having students with reading and writing problems in most of the schools.

In this part, the classroom teachers were also asked to recommend a content (in-service training, seminar, course, etc.) regarding the education to be given to students who have problems in reading and writing. Classroom teachers stated that instead of theoretical training, an education which is supported with concrete examples and prepared by taking the observed cases and events into account would be more beneficial. In addition, teachers stated that the problems of children should be determined together (family, counseling service, school administration, academic staff and RAM (Counseling Research Center)) based on these case studies and education should be given to these children according to their problems. One of the opinions received from teachers on this issue is given below:

P-1 stated that “Concrete examples, observed cases, events experienced should be brought to the education environment. Then, the problems of these children should be determined together and these children should be educated together. Teachers should be
informed about reading and writing assignments/exercises to be given. There are different types, they should be informed about it."

It is possible to encounter problems during the implementation phase even if the courses, seminars, in-service trainings or trainings given by experts at the university are easily understood in theory. For this reason, while preparing the educational content, enough attention should be paid to the application dimension. When the opinions of the teachers are examined, it will be understood that the application dimension of the given trainings should be emphasized, even if possible, they want to see what has been done gradually by doing joint studies on a student.

2. Findings on the process of determining students with reading and writing difficulties by classroom teachers

In this section, as a second step, the findings about how teachers identify these types of students are included. The codes obtained about how students are determined were basically evaluated within the framework of two themes.

Table 3. Problems seen in students in reading and writing

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with Writing Skill</td>
<td>Wrong writing</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Mixing up the direction of letters</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Skipping</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Having trouble combining letters or syllables</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Not paying attention to the lines in the notebook</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Not paying attention to spaces</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mixing up upper-case and lower-case letters</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Punctuation errors</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Forgetting the letter order while typing</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Inability to distinguish letters</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Inability to achieve hand-eye coordination</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Illegible writing</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Sloppy writing</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Problems with Reading</td>
<td>Misreading</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Adding</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Skipping</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Inability to distinguish letters</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Difficulty in making voices</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Inability to combine letters or syllables</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Slow reading</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Low self-confidence</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Forgetting</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Swapping letters/words</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Being nervous when given the task to read</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 3 lists the characteristics seen in students with reading or writing problems according to teachers’ opinions. Characteristics seen in students with writing problems were determined to be wrong writing (17%), mixing up the direction of the letters (17%), skipping (11%), having trouble combining letters or syllables (5%), not paying attention to the lines in the notebook (5%), not paying attention to spaces (5%), mixing up upper-case and lower-case letters (5%), punctuation errors (5%), forgetting the order of letters when writing (5%), inability to distinguish letters (5%), inability to provide hand-eye coordination (5%), illegible writing (5%), sloppy writing (5%) and characteristics seen in students with reading problems were determined to be wrong reading (19%), adding (13%), skipping (13%), inability to distinguish letters (13%), difficulty in making sounds (6%), inability to combine letters and syllables (6%), slow reading (6%) low self-confidence (6%), forgetting (6%), swapping letters/words (6%), being nervous when given a task to read (6%).
In addition, it was determined that classroom teachers took their own experiences, parents' and classroom teachers' opinions as a reference while determining students with reading and writing difficulties. Also, one of the classroom teachers stated that he/she had difficulty in identifying the students because he/she did not receive any training on this subject and that the main diagnosis was made by RAM (Counseling Research Center).

Some of the teachers' opinions about the above findings are given below;

**P-1** stated that “I made a decision with my experience, I did not give any guidance. I did literacy exercises as a criterion. He/she confuses the direction of letters in writing. He/she writes incorrectly. Not paying attention to punctuation, capitalization, letter or syllable spacing. In the same way, attention is paid to skipping, adding, and reading. Whether there is any sound he/she can not make is checked. His/her status on active, open and closed syllables is examined. For example, I worked with a 2nd grade child who reads open syllables correctly. But, he/she confuses letters”

**P-2** stated that “In his/her writing, he/she misses while writing what is written on the board in the notebook. For example, he/she will write words on the board. He/she was writing by looking at letters one by one. After that, he/she was forgetting what letter or word he/she was on. He cannot write in a complete line, you must see that notebook. After that, he/she cannot write exactly what is written on the board. His/her writings are constantly incomplete. You can’t read; he/she makes the letters a different. ”

The data obtained as a result of the observation regarding this part of the study are listed below.

"The teacher gave Kerim the task of writing on the board. He writes the letter very small. Skipping and misspelling is too much. The sizes of the letters are not the same. He cannot even draw the line straight. Also he is very slow"

“Emre also has a difficulty in writing. He is very slow and skipping and confusing is too much. He didn't pay attention to the line. Letters are formed incorrectly; sizes are not suitable. He writes both unwillingly and incorrectly.”

When the observation and interview data above are examined, it will be seen that in general, classroom teachers determine students in line with their knowledge and experience rather than a standard method or technique. The problems observed in students during reading and writing are decisive for teachers.

3. Findings regarding the educational environment of students with reading and writing difficulties

This section includes findings on whether students with reading and writing difficulties should receive education individually or through inclusive education.

When the findings were examined, it was seen that all of the teachers stated that students should receive inclusive education in normal classrooms. There are some advantages to study in regular classrooms according to teachers' views. They are:

- Peer teaching,
- Social development,
Positive communication skills,
Desire for success,
Empathizing with other students,
Benefiting from a positive classroom atmosphere,
Competing with other students and increasing study time to beat them.

On the other hand, the two interviewed teachers stated that additional studies are definitely needed to overcome the problems of these students although this type of students should be educated in the normal classroom with mainstreaming. In other words, according to the teacher's opinion, these students should receive support from their family or another person outside of normal school hours. Apart from the positive aspects of students studying in regular classes, there are some difficulties encountered. They are:

- Not being able to catch up with other students,
- Parents' dissatisfaction as a result of the difference, frequent repetitions of the teacher, slow reading and writing activities, teachers showing more interest in such students, etc.,
- Being nervous of teacher for this reason,
- The student who fails in reading and writing tasks being reacted by others and not getting on well with friends,
- Difficulty to deal with such students due to crowded classes,
- Other students teasing, laughing while reading or writing.

Some of the opinions of the teachers about the above-mentioned findings are listed below;

**P-1** stated that “If it is provided with family support, mainstreaming is better, otherwise they should benefit from it, the teacher is not enough. Because if the child doesn't get enough support, he/she can't keep up with other students. Other families don't want him/her. The teacher becomes nervous. The child is being oppressed. He/she is at odds with his friends"

**P-2** stated that "When he/she is educated with his/her own class, he/she develops socially. After that, his/her communication with his/her friends would be better. He/she grows better, I think he/she would see from his/her friends, gets help from them while playing games, while he/she is doing lessons. Children already helps. They help each other. He/she should be in his class to me. He/she should not be excluded"

**P-3** stated that “Let me say this. This is my personal opinion. Yes, he/she should be in the classroom, but additional work should be done. So I think an extra work needs to be done outside of school. I think that this process can be corrected, even if little, over time by accelerating by looking at other friends, correcting this issue with other friends, for example imitating them or sampling them."

Some of the observation data made by the researcher on this subject are given below;
“His friends get angry during their writing assignments. "Kerim, write big", "what did you write", "I don’t understand". He gets excited when the students react. It was noticed that his hand was shaking. He uses a lot of erasers, lags behind. He tries to write fast under the pressure of his teacher and his friends. However, this time the errors are increasing.

During reading, he reads so slowly that other students forget what he said at first. Other students laugh after a while because they do not understand anything during the reading task. The students are breaking away from the lesson. After a while there is humming. While reading, he forgets his place, constantly turns to the beginning, what he read is not understood anyway. The classroom is adversely affected by this situation.”

“He looks at his friends' notebooks and makes corrections during the lesson. From time to time he asks them questions. His friends help him even though they sometimes respond wrongly. Kerim gets angry when it doesn’t.”

When the findings above were examined, it was emphasized that, students who have problems with reading and writing due to problems such as having different types of students in the classroom, time problem, not having enough information about the subject, etc., need additional support although mainstreaming education is supported by teachers. In addition, it is among the findings that these students experience some academic problems in the mainstreaming education process, they get reactions from their friends on different issues, they act more hesitantly and are emotionally affected by this situation.

4. Findings regarding the studies conducted to solve the problems of students with reading and writing difficulties

In this section, findings on what kind of studies the classroom teachers do with students who have reading and writing difficulties are included.

When the views of the teachers were examined, it was understood that trinkets in the form of letters/syllables, gamification, letter cards, individual syllable work, memorization assignments, dictation work, storytelling, drama, additional literacy exercises and colored syllables were used to solve students' problems. Some of the opinions of teachers on this subject are given below;

P-1 stated that “Reading is our priority; we focus on it. If he/she can, we try to take them together. We examine the letter groups from Group 1. We examine all the groups in turn. If there are any problems, we troubleshoot them according to the normal teaching schedule. We made the eye active by pasting the studied letters and syllables in his room, house and places he could see in the form of trinkets”

P-2 stated that “In the first grade, I used to call and have them read by dividing them into individual syllables. For example, I give them memorization assignments, simple memorization poems, rhymes, dictation, simple sentences, story readings, and home story assignments. But they get bored with the story quickly. Having small texts read and giving small texts for home. I did not do anything different; I generally had the whole class read by memorization, story reading, small texts, and the texts I gave one by one every day.”

P-4 stated that “while reading the words, we gave 5 sentences to other students and gave 10 sentences to him. We have letters and syllable books, we had him read 2 pages while others read 1 page. But we did it one to one. For example, while we were reading in the classroom, having him read one by one, we did it in a way that the student noticed his mistake by taking him with us and making eye contact. There are syllables in the color book; For
example, Ali's A is written in red and Li is written in green. We made such books used. So that he does not misread the letters and read them by separating syllables and making correct vocalizations."

Some of the observations made by the researcher on this subject are given below:

"I can say that I have not encountered any method or technique such as repeating reading, echo reading, Fernald, etc. Whatever the teacher asks or tells other children, does the same to Kerim. He/she gives the writing task. If he cannot write, he/she passes. He/she gives a reading task, if he cannot read, he does not stop and pass. While writing, he gives commands such as pay attention to the line, write carefully, write correctly, but he/she passes right away and does not care much. A special work plan is not applied to him. The education plan is arranged and carried out according to normal children. That is because there are many different types of students in the classroom. Foreign students (Syria, Afghanistan, Iran) were seated together in the row in front of the door (the lefmost row when looking against the classroom). The teacher becomes nervous because foreign students, Turkish students and students with literacy problems, such as Kerim, are in the classroom. He has difficulty to keep up with all of them"

"There is no strategy used. The teacher gave a reading task. Emre's reluctance is so obvious that although the lesson started for 15 minutes, he just opened the book and turned the pages reluctantly. He waited for a long time (40 seconds or so) before reading it, looking at the text. The teacher warned politely 5 or 6 times. The student read letter by letter, both reading with a very low voice and not being understood. Therefore, noise started in the classroom. Other students got angry and reacted "my teacher." He is reading the words incorrectly. Too much skipping, too much pause between words. Finally, other students reacted by saying 'we don't understand anything, my teacher.'

"The teacher usually asks the child to give additional work and complete it. The student has to do what is done in the school and often cannot complete the extra homework. In this case, the child has to go to breaks less often. Even if the teacher says you do what I said, do not write the blackboard, the child wants to write on the blackboard like his friends, this case tenses the child. The teacher cannot spare enough time for this student due to the class crowd"

When the findings of the study were examined, it was seen that although there were many techniques/methods/strategies for solving reading and writing problems in the literature (repeat reading, echo reading, choral reading, peer reading, Fernald technique, word box strategy… etc), most of these techniques were not included in practice. Rather, classroom teachers repeat the path they followed in the normal education period in their work with these students.

5. Findings regarding whether the problems of students with reading and writing difficulties have been solved.

In this section, the difficulties encountered in the process of working with students who have reading or writing problems and the findings about whether the students' problems are solved are included.

All of the teachers stated that students progressed more or less as a result of the studies. They listed the factors affecting the progress of students as family support, regular work, doing homework, and one-on-one work. Classroom teachers were asked how they noticed the developments in their
students. In general, they gave answers such as the increase in the reading speed of the students, the decrease in their mistakes, the visible improvement in their writing. Some of the opinions of teachers on this subject are given below;

**P-1** stated that “If the family reinforced it, if sufficient implementation was made, if there was no disrupt, there was no problem. Of course, there was a problem during holidays, when families could not make him/her read and write regularly and continuously.”

**P-2** stated that "For me, the memorization homework I gave home was useful. I said read small texts 5 times at home read 10 times and then I made them read in turn. I think they were useful in the whole class. A little better than before. We achieved some success."

**P-3** stated that "Since education is always there, I always say education is like a trivet, it is useless for me one of the three, the teacher, parent and student, is not good."

This section also includes findings on the difficulties encountered in the process of working with students who have reading and writing difficulties.

**Table 4. Difficulties encountered in working with students who have reading and writing difficulties**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems Caused by the Student</td>
<td>Students not wanting to write</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Students not wanting to read</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Reluctance to study</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Having a sense of failure</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Low self-confidence</td>
<td>2</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Being introverted</td>
<td>2</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Low motivation</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Being careless</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Failing to do homework on time</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Not being at the appropriate level of preparedness</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Problems Caused by the Family</td>
<td>The family's unawareness</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>Family not taking time</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Problems Caused by the Teacher</td>
<td>Teachers' desire to teach reading and writing as soon as possible</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Negative attitude of the teacher</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Problems Caused by Physical Conditions</td>
<td>Time shortage</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Working Environment</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Crowded classes</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Problems Caused by Other Students in the Classroom</td>
<td>Immigrant children</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>Other students getting bored</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>Negative intervention of other students</td>
<td>1</td>
<td>33.3</td>
</tr>
</tbody>
</table>

When Table 4 is examined, it will be seen that the difficulties that classroom teachers encounter while working with students who have reading and writing difficulties are basically gathered under 5 themes. These themes are problems caused by the student, problems caused by the family, problems caused by the teacher, problems caused by physical conditions, and problems caused by other students in the classroom.

Under the theme of problems caused by the students, it can be seen that the codes of students are not wanting to write (19%), students not wanting to read (14%), unwilling to study (14%), having a sense of failure (14%). Teachers' views on the subject are listed below;

**P-2** stated that “They are more reluctant compared to others. We are waiting for him for two hours to read a passage. Children are also bored. He has more difficulty, does not want to write, does not like. He writes more quickly and creates illegible, absurd, unclear
lines. But he likes math lesson, he is not bored. His favorite lesson is math. He does not like to read, does not like Turkish.”

P-4 stated that “The most obvious difficulties are that students laugh when they read incorrectly in the classroom. For example, the student is reading. When a better student reacts, the student says I don’t want to read. He has an introversion problem socially. Another self-confidence in terms of writing; I always write wrong, I read wrong I will not write; there is reluctance. There are problems with both self-confidence and willingness in the student's perspective”

Under the theme of family-related problems, there are codes that the family is unawareness (67%) and the family does not spare time (33%). An example of the opinions of these participants is given below;

P-2 “His mother just doesn’t have influence on him. His mother goes for cleaning. She doesn't have time; she can’t take care of him. There is also some problem with the father. He is not aware”

In the part of the problems caused by the teacher, it will be seen that the codes are the desire of teacher to teach literacy as soon as possible (50%) and the teacher's negative attitude (50%). Views of teachers on these codes are given below;

P-1 “The sharing of pictures and names of the first reader and the next readers puts children and families who cannot read in a rush and stress. Families engage in letter teaching without knowledge. This leads to erroneous learning in the teaching, combination or pronunciation of some letters.”

P-1 “When the attitude of teacher is motivating, his efficiency increases. If he/she gets angry, the student makes more mistakes with fear”

Under the theme of problems caused by physical conditions, it will be seen that the codes included are time shortage (50%), working environment (25%) and crowded classes (25%). Views of teachers on these codes are as follows;

P-5 “Time is very limited. Which one should I deal with? After all, I cannot dedicate myself to them...”

P-1 "If the working environment is not suitable, it can be distracting"

P-6 "Other schools being crowded, recently increasing immigration ..."

Finally, under the theme of problems caused by other students in the classroom, the codes included are immigrant children (33.3%), boredom of other students (33.3%) and negative interventions of other students (33.3%). Some of the opinions of teachers regarding these codes are listed below;

P-2 “We are waiting for him for two hours to read a passage. Children got bored.”

P-4 stated that “The most obvious difficulties are that students laugh when they read incorrectly in the classroom. For example, the student is reading. When a better student reacts, the student says I don't want to read.”

Some of the observation data obtained on this subject are given below:
"The teacher entered the classroom with the question "What are the features that distinguish us from other people?". Each student gave any answer, but Kerim never raised a finger and continued to deal with other things in the classroom. He plays with his notebook or book etc. It caught the attention of the teacher and he/she warned the student. However, Kerim continued to be interested in other things despite these warnings. Later, the teacher directed one of the questions he/she asked the classroom to Kerim. He/she asked him to stand up. The student answered the question correctly. But when the teacher gets angry with him or gets angry and says something, his classmates starts laughing. The student answered the questions of the teacher (3 out of 4) correctly. He expresses himself well. There is no speech disorder, word swallowing, speechlessness etc. But he is as if he was brought to class and held there by force.

There are students with very different levels in the classroom. Some of them answer the questions exactly, some incompletely and some cannot answer at all. Also, there are students who speak Turkish at different levels and who cannot speak at all. The teacher makes effort to make up for other students, but has a problem with sparing time. The teacher has trouble dealing with both Kerim and other students."

In the study, it was emphasized that students can progress when cooperation with the family is provided, one-to-one studies are carried out and the students fulfill their duties regularly. In addition, it is among the findings that students are unwilling to read and write, avoid working, are careless, have low motivation, and do not do homework on time. On the other hand, introversion, low motivation or low self-confidence are other important problems encountered in these students. In addition to these problems, some problems caused by family, teacher, physical conditions and other students in the classroom are other problems experienced while working with these students.

6. Opinions and recommendations of classroom teachers for students with reading and writing difficulties

1. Teachers want to teach reading and writing as soon as possible without complying with the normal teaching schedule, and are hasty in this regard. Thus, some students have problems in learning to read and write since each student's learning speed is different. Also, teachers should check the letters written by each student in the reading and writing teaching process and correct them immediately if there is any mistake. Otherwise, incorrect learning may cause permanent learning problems and confusion of concepts.

2. As stated before, classroom teachers expressed the need for practical training. It was emphasized that by examining the students who had reading and writing difficulties during the education, the problems should be determined together, the study plan should be formed and all the stages should be done in a practical way.

3. Although most of the students with reading or writing difficulties study in regular classes, their academic performance is behind other students. However, the teaching of the lessons in the classroom continues normally in spite of it. In other words, course or activity books, worksheets, etc. are entirely for other students in the classroom. If a student with reading and writing difficulties cannot benefit from these resources, the teacher moves on to the next topic without much attention and the deficiencies of the students increase exponentially. For this reason, materials, worksheets, activity samples, appropriate texts, etc. should be prepared for students with reading and writing problems and teachers should be able to access them easily.

4. As mentioned above, when these students fail in the classroom, other students may laugh, make fun of, or even get angry with them. In order to deal with this situation, the classroom teacher can give information to the students about the behaviors that should and should not be done in the classroom in other lessons. Other students can be told that there are things that every person does well or has difficulty doing.
CONCLUSION AND DISCUSSION

In this study, the experiences and practices of classroom teachers with their students with reading and writing difficulties were examined based on opinions and observations of the teachers. The data obtained in the study and the results of different studies on this subject are listed below.

First of all, in the study, it was examined whether the classroom teachers received training on reading and writing difficulties. Two of the participants stated that they did not receive training. Three participants stated that the training they received was generally related to the mentally disabled, autistic students, gifted students, and that the issues related to students with reading and writing difficulties were not emphasized much. In this case, the teachers have problems about how to determine and solve the reading and writing problem since they do not receive proper training. Similarly, the studies in the literature emphasized that teachers' knowledge of learning disabilities is inadequate and that they have conceptual misconceptions about the subject and the importance of increasing teachers' knowledge of the subject (Aladwani & Shaye, 2012; Altuntaş, 2010; Balcı, 2019; Başar & Göncü, 2018; Dapudong, 2013; Esen & Çiftçi, 2000; Schumm, Vaughn, Gordon & Rothlein, 1994). It is clear that qualified training on reading and writing difficulties will contribute to teachers academically. Teachers who progress academically can also feel competent professionally. Camadan (2012) stated that teachers are competent in preparing an individual education plan owing to in-service training and their self-efficacy perceptions have improved.

In the study, the methods of determining students with reading and writing difficulties were investigated. When classroom teachers identify students with writing difficulties, they refer to the methods such as misspelling, confusing letters, skipping, having trouble combining letters or syllables, not paying attention to spacing, confusing capital and small letters, remembering the order of letters when writing, not being able to distinguish letters, unreadable writing and when they identify students with reading difficulties, they refer to the methods such as misreading, adding, skipping, inability to distinguish letters, difficulty making sounds, combining letters or syllables, slow reading, swapping of letters/words. In their study, Can and Altuntaş-Yavuz (2017) found that the problems students face related to reading and writing are making letter errors while reading and writing, inverting, skipping, slow reading or writing, inability to focus, directional errors, unwillingness to read and write, having trouble following lines, wrong pencil holding. In his study, Kocaarslan (2013) found that students who had reading problems according to the opinions of classroom teachers had problems such as inability to establish cause-effect relationship, inability to understand what they read, inability to synthesize, not bringing the prior information to the reading environment, not being able to deduce and focus. Önder (2009), on the other hand, discovered in the study in which third-grade students wrote their writing problems that students had writing problems such as writing incorrect letters/suffixes, missing letters/syllables/words. When these results are examined, it can be said that they are in parallel with the results of our study. However, it would be more beneficial for teachers to evaluate and monitor reading and writing skills of students with standard tools rather than their own experiences and observations. Standard tests that can evaluate reading and writing skills of students will allow both to provide unity in practice and to compare different students (Kilmen, 2019).

Classroom teachers declared that students with reading and writing difficulties should study in the same class as their peers, but they should receive additional support. In the study of Koç (2012), teachers stated that these students should be sent to special education classes. This result contradicts the results of our study. However, the need for additional studies with such students outside of school is among the findings of the same study. This finding is similar to the results of our study. Also, in the study of Balcı (2019), teachers were asked whether the education should be given to students with dyslexia through mainstreaming or support education. According to the findings, the majority of teachers (38%) support an education in which both will be implemented. This finding is similar to the results of our study. It has been determined that students who have reading and writing difficulties receiving education with their peers who show normal development (within the scope of mainstreaming education) contribute positively to students in many ways (Rea, McLaughlin, & Walther-Thomas, 2002). It is possible to say that healthy friendship relationships established in regular
classrooms will protect the self-concept of students with learning difficulties (Shany, Wiener, & Assido, 2012), improve their social skills (Türkmenoğlu & Baştuğ, 2017) and increase their academic success.

The studies conducted by classroom teachers with students who have reading and writing difficulties were determined as letter/syllable trinkets, gamification, letter cards, individual syllable work, memorization assignments, dictation work, story reading, drama, additional literacy exercises, and colored spelling. According to the findings of the study conducted by Altuntaş (2010), classroom teachers do not conduct a special study for students. Only revision is carried out, additional time is given and studies that students can do are given. In his study, Balci (2019) asked teachers whether they applied a different program to students with reading problems than those applied to other students. According to the findings, all of the teachers stated that they do not know the educational methods for the educational needs of dyslexic students. When the opinions of the teachers in the content of the study are examined, it is seen that they do not apply different methods and there are many revisions and additional studies. Also, according to the findings of our study, classroom teachers stated as a result of their studies that they solved the problems of students who had difficulty in reading and writing, even if a little. When the related literature is examined, it will be seen that there are methods and techniques that have proven effective in minimizing reading and writing problems (Akyol & Kodan, 2016; Akyol & Sever, 2019; Aydın & Cavkaytar, 2018; Baydık, 2011; Dağ, 2010; Dinç, 2017; Ellis, 2009; Kodan, 2016; Kuşdemir, Kurban & Bulut, 2018; Roundy and Roundy , 2009; Therrien and Kubina, 2006; Yıldız, 2013; Yüksel, 2010). However, when the findings of the study are examined, it will be seen that the studies in the literature have no equivalent in the classroom, in other words, the theory is not reflected in practice. For this reason, the progress observed in students as a result of work of teachers is not at the desired level.

As the difficulties classroom teachers face when working with students who have reading and writing difficulties they stated problems caused by the student (students not wanting to study, unwilling to study, having a sense of failure, low self-confidence, being introverted, low motivation, being careless, etc.), problems caused by the family (family being unaware, family not sparing time etc.), problems caused by the teacher (desire of teacher to teach reading and writing as soon as possible, negative attitude of the teacher), problems caused by physical conditions (time constraints), problems caused by the working environment (crowded classes), and problems caused by other students in the classroom (immigrant children, boredom of other students, negative intervention of other students). In a similar study conducted by Ketenoğlu and Kayabaşı (2019), they divided the problems teachers experience while gaining reading skills to their students with reading difficulties and explained them under the headings of individual and environmental problems. Individual problems are absenteeism, motivational problems, indifference towards the lesson, inability to take responsibility, low tone of voice, slow reading, not knowing rules, forgetfulness, comprehension problems, talking too much, and belligerent attitude. Environmental problems are not getting family support and peer bullying. In a study conducted by Çoğaltay and Çetin (2020), according to the opinions of classroom teachers, the characteristics of students with special learning difficulties are low academic achievement, being backward in the academic field from their peers, late and difficult learning, remembering, perception, communication and motor skills. In addition, being careless and unwilling and low self-confidence are among the characteristics of these students. Finally, Avçoğlu (2012) stated in his study that although family participation is important for students with reading and writing difficulties, different problems arise in family participation.

REFERENCES


Pre-Service Teachers' Digital Literacy Levels, Views on Distance Education and Pre-University School Memories*

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Mus Alparslan Univesity

Abstract

Many studies are still ongoing on the possible effects of the Covid-19 Pandemic process on educational environments. With the decision to switch to distance education during the pandemic process, an important opportunity has emerged for rapid digital transformation in higher education. In this process, the relationships between the digital literacy levels of university students, their views on distance education and their pre-university school memories are curious. Therefore, the main purpose of this study is to examine the relationship between education faculty students' digital literacy levels and their views on distance education and their pre-university school memories. The research was carried out in the faculty of education at a state university in the 2020-21 academic year. The sample group consists of n = 234 (89 males; 145 females, mean age 21.7) pre-service teachers. Research data were collected online via Classroom. During the data collection process, one personal information form and three scale forms were used together. The return rate of the data collection tool is ~ 51%. Descriptive and relational analysis were used to analyze the collected data (p <.05). The findings, there are some significant and positive relationships between pre-service teachers' digital literacy levels, their views on distance education and their pre-university school memories. It has been revealed that students' digital literacy levels, their pre-university school memories and their views on distance education have significant effects in varying degrees. Some suggestions were made within the framework of the relevant literature for the results reached.

Keywords: School Memories, Digital Literacy, Distance Education and Online Learning, Pre-Service Teachers, 21st Century Abilities, Covid-19 Pandemic Process

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INTRODUCTION

For pre-service teachers, pre-university school memories form an academically important pre-experience in terms of future learning experiences. This pre-experience has several defining features for their future professional career. In terms of pre-service teachers, these determinants may have positive as well as negative effects in the future. According to Kaya (2018), pre-service teachers' future academic and professional understanding is not independent from their academic background / school memories (Kaya, 2018). This reality also plays an important role in the process of emerging teacher identities after pre-service teachers start their profession (Heikkilä, Uusiautti, & Määttä, 2012). Rothenberg (1994) emphasizes that school memories can be a remarkable way of providing insight into teachers' development and professional behavior. In this context, Arwas and Flum (2020) argue that the teacher-student relationship in past school memories has a long-term effect on students' identity formation.

Literature Review

In order to see the current situation on the subject more clearly, many studies of different types are encountered in the literature. For example, in a study conducted by Miller and Shifflet (2016) on primary school pre-service teachers, they revealed the power of early school memories for pre-service teachers.

Miller and Shifflet (2016) asked primary school pre-service teachers to write down their primary school memories and reflect on the meaning of these memories together with the course material. In this case, it was observed that the early school memories that the students had creating the teaching self they wanted and/or fear were effective. It has even been revealed that some pre-service teachers with negative school memories noticed some contrasts between these memories and the effective teaching practices learned in the lesson. Some pre-service teachers were able to define a more positive learning experience when they compared their past good school memories with current practices. So, it can be stated that studies on school memories have a high potential to gain a deep perspective on educational environments.

It is understood that school memories have important reflections on the social development of individuals. These reflections can pave the way for participant-oriented and historical thinking about the social dimensions of education (Lahelma, 2002; Tanggaard & Nielsen, 2013). Thus, an environment can be provided for the often-unheard voices of the daily life cycle at school. That is, it may lead to a special emphasis on the everyday and relational aspects of school education.

Sonu (2020), with a Foucaulty's point of view, drew attention to the fact that the analysis of school memories can shed light on the complex network of social problems, especially racism. In other words, school memories according to Meda and Viñao (2017); It can also be used to explore social perception of education and training. So, increasing research on school memories may reveal the effective social and cultural dimensions of the historical phenomenon. It can also help us identify the reasons behind some stereotypes / routines that still surround the school.

But, there are some studies in the literature that deal with school memories from the perspective of parents. For example, Räty (2010) sees parents' school memories as an experience-based component of their attitudes towards education. In this context, parents with positive school memories are more satisfied with their children's school life than those with negative school memories. Başaran and Yıldırım (2017) found that parents' school memories differ according to their education level. In this sense, it can be stated that the school memories of students' parents have a partial effect on the positive or negative formation of students' school memories.

Smith et al. (2003) found that especially students' negative school memories can affect their future professional lives. For example, students who have negative school memories of school bullying are at risk of future workplace victimization. It has even been suggested that students with
memories of school who are unable to cope with bullying or who try to make fun of bullying are at
greater risk in the workplace.

Today, it is possible to add university students' early acquaintance with technology among the
factors affecting studies on the importance of school memories for students. In this context, it is
necessary to consider the concepts of digital literacy and digital nativity, which are 21st century skills
(Arabacı & Polat, 2013; Nawaz & Kundi, 2010). It is a predictable situation that especially digital
literacy has become an important part of pre-university school memories among pre-service teachers,
as it is for students at other school levels in today's conditions.

Since 1924 in Turkey, the developments occurring in distance education is necessary to keep
in mind. In this process, there are changes in both technology and student structure in higher
education. Distance education, especially on the internet, has become popular (Akdemir, 2011). Thus,
the presence of a digital transformation in education in Turkey is accepted. In this respect, it is stated
that there is a great need for projects that will increase the digital literacy competence of students
(Karabacak & Sezgin, 2019). Because, as Zan et al. (2021) said, digital literacy skills come to the fore
for university students to have the digital literacy level that will meet the needs of the 21st century,
representing the qualified human resources of countries. Tejedor et al. (2020) point out that in the
century we live in, it is almost necessary to guarantee a set of skills and competencies that integrate
digital literacy into the existing higher education system in higher education.

It is observed that the digital transformation and digital literacy process in higher education
has accelerated further with the effect of the Covid-19 pandemic process. Especially in this period,
researches trying to examine the open and distance education process (Can, 2020; Durak, Çankaya &
İzmirli, 2020) are also common. Yet, in this process, according to List (2019), it is important to
examine the contexts that reveal the digital literacy of prospective teachers in more detail. In this
context, it has been observed that there are not enough studies to shed light on a possible relationship
between pre-service teachers' views on digital literacy and distance education and their pre-university
school memories.

This observation makes up the main motivation of this research. So, the purpose of this study
is to explore the relationships between pre-service teachers' views on digital literacy and distance
education during the pandemic process and their pre-university school memories. The main sub-
problems that the research seeks to answer are as follows:

- What are the pre-service teachers' digital literacy levels, their views on distance education
  and their pre-university school memories?

- Are there any significant relationships between prospective teachers 'demographic
  characteristics (gender, grade level, parents' educational status, number of siblings,
  registered program) and their digital literacy levels, their views on distance education and
  their pre-university school memories?

- Are there any direct relationships / effects between prospective teachers' digital literacy
  levels and their views on distance education and their pre-university school memories?

MATERIAL AND METHODS

Research Model

In this study, cross-sectional and relational scanning patterns were used together. The aim of
the cross-sectional survey is to reveal an instantaneous picture of the sample group (Özdemir, 2015).
The purpose of relational screening is to discover possible relationships between pre-service teachers'
digital literacy level, their views on distance education and their pre-university school memories. In
other words, it is to understand the nature of the relationship between these variables (such as whether there is a change together or what is its degree) (Fraenkel & Wallen, 2009; Karasar, 2005).

**The Population and Sample**

During the 2020-21 academic research universe constitute the faculty of education students who are at a state university in Turkey. The sample group of the study consists of n = 234 teacher candidates. The sample group was determined by appropriate / accidental sampling. This method of sampling is preferred because the sample can be selected from an accessible universe due to time, labor and money (Büyüköztürk & Diğ., 2017). The average age of the teacher candidates participating in the study is 21.7. The demographic information of the sample group is shared in Table 1.

**Table 1. Demographic Information of Participants**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Male</th>
<th>Female</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary mathematics</td>
<td>21</td>
<td>17</td>
<td>38</td>
<td>16.4</td>
</tr>
<tr>
<td>Science</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
<td>19</td>
<td>25</td>
<td>10.8</td>
</tr>
<tr>
<td>Pre-school</td>
<td>18</td>
<td>48</td>
<td>66</td>
<td>28.2</td>
</tr>
<tr>
<td>Guidance and psychological counseling</td>
<td>3</td>
<td>11</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Elementary school teacher</td>
<td>27</td>
<td>29</td>
<td>57</td>
<td>24.4</td>
</tr>
<tr>
<td>Social studies teacher</td>
<td>7</td>
<td>17</td>
<td>24</td>
<td>10.3</td>
</tr>
<tr>
<td>Turkish language teaching</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Grade Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st grade</td>
<td>48</td>
<td>71</td>
<td>119</td>
<td>50.9</td>
</tr>
<tr>
<td>2nd grade</td>
<td>6</td>
<td>14</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>3rd grade</td>
<td>20</td>
<td>35</td>
<td>53</td>
<td>23.5</td>
</tr>
<tr>
<td>4th grade</td>
<td>14</td>
<td>25</td>
<td>39</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Mother Education Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>28</td>
<td>53</td>
<td>80</td>
<td>34.6</td>
</tr>
<tr>
<td>High school</td>
<td>4</td>
<td>13</td>
<td>17</td>
<td>7.3</td>
</tr>
<tr>
<td>Illiterate</td>
<td>45</td>
<td>61</td>
<td>107</td>
<td>45.7</td>
</tr>
<tr>
<td>Middle school</td>
<td>7</td>
<td>13</td>
<td>20</td>
<td>8.5</td>
</tr>
<tr>
<td>Graduated from a Universty</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Father Education Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>41</td>
<td>51</td>
<td>92</td>
<td>39.3</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>High school</td>
<td>14</td>
<td>32</td>
<td>46</td>
<td>19.7</td>
</tr>
<tr>
<td>Illiterate</td>
<td>6</td>
<td>21</td>
<td>27</td>
<td>11.5</td>
</tr>
<tr>
<td>Middle school</td>
<td>15</td>
<td>19</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>Graduated from a Universty</td>
<td>12</td>
<td>20</td>
<td>32</td>
<td>13.7</td>
</tr>
<tr>
<td><strong>Number of Siblings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 1-3</td>
<td>18</td>
<td>47</td>
<td>66</td>
<td>28.2</td>
</tr>
<tr>
<td>Between 4-6</td>
<td>41</td>
<td>50</td>
<td>91</td>
<td>38.9</td>
</tr>
<tr>
<td>7 and above</td>
<td>27</td>
<td>47</td>
<td>74</td>
<td>31.6</td>
</tr>
<tr>
<td>I have not got brother or sister</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1.3</td>
</tr>
</tbody>
</table>

According to Table 1, the highest participation rate (62.2%) belongs to female pre-service teachers. The main reason for this situation is that the number of female students in education faculty is generally higher than the number of male students. Besides, it is understood that the number of teacher candidates participating in the study is higher in the preschool program (28.2%) than other teaching programs. Since the general student quota in this program is higher than other programs, it is understandable that the rate of participation is high. It can be stated that the most first year students (50.9%) participated in the study voluntarily. Among the participants, it was observed that the "Illiterate" option was preferred more (45.7%) for the education status of the mother. For the education level of the father, the option of "Primary School" was preferred at a rate of 39.3%. It has been determined that most of the teacher candidates have 4-6 siblings (38.9%).

**Data Collection Tools**

Personal information questionnaire and three different scales were used as data collection tools in the study. Detailed information on the data collection tools used is as follows:
**Personal Information Questionnaire:** There are seven structured questions in this questionnaire. Participants were asked questions about gender, age, class level, registered program, number of siblings, education status of fathers and mothers.

**Digital Literacy Scale:** The original of the scale, which was adapted into Turkish by Üstündağ, Güneş and Bahçivan (2017), belongs to Ng (2012). The Turkish version of the scale consists of 10 items and is one-dimensional. The calculated Cronbach Alpha reliability coefficient of the scale is .86 (Üstündağ, Güneş, & Bahçivan, 2017). In this study, scale items were graded as: "1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree". The reliability values calculated for the scale are Cronbach Alpha .87 and McDonalds’ .88.

**Global School Memories Rating Scale:** The scale was adapted to Turkish culture by Başaran and Yıldırım (2017). The adaptation scale consists of 22 items and is one-dimensional. The original of the scale belongs to Rowley and Taylor (1999). The original scale consists of 26 items. There are six reverse-coded items in the scale. High scores from the scale indicate that the individual's memories about school are positive and good. The calculated Cronbach Alpha value of the scale is .89 (Başaran & Yıldırım, 2017). In this study, scale items were graded as: "1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree". The reliability values calculated for the scale are Cronbach Alpha .87 and McDonalds’ .88.

**Views on Distance Education Scale:** The scale was developed by Yıldırım et al. (2014). There are a total of 18 items in the scale, which consists of four sub-dimensions, namely "Personal Suitability, Effectiveness, Instructional and Preparedness". Reverse coding is used for seven of the scale items. The calculated Cronbach Alpha value of the scale is .86 (Yıldırım & Diğ., 2014). In this study, scale items were graded as: "1 = Never Agree, 2 = Rarely Agree, 3 = Sometimes Agree, 4 = Generally Agree, 5 = Always Agree". The reliability values calculated for the scale are Cronbach Alpha .92 and McDonalds' "93".

**Data Collection Process**

The data collection process of the research took place throughout the 2020-2021 academic year (Fall + Spring). Prior to the study, participants were asked to mark "yes" on a consent form indicating that they participated in the study voluntarily. Teacher candidates participating in the research follow the classes on Google Classroom due to the pandemic. For this reason, the data collection tool prepared for the research was sent to N = 461 pre-service teachers via Classroom using an online Google Forms link (https://bit.ly/3relQkC). The return rate of data collection form is ~ 51%. Marking appropriately among the returning data collection forms, missing data entry, not creating a pattern, etc. A preliminary examination was made before the analysis to be made in terms of criteria. At the end of this examination, analyzes were made on the data obtained from 234 data collection forms that were answered in accordance with the criteria required for analysis.

**Data Analysis**

First, whether the data met the assumption of normality or not was examined. The skewness-kurtosis values for the normality assumption can be found in Table 2. Accordingly, it is understood that these values are between -3 and +3 suggested by Tabachnick and Fidell (2013). In this case, it is accepted that the data generally meet the normality assumption. Then, the homogeneity of the variances was examined, and it was determined that Levene Test values were within acceptable limits (p> .05). All the scales used in the research are 5-point Likert scales. For this reason, the option ranges were arranged according to the interval coefficient (4/5 = .80) calculated for the evaluation range of the arithmetic mean of the scale scores (5-1 = 4). For example; For the digital literacy scale average score (1-1.79), the averages between (1-1.79) are "very low", (1.80-2.59) "low", (2.60-3.39) "medium", (3.40-4.19) "high" and (4.20-5.00) are interpreted as "very high".
Descriptive statistical analysis, Pearson Correlation analysis, Post-Hoc analysis (Games-Howell, Tukey), Independent sample t-test, One-way ANOVA test and Simple Linear Regression analysis were applied on the data. While interpreting the obtained correlation coefficients, the correlation intervals suggested by Cohen (1988) were used. Accordingly, it means small effect (.10-.29), medium effect (.30-.49) and strong effect (.50-1.00) for the established correlations. Jamovi (Version 1.6), a free open source statistical software, was used for data analysis. In the interpretation of the analysis results, the general significance value was taken as p <.05.

RESULTS AND DISCUSSION

Following the data analysis, the findings obtained for the research questions are shared below, together with the research questions.

**What are the pre-service teachers’ digital literacy levels, their views on distance education and their pre-university school memories?**

The findings obtained for the digital literacy levels of the pre-service teachers participating in the study, their views on distance education and the score levels of pre-university school memories are summarized in Table 2. In addition, in Table 2, along with the general views of the students about distance education, the level of the average scores reached for the sub-dimensions of "personal suitability, effectiveness, Instructiveness, familiarity " sub-dimensions of the scale of opinions towards distance education can be examined.

<table>
<thead>
<tr>
<th></th>
<th>DL</th>
<th>PSM</th>
<th>DE</th>
<th>PS</th>
<th>Effect</th>
<th>Instruct</th>
<th>Fami</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>234</td>
</tr>
<tr>
<td>Mean</td>
<td>3.35</td>
<td>4.00</td>
<td>2.55</td>
<td>2.71</td>
<td>2.16</td>
<td>1.82</td>
<td>3.85</td>
</tr>
<tr>
<td>S_x</td>
<td>0.0489</td>
<td>0.0380</td>
<td>0.0565</td>
<td>0.0823</td>
<td>0.0720</td>
<td>0.0624</td>
<td>0.0611</td>
</tr>
<tr>
<td>SD</td>
<td>0.748</td>
<td>0.581</td>
<td>0.864</td>
<td>1.26</td>
<td>1.10</td>
<td>0.954</td>
<td>0.935</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.286</td>
<td>-0.666</td>
<td>0.806</td>
<td>0.460</td>
<td>1.00</td>
<td>1.22</td>
<td>-0.563</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.0876</td>
<td>-0.0566</td>
<td>-0.0932</td>
<td>-0.981</td>
<td>0.180</td>
<td>0.845</td>
<td>-0.279</td>
</tr>
</tbody>
</table>

When Table 2 are examined, the scores of pre-university teachers' memories of pre-university school (M = 4.00, SD = .58) are compared to other variables (digital literacy (M = 3.35, SD = .75) and distance education (M = 2.55, SD = .66)). In other words, pre-university school memories of pre-service teachers are high and positive. It has been found that the digital literacy levels of the participants are at a "medium" level and their views on distance education are generally at a "low" level.

The pre-service teachers stated a high level of opinion for the "familiarity" dimension of distance education (M = 3.85, SD = .94). In other words, pre-service teachers prefer to “postpone the assigned tasks, leave unfinished and wait until the last moment to do homework” at a very high level in the distance education process. So, it is understood that the opinions of the teacher candidates for the "instructiveness" dimension of distance education (M = 1.82, SD = .94) are quite low. According to this; Pre-service teachers do not think that face-to-face interaction is necessary for a good education. Contrary to what is known, it is not true for them that ideas in traditional education can be expressed instantly and more clearly. Students agree with a low level of opinion that face-to-face communication is needed in order to provide and learn a more effective learning environment.

Another dimension of distance education in which pre-service teachers take part at a low level is the "effectiveness" dimension (M = 2.16, SD = 1.10). In other words, students disagree with the view that distance education makes students more active in terms of teaching practices. Moreover, they are not eager to say that distance education is more effective than traditional education to provide...
a good learning opportunity, to enable the student to learn at his own pace and to increase the retention of learning. However, it can be stated that the opinions of the pre-service teachers about the "personal suitability" dimension of distance education (M = 2.71, SD = 1.26) are at a medium level. In other words, almost half of the students prefer distance education due to the intensity of their personal work, lifestyle and the education they need. Besides, it is necessary to consider reasons such as not wasting time, the flexibility to attend classes from wherever they want, and it is difficult for them to go to the university campus.

**Are there any significant relationships between prospective teachers' demographic characteristics (gender, grade level, parents' educational status, number of siblings, registered program) and their digital literacy levels, their views on distance education and their pre-university school memories?**

In the study, no significant difference was found between the gender variable and the participants' digital literacy levels and their views on distance education in terms of independent t-test findings (p > .05). However, it was found that the relationship between the gender of the participants and their pre-university school memories was significant in favor of the female participants. In other words, female teacher candidates' pre-university school memories (M = 4.10, SD = .55) were significantly higher and positive than male students' pre-university school memories (M = 3.85, SD = .60) (t = -3.13; p < .001; Cohen's d = -.42).

No significant difference was found between teacher candidates' enrolled teaching program and fathers' educational status variables, their digital literacy levels, their views on distance education and their pre-university school memories in terms of One-Way ANOVA test findings (p > .05). However, One Way-ANOVA findings obtained for the significant differences reached for the variables of class level, mother's education status and number of siblings belonging to teacher candidates are shared in Table 3.

**Table 3. One-way ANOVA Analysis Table for Participants' Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>df</th>
<th>F</th>
<th>η²</th>
<th>p</th>
<th>Significant Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Level (1st grade (K); 2nd grade (L); 3rd grade (M); 4th grade (N))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance Education</td>
<td>3</td>
<td>5.43</td>
<td>.066</td>
<td>.001*</td>
<td>N&gt;K - N&gt;L</td>
</tr>
<tr>
<td>Instructiveness</td>
<td>3</td>
<td>4.88</td>
<td>.060</td>
<td>.003*</td>
<td>N&gt;K - N&gt;M</td>
</tr>
<tr>
<td>Personal Suitability</td>
<td>3</td>
<td>7.00</td>
<td>.084</td>
<td>***</td>
<td>N&gt;K - N&gt;L</td>
</tr>
<tr>
<td>Mother Education Status (Illiterate (A); Primary school (B))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Literacy</td>
<td>4</td>
<td>5.12</td>
<td>.082</td>
<td>***</td>
<td>B&gt;A</td>
</tr>
<tr>
<td>Pre-University School Memories</td>
<td>4</td>
<td>4.34</td>
<td>.070</td>
<td>.002*</td>
<td>B&gt;A</td>
</tr>
<tr>
<td>Familiarity</td>
<td>4</td>
<td>2.76</td>
<td>.046</td>
<td>.09*</td>
<td>B&gt;A</td>
</tr>
<tr>
<td>Number of Siblings (I have not got brother or sister (C); Between 4-6 (D); 7 and above (E))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Literacy</td>
<td>3</td>
<td>3.02</td>
<td>.038</td>
<td>.031*</td>
<td>C&gt;D; C&gt;E</td>
</tr>
</tbody>
</table>

Note: n=234; * Significant load p<.05, *** Significant load p<.001

When Table 3 is examined, according to the One-Way ANOVA test, it is seen that there is a significant relationship between the class level variable of the participants and their views on distance education in general (F (3,230) = 5.43, p = .001, η² = .07). According to the Post-Hoc Tukey test conducted for the source of the significant difference reached; There is a significant difference between 4th grade students and 1st (p <.001) and 2nd year (p = .03) students in favor of 4th grade students. In other words, positive opinions of 4th grade students on distance education are statistically higher than 1st and 2nd grade students.

Similarly, the relationship level between teacher candidates' views on the "instructiveness" sub-dimension of distance education and the classroom level variable was found to be significant (F (3,230) = 4.88, p = .003, η² = .06). According to the Tukey test, there is a significant difference
between 4th grade students and 1st grade (p = 0.001) and 3rd grade (p = .021) students for the teaching dimension of distance education in favor of 4th grade students. Besides, it was determined that the relationship between students’ grade level variable and their views on the "personal suitability" dimension of distance education was also significant (F (3, 230) = 7.00, p <.001, η2 = .08). According to the Post-Hoc Games-Howell test, it is understood that there is a significant difference in favor of 4th grade students between 4th grade students and 1st grade (p = .002) and 2nd grade (p = .021) students.

Likewise, according to the One-Way ANOVA test; teacher candidates' mother education status variable and digital literacy levels (F (4, 229) = 5.12, p <.001, η2 = .08), "Familiarity" dimension of distance education (F (4, 229) = 2.76, p = .029, η2 = .05) and pre-university school memories (F (4, 229) = 4.34, p = .002, η2 = .07) were found to be significant. Accordingly, at the end of the Tukey test; It is understood that there is a significant difference between being a primary school graduate and being illiterate in terms of mother's education level at all variables. This significant difference (digital literacy (p <.001), pre-university school memories (p = .002), and distance education familiarity dimension (p = .029)) are in favor of primary school graduation. In other words, the digital literacy levels, "tendency" levels of distance education and pre-university school memories of teacher candidates whose mother education level is primary school is significantly higher than those who are illiterate.

As a result of the One-Way ANOVA test conducted on the relationship between the number of siblings that the teacher candidates have / did not have and their digital literacy levels, the difference was found to be significant (F (3, 230) = 3.02, p = .031, η2 = .04). According to the Games-Howell test, the difference between pre-service teachers who said they had no siblings and those with 4 to 6 siblings (p = .037) and those with 7 or more siblings (p = .025) was significant. This significant difference is in favor of teacher candidates who do not have siblings.

Are there any relationships / effects between prospective teachers' digital literacy levels and their views on distance education and their pre-university school memories?

Pearson Correlation analysis was conducted for the relationship between preservice teachers' digital literacy levels and their views on distance education and their pre-university school memories. The findings obtained are shared in Table 4.

### Table 4. Correlation Table of the Basic Variables of the Study

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Digital Literacy (DL)</td>
<td>3.35</td>
<td>.75</td>
<td>--</td>
<td>2</td>
<td>.20**</td>
<td>--</td>
<td>4</td>
<td>.92***</td>
<td>--</td>
</tr>
<tr>
<td>2. Pre-University School Memories (PSM)</td>
<td>4.00</td>
<td>.58</td>
<td>.20**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>4</td>
<td>.91***</td>
<td>.80***</td>
</tr>
<tr>
<td>3. Distance Education (DE)</td>
<td>2.55</td>
<td>.86</td>
<td>.21***</td>
<td>--</td>
<td>-0.09</td>
<td>.92***</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Personal Suitability (PS)</td>
<td>2.71</td>
<td>1.26</td>
<td>.27***</td>
<td>-.09</td>
<td>.92***</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. Effectiveness</td>
<td>2.16</td>
<td>1.10</td>
<td>.20**</td>
<td>-.05</td>
<td>.91***</td>
<td>.80***</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>6. Instructiveness</td>
<td>1.82</td>
<td>.95</td>
<td>-.07</td>
<td>-.21**</td>
<td>.77***</td>
<td>.57***</td>
<td>.66***</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7. Familiarity</td>
<td>3.85</td>
<td>.94</td>
<td>.16*</td>
<td>.24***</td>
<td>.24***</td>
<td>.04</td>
<td>.04</td>
<td>.10</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: n=234; * Significant load p<.05, ** Significant load p<.01, *** Significant load p<.001

According to Table 4, the relationship between teacher candidates' pre-university school memories and their digital literacy levels is significant (r = .20, r2 = .04, p = .002). In other words, pre-service teachers' pre-university school memories have a small positive effect of ~ 4% on their digital literacy level. In addition, there is a significant relationship between the pre-university school memories of teacher candidates and the "Instructiveness" dimension of distance education (r = -.21, r2 = .04, p = .002).

There is also a significant relationship between pre-university school memories and the "Familiarity" (r = .24, r2 = .06, p <.001) dimension of distance education. According to this, the pre-university school memories of students have a small negative effect of ~ 4% on their views on the "Instructiveness" dimension of distance education. It can be said that the effect of participants' pre-
university school memories on their "Familiarity" level to distance education has a small positive effect of ~ 6%. In other words, a positive increase in the pre-university school memories of the students indicates that they find distance education more useful than traditional education with a small and significant difference in terms of the "Instructiveness" dimension of distance education. Yet, the increase in the score of pre-university school memories can also increase the academic procrastination tendency in distance education with a small and significant effect. So, it was determined that there is a positive and significant relationship with a small effect between pre-service teachers' digital literacy levels and their views on distance education (r = .21, r² = .05, p = .001). In other words, the increase in the digital literacy scores of the students positively affects their views on distance education with a small effect of ~ 5%.

Moreover, the relationship between the digital literacy levels of students and the "personal fitness" (r = .27, r² = .07, p <.001) dimension of distance education is significant. Similarly, the relationship between digital literacy and distance education's "effectiveness" (r = .20, r² = .04, p = .003) and "Familiarity" (r = .16, r² = .02, p = .001) dimensions was also meaningful. It can be said that there are small and significant positive effects for the significant relationship levels in these dimensions.

Accordingly, it can be stated that as the digital literacy scores of the pre-service teachers increase, they think that distance education is more personally suitable (~ 7%) and offers a more effective learning environment (~ 4%). But, it is observed that the behavior of “academic procrastination” in distance education also increases with a small effect (~ 2%) in students with high digital literacy. However, as the level of personal suitability in distance education increases, it is understood that it is more effective for students (r = .80, r² = .64, p <.001). In other words, it can be stated that the personal fitness variable has a strong and significant effect (~ 64%) on the effectiveness of distance education. As the level of personal suitability increases, pre-service teachers prefer distance education more (~ 33%) than traditional education (r = .57, r² = .33, p <.001). Students find distance education ~ 43% more instructive than traditional education when there is an effective distance education environment (r = .65, r² = .43, p <.001).

We can explain distance education as a flexible educational approach in which students can freely access learning resources and there is usually no time constraint (Aydin & Erol, 2021; Gökçe, 2008; İnce, Kabul & Diler, 2020). In this respect, it is possible to associate many 21st century skills, especially digital literacy, with distance education.

The results of this study generally show that there is a positive and effective relationship between pre-service teachers' digital literacy levels and their views on distance education and their pre-university school memories. But, no direct relationship was found between distance education and pre-university school memories.

Within the scope of the study, it is understood that the opinions of teacher candidates on distance education are generally low and at a positive level. It was determined that digital literacy levels are at a medium level. According to the researches (İnce, Kabul & Diler, 2020; Kirali & Alcı, 2016; Kurtüncü, & Kurt, 2020; Özyürek, Begde, Yavuz & Özkan, 2016; Serçemeli & Kurnaz, 2020); The low level of positive opinions of teacher candidates on distance education can be attributed to the deficiencies in the distance education infrastructure, the inadequacy of web-based applications, the lack of personal computers and internet, etc.

So, it can be said that the medium level of digital literacy coincides with some research results (Öteles, 2020; Yontar, 2019).

These results are incompatible with many research results in the literature. Because, according to the researches in the literature (Akgün & Akgün, 2020; Güngör & Kurişek, 2020; Koçan & Bulut Özek, 2019; Rusydiyah et al, 2020); Students' views on digital literacy and distance education are high and at a good level.
Of course, it can be stated that for these disparate research results, for example, there is a difficulty in evaluating digital literacy due to the large number of definitions available (Miranda, Isaias & Pifano, 2018; Spante et al, 2018). Or it could be argued that the technology that underlies online learning can be assumed to be fast, easy to use, suitable for all learning activities, and accessible to all (Burton et al, 2015). However, due to similar reasons, high and good results were not obtained as expected at the end of this study for the digital literacy levels of the students.

On the other hand, among the important results of this study is the finding that the opinions of the teacher candidates towards distance education are at a high level in the "Familiarity" dimension. In other words, the tendency of teacher candidates to exhibit "academic procrastination" behaviors in the distance education process may increase. This result coincides with the results of some research (Bayrak, 2019; Goroshit & Hen, 2019; Uçar, 2020). According to Uçar (2020), students can show academic procrastination in distance education for reasons such as purposeful procrastination, the structure of the lesson, habit, circle of friends, lecturer and the idea of failure.

However, pre-service teachers prefer distance education more than traditional education in terms of "Instructiveness". This result does not coincide with the research results reached by Keskin and Özer Kaya (2020), Karatepe, Kıcıküçkencan and Peker (2020) and Bircan, Eleroğlu, Arslan & Ersoy (2018). Distance education for teacher candidates is considered to be medium in terms of "personal suitability". In other words, pre-service teachers look positively towards distance education due to reasons such as intensive personal work, lifestyle, the trainings they need, saving time and the flexibility to attend classes from wherever they want. Another of these reasons is that it is difficult for them to go to the university campus. For these reasons, they think that distance education provides an advantage for them. This result is similar to the results reached by Çağuşoğlu and Acar (2020) and Cheng, Cheon and Cho (2020). However, students find distance education to be low-level effective. For this conclusion, according to Guardianship, Charissi and Tympa (2021), it may be necessary to first consider the roles of educators working in distance education.

Another result of the research; There is no significant relationship between the gender variable and the digital literacy level of pre-service teachers and their views on distance education. This result showing that there is no relationship between distance education and gender coincides with the research results of Kırlı & Açı (2016) and Kara (2021). On the other hand, many studies in the literature (Akgün & Akgün, 2020; Başar, Arslan, Günsel & Akpınar, 2019; Boyacı, 2019; Çam & Kıyık, 2017; Çağuşoğlu & Acar, 2020; Hamutoglu et al, 2020; Günçoğ & Kurtipek, 2020; Öteles, 2020; Özden, 2018; Yontar, 2019); It points out that there is a significant relationship between gender and the variables of digital literacy and distance education. In this context, for example, in general, male students' mean digital literacy score is significantly higher than female students.

According to another important result of this research; In terms of gender variable, it was revealed that the pre-university school memories of female pre-service teachers were significantly higher and positive than male students.

In the study, no significant relationship was found between pre-service teachers' grade levels and their digital literacy levels and their pre-university school memories. This result does not coincide with, for example, Dedebali's (2020) results for digital literacy. Yet, it has been revealed that there are some meaningful relationships between students' views on distance education and their grade levels. According to this; It is concluded that the opinions of the 4th grade teacher candidates about distance education are higher than the opinions of the 1st and 2nd grade pre-service teachers. In this context, it can be said that the 4th grade pre-service teachers found distance education more instructive and more personally appropriate than the 1st and 2nd grade teachers. In fact, these results are predictable. Because most of the 4th grade students prepare for various exams for both graduation and teaching. For this reason, they may think that a "face-to-face teaching" process can slow them down. These results obtained in terms of the grade levels of the teacher candidates do not match the research results of Başar and colleagues (2019).
The relationship between pre-service teachers' maternal education variables and their digital literacy levels, the "Familiarity" dimension of distance education and their pre-university school memories was found to be significant. The digital literacy levels and pre-university school memories of teacher candidates whose mother's education level is "primary school" is significantly higher than those of "illiterate". But, students whose mothers graduated from "primary school" tend to be more inclined towards "academic procrastination" in distance education.

In other words, the higher the education level of the mother; Pre-service teachers' digital literacy status and pre-university school memories may also be at a better level. At the same time, "academic procrastination" behaviors can be observed in distance education. According to this; The conclusion reached for the relationship between digital literacy and maternal education does not coincide with the research results of Kara (2021).

Here, according to Başaran and Yıldırım (2017) and Räty (2011), the existence of a meaningful relationship between the "disposition" dimension of distance education and the education status of the mother can be evaluated in the context of parents' school memories.

Also, according to the research findings, the relationships between the number of siblings that prospective teachers have and their digital literacy levels are also significant. In other words, digital literacy levels of teacher candidates who do not have siblings can be significantly higher than those with "more than 4 siblings". This result can be considered in terms of the number of children the family has and the opportunities for children to access technological products on time within the framework of the outputs of this situation on the family economy.

Correlationally significant correlations were reached between students' pre-university school memories and their digital literacy levels, and the "Instructiveness" and "Familiarity" dimensions of distance education. This situation can be interpreted that the better / positive the pre-university school memories of teacher candidates are, their digital literacy levels can also be positively affected. Students with higher pre-university school memories prefer distance education more than traditional education in terms of "teaching". However, this situation can also increase "academic procrastination" in distance education among teacher candidates with a small effect.

In addition, it is understood that there is a positive correlational relationship between the digital literacy levels of prospective teachers and their views on distance education. It can be stated that digital literacy levels of teacher candidates have a positive effect on their views on distance education with a small but effective increase. Accordingly, the increase in the effectiveness of distance education explains that prospective teachers find distance education more instructive. But, similarly, this situation may increase the tendency of "academic procrastination" in distance education in pre-service teachers with a small effect. This result may be overcome by attaching more importance to the "personal suitability" dimension of distance education. Because the increase in personal fitness scores also has a small effect on the effectiveness and didactics of distance education. In other words, when there is an effective distance education environment, teacher candidates may prefer distance education more than traditional education. According to Abbas, Hussain, and Rasool (2019), it is possible to increase academic success and self-confidence in students with a well-designed distance education environment and a high rate of digital literacy.

**Limitations and Recommendations**

Apart from the results of this research, there are some limitations as well. Firstly, it can be stated that the rate of return of the data collection tool is slightly below the expected. Thus, the entire universe has not been reached. Secondly, the results reached are limited to the views of the small number of volunteer participants. So, it is possible to make some suggestions to educational policy developers, practitioners and researchers in terms of the results of the research. The results of this research can be taken into account while developing policies to include distance education in the teacher training process. In the process of implementing the distance education policies to be
developed for teacher candidates, special attention can be paid to the "personal suitability" criteria of distance education. Joint action researches, projects and workshops can be conducted with researchers on how to increase distance education and digital literacy skills of prospective teachers. Researchers can carry out longitudinal and mixed design studies on the possible effects of pre-university school memories on teacher education.

CONCLUSION

At the end of the study, it was revealed that there was a significant and effective relationship between the digital literacy levels of the teacher candidates, the "Instructiveness" and "Familiarity" dimensions of distance education and their pre-university school memories. In this context, it can be said that the pre-university school memories of pre-service teachers should be considered as an important variable in future studies for teacher training. Research results also state that an effective distance education approach will have a positive and significant effect on pre-service teachers' views on distance education. While developing this type of distance education approach, more attention can be paid to the "personal suitability" dimension of distance education.

REFERENCES


Achievement and Perceived Satisfaction, Collaboration and Social Presence of Pre-Service Teachers in a Blended Learning Environment

Melike Ozudogru
Manisa Celal Bayar University

Abstract

This case study aimed to investigate whether the perceived satisfaction, collaboration, and social presence of pre-service teachers predicted their achievement in a blended learning environment and differed significantly according to their gender and departments. This study was conducted during the fall semester of 2019-2020 for six weeks at an educational sciences course in a public university in Turkey. 149 pre-service teachers were chosen according to the purposive sampling method. In this study, the course design was based on the ‘Blending with Purpose’ multimodal model, and data were collected through course grades and the application of the ‘Satisfaction, Collaboration and Social Presence Scale’. After conducting the descriptive and inferential statistical analysis, it was found that satisfaction, collaboration, social presence, and academic achievement of pre-service teachers correlated significantly in a positive direction, but only the satisfaction in the course predicted their achievement. Also, this study found some significant differences in terms of gender and department according to the academic achievement, satisfaction, collaboration, and social presence of pre-service teachers. The possible explanations for these results were examined and discussed in detail.

Keywords: Academic Achievement; Blended Learning; Collaboration; Satisfaction; Social Presence

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INTRODUCTION

Blended learning (BL) is a combination of both face-to-face (F2F) and online learning where instruction is provided both in the classroom and asynchronous and/or synchronous online environments in which the online part becomes a natural extension of the F2F part (Dang et al., 2016; Lim & Morris, 2009; So & Bonk, 2010). There are many benefits of BL such as flexibility of learning time, and place thanks to the online part (Jonker et al., 2020), an increased interaction among learners and instructor (Baepler et al., 2014; Jonker et al., 2020; So & Bonk, 2010; Weaver, 2005; Yang et al., 2018). Moreover, BL increases satisfaction and collaboration, encourages social competencies and social presence, exposes students to alternative points of views in which they can learn a wide variety of subject domains (De Wever, et al., 2015; So & Brush, 2008; Yang et al., 2018). Moreover, the results of studies stressed the fact that although learners’ classroom seating time is reduced due to BL, they were as successful and satisfied as the learners in traditional instruction (Baepler et al., 2014; Delialioglu, & Yildirim, 2008). In addition, many studies revealed that student learning is significantly better in blended courses than traditional courses (Baepler et al., 2014); however, others revealed insignificant results in students learning (Delialioglu & Yildirim, 2008; Han, 2013). However, despite the increasing adoption of BL, pedagogical changes to teach in BL environments have been slow. BL is not about including online part but continuing to teach through traditional presentations. For this reason, the current study included an active BL design approach. Also, there is a need to investigate the effect of different variables to the quality of instruction in BL environments. Hence, the current study aimed to understand the learning of pre-service teachers (PsT) and its relation to some variables; perceived satisfaction, collaboration, and social presence.

Literature review

Satisfaction

Satisfaction was defined as the fulfillment of a need or enjoyment derived from an activity (Bolliger & Erichsen, 2013). Student satisfaction was mentioned as one of the basic requirements for successful implementation of BL (Naaj et al., 2012) and stated as one of the strong predictors of learning outcomes such as engagement, retention, use of deep learning strategies, collaboration, social presence (Akyol & Garrison, 2011; Bolliger & Erichsen, 2013; LaPointe & Gunawardena, 2004; So & Brush, 2008). It was stated that the more learners are satisfied, the more they are expected to be successful and have higher graduation rates (Sorden, 2011). Also, satisfied students learn more easily, are less likely to drop out of class, more likely to take more BL courses, and also they recommend the course to others (Naaj, et al., 2012). However, if learners are not satisfied, the benefits mentioned previously might not be achieved. Moreover, it was thought that blending an Educational Sciences course may deepen the understanding of PsT about the course content by involving discussions outside of the class time and creating time for in-class activities, which in turn may affect their satisfaction positively. Also, PsT may observe and experience this pedagogical approach at firsthand and if they are satisfied in terms of their experiences, they may benefit from different instructional strategies including information and communication technologies in their future profession rather than depending on traditional presentations. For this reason, in this study, the satisfaction levels of PsT were investigated concerning collaboration, social presence, and learning in a BL environment.

Collaboration

BL includes collaborative learning opportunities for learners who have different abilities and skills to increase their engagement in courses and facilitate interaction and group learning processes both in the F2F part of the course and among the group members who live in physically distant areas (So & Brush, 2008; Sorden, 2011; Yang et al., 2018). As stressed by social constructivist theorists, social interaction and collaboration are important in the learning process as a way to enhance the learning and satisfaction of students (Ferguson & DeFelice, 2010; LaPointe & Gunawardena, 2004; Nummenmaa & Nummenmaa, 2008; Patrick et al., 2007; So & Brush, 2008). Moreover, there is a large, direct effect of self-reported peer interaction on learning since collaboration among participants
supports them to become more active in their learning processes (LaPointe & Gunawardena, 2004). To put it another way, learners who perceive high levels of collaboration, are highly satisfied with the course activities, learn better and perceive high levels of social presence. Besides, increased support from classmates during collaborative activities in terms of feeling being cared both as a person and issues related to the course (Patrick et al., 2007) increases the perceived satisfaction and social presence of learners (So & Brush, 2008). By experiencing collaborative activities in a blended course, PsT may also include collaborative activities when they are teaching in real classroom environments in the future.

**Social Presence**

Social presence is related to one’s perceptions of the quality of interactions taken place in an online community in which participants develop trust relationship, are aware of the existence of other participants, feel that they belong to that community, interact with other learners and the instructor even when the physical contact is not available (Garrison et al., 2010; Picciano, 2002; Tu, 2002). Also, Tu and McIsaac (2002) explained that the increase in the number of posts at the online part of the blended course does not represent a high social presence, but familiarity with participants, interaction among them, and trust relationships influence social presence positively and learning as a consequence. Moreover, many researchers concurred that learning, satisfaction, collaboration and social presence are some of the important variables for effective instruction in BL environments and they are interconnected with each other (Picciano, 2002; Allred-Oyarzun, 2016; So & Brush, 2008; Sorden, 2011). It can be explained that if PsT feel that they learned the content, they may have more positive learning experiences and a strong sense of satisfaction towards the course as stated by Sorden (2011). As PsT satisfied in the course, they interact with others more about course tasks which increases perceived collaboration (LaPointe & Gunawardena, 2004). For this reason, PsT might perceive higher social presence as stated by Allred-Oyarzun (2016), which in turn increase their achievement.

Moreover, So & Brush (2008) revealed that course structure, and communication medium are some of the critical factors associated with learning and perceptions of satisfaction, collaboration, and social presence. For these reasons, this study investigated the interaction of these variables in a BL environment designed according to ‘Blending with Purpose’ multimodal model.

This study aimed to investigate whether the perceived satisfaction, collaboration, and social presence of PsT predicted their achievement in a blended learning environment and differed significantly according to their gender and departments. In the current study, the possible gender and department differences in PsT’s achievement, satisfaction, collaboration, and social presence were also investigated since it has been argued that females may be at a disadvantage in the online part of BL because they have lower experience or confidence in the use of computers (Johnson, 2011). Previous research has identified certain gender differences in terms of adoption of computer technologies such
as the ease of use (Nel & Raleting, 2012), team effectiveness (Dunaway, 2013), computer self-efficacy and perceived accomplishment and enjoyment (Dang et al., 2016). However, there is limited research investigating the gender and department differences in terms of achievement, perceived satisfaction, collaboration, and social presence of PsT (Dang et al., 2016; Gonzalez-Gomez et al., 2012). Based on the purposes of this study, the following research questions were proposed:

1) Is the scale developed in the current study valid and reliable to measure PsT’s satisfaction, collaboration, and social presence levels?

2) How well satisfaction, collaboration, and social presence of PsT predict their achievement in an educational sciences course?

3) Do the satisfaction, collaboration, social presence and academic achievement levels of PsT differ significantly according to their gender and departments?

**METHOD**

This case study (Fraenkel & Wallen, 2009) was conducted during the fall semester of 2019-2020 for six weeks at an educational sciences course in a public university in Turkey after obtaining the approval of the Human Subjects Ethics Committee.

**Participants**

The participants which suited the purposes of the study were chosen according to the purposive sampling method mainly according to the convenience sampling method (Creswell, 2012). In this study, for the validity and the reliability studies of the Satisfaction, Collaboration and Social Presence Scale (SCSP) scale, 242 PsT were included. Among the 242 PsT, 155 (64%) of them were female and 87 (36%) of them were male and 90 of them took the BL course which included the same course topics and activities by the same instructor in the spring semester of 2018-2019 education year. The distribution of PsT across their departments can be seen in Table 1.

**Table 1. The distribution of participants across their departments**

<table>
<thead>
<tr>
<th>Departments</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance and Psychological Counseling</td>
<td>44</td>
<td>18.2</td>
</tr>
<tr>
<td>Elementary School Mathematics Teaching</td>
<td>24</td>
<td>9.9</td>
</tr>
<tr>
<td>Turkish Language Teaching</td>
<td>114</td>
<td>47.1</td>
</tr>
<tr>
<td>Social Sciences Teaching</td>
<td>25</td>
<td>9.4</td>
</tr>
<tr>
<td>Classroom Teaching</td>
<td>35</td>
<td>14.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>242</td>
<td>100</td>
</tr>
</tbody>
</table>

149 PsT (105 female, 44 male) were included in the second part of the study to investigate whether their perceptions in BL environment predicted their achievement and differed in terms of the perceptions of satisfaction, collaboration, and social presence according to their gender and departments. Among the PsT, 45 (30.2%) of them were from Psychological Counseling and Guidance Department; 21 (14.1%) of them were from Elementary School Mathematics Teaching Department; 23 (15.4%) of them were from Turkish Language Teaching Department; 27 (18.1%) of them were from Social Sciences Teaching Department and 33 (7.9%) of them were from Elementary Education Classroom Teaching Department.

**Data Collection Instruments**

In this study, data were collected through the application of the SCSP scale. According to literature, researchers have appealed to course grades to compare the effectiveness of instruction (Akyol & Garrison, 2011). Hence, in the current study, the course grades of PsT were evaluated as the achievement scores of them, which varied from 0 to 100. The course content included the planning of
instruction, basics of curriculum development, needs assessment techniques, content organization, variables for the effective teaching-learning process, curriculum evaluation types.

**Satisfaction, Collaboration and Social Presence Scale (SCSP)**

In this study, ‘the Satisfaction, Collaboration, and Social Presence Scale (SCSP)’ Scale was developed by the researcher. Firstly, a thorough literature review was conducted to determine scale items. In this sense, many instruments across various grade levels, subjects, and different classroom contexts such as online or blended were investigated (Picciano, 2002; So & Brush, 2008; Tu, 2002) and a total of 47 items was written in Turkish by adapting some items from these instruments as well as writing new items. As a result, a draft form was prepared and presented to the expert opinion. The experts were asked for making analyzes and recommendations about the coincidence of items to the factors, their meaning, and clarity. Besides, the suggestions of experts for adding new items, the grammar of sentences, face validity, and length of administration were obtained as also suggested by Worthington and Whittaker (2006). As a result, some items were omitted and some items were rephrased. Also, the SCSP scale was applied to five PsT to review the instrument in terms of clarity and readability of items and instructions. The final form consisted of 35 items 5-point Likert-type scale which is changed from certainly agree (5) to completely disagree (1). The scale included three factors; eight items for Satisfaction, nine items for Collaboration, and 18 items for Social Presence.

This study included PsT who learned the course through BL, using a Learning Management System (LMS) such as Edmodo. Hence, the data collection process took a long time in terms of reaching as many PsT as possible to conduct the analysis and started in the 2018-2019 education year spring semester and was completed at the end of 2019-2020 education year fall semester. PsT needed around 20 minutes to fill out the scale.

**Data Collection Procedures**

In the current study, the course design was based on the “Blending with Purpose” multimodal model. This is a flexible model and is based on BL technology, social learning theory and cognitive science including theories related to personality types and learning styles (Picciano, 2009).

![Blending with Purpose – The Multimodal Model](image)

*Figure 1. The multimodal model for blending with purpose (Picciano, 2009, p. 15)*
As shown in Figure 1, this model included pedagogical objectives of the course, content, questioning part about course topics, F2F and online collaboration, online reflection, synthesizing, evaluating, and assessing learning. Also, this model integrated different learning approaches and technologies for effective learning. According to this model, every course does not need to include online discussion activities or jigsaw groups if there is no specific pedagogical objective to conduct them as stated by Picciano (2009).

In the current study, the content was delivered in the F2F part of the course by using technologies like PowerPoint slides and YouTube videos related to course topics. Oral question-answer sections in the F2F part of the course was conducted to check learning of PsT. Moreover, PsT interacted with each other and the instructor in collaborative group studies, so they could obtain social, cognitive, and emotional support to foster their satisfaction, collaboration, and social presence of the course.

As underlined by Han (2013), involvement in course activities cognitively, posting ideas on the discussion board fosters social presence. For this reason, to establish a strong social presence even in the online part of the course, an online discussion board Edmodo (LMS) was designed as a rich communication and interaction method. In this way, PsT conducted asynchronous discussions collaboratively to refine their understanding of the content in the online part of the course. During asynchronous online discussions, PsT were asked to share their ideas and the points they agreed or opposed by stating the reasons based on the literature to reinforce their learning. Through these online discussions, PsT had the opportunity to talk and discuss various topics in relation to the content of the course. In this way, it was aimed that PsT could think critically about the discussion topic cases and reflect on them.

Moreover, the synthesis, evaluation, and assessment of learning part included Kahoot plays to evaluate the learning of PsT at the end of F2F part of the course besides the group studies which were conducted to discuss course topics or to prepare a sample lesson plan which included the topics of the course (Writing the objectives of the course, content organization, instructional activities, and evaluation part). The instructor was able to observe the learning of PsT both in F2F and online parts of the course and corrected any misunderstanding about the course topics.

Data Analysis

In this study ‘Exploratory Factor Analysis’ (EFA) and ‘Confirmatory Factor Analysis’ (CFA) were conducted to answer the first research question and to check the construct validity of the scale. For EFA, oblique rotation, Promax method was used (Raubenheimer, 2004; Worthington & Whittaker, 2006) since according to pre-mentioned literature, a high level of inter-item correlation was assumed among the factors ‘Satisfaction’, ‘Collaboration’, and ‘Social Presence’. The Principle Axis Factoring (PAF) extraction method was employed since the multivariate normality was violated according to Mardia’s test results (Field, 2009).

Having checked the assumptions, EFA was performed (Field, 2009; Tabachnick & Fidell, 2007; Yong & Pearce, 2013). While determining the number of factors, the factors with eigenvalues greater than one were considered and the scree plot was checked (Field, 2009; Hair et al., 2014; Worthington & Whittaker, 2006). Then CFA was conducted to validate the factor structure of the model derived from the results of EFA by using AMOS 24.0 (Yong & Pearce, 2013; Worthington & Whittaker, 2006). Finally, Cronbach’s Alpha coefficients of internal consistency were examined to test the reliability of the scale.

In order to answer the second research question and to predict the achievement of PsT in an educational sciences course, Multiple Linear Regression (MLR) procedures were employed (Tabachnick & Fidell, 2007). The satisfaction, collaboration, and social presence dimensions of the SCSP Scale were analysed together to determine whether they predicted the achievement of PsT. For this reason, the assumptions of MLR were also checked to ensure that there was no violation of
linearity, normality, multicollinearity, the influential observations, and homoscedasticity (Field, 2009; Tabachnick & Fidell, 2007).

In order to answer the third research question, Multivariate Analysis of Variance, MANOVA, was employed after checking and confirming that there is no violation of assumptions (Tabachnick & Fidell, 2007). The homogeneity of the covariance assumption was violated since the result of Box’s M test was significant, Box’s M= 148.66, F(80, 4133.01) =1.55, p< .05 (Tabachnick & Fidell, 2007) beside the violation of the multivariate normality assumption. For these reasons, Pillai’s Trace values were reported (Pillai’s Trace = 0.99) to check the significance of the MANOVA model $F(4, 136) =2785.13, p < .00$. Data analyses were conducted using SPSS 22 and the significance of the alpha level was selected at the cut-off value .05 (Tabachnick & Fidell, 2007).

**Results**

In this part of the study, firstly, findings related to the validity and reliability of the SCSP Scale were presented. Then the findings of the remaining research questions were presented.

**Results Related to the Validity and Reliability of the SCSP Scale**

The EFA was conducted to ensure the validity of the SCSP scale. When the pattern matrix of the SCSP Scale was checked, some items were removed from the scale one by one because of having factor loadings less than 0.30, cross-loading on multiple factors which was less than .15 difference from an item’s highest factor loading and forming a 2-item factor (Field, 2009; Tabachnick & Fidell, 2007; Yoo & Donthu, 2001; Worthington & Whittaker, 2006). The remaining items significantly contributed to the corresponding factor as they were statistically significant at p= .00 level (see Appendix 1 for the remaining items). According to the last analysis, three eigenvalues were found higher than one and they explained 59.58% variance. The results of the EFA was shown in Table 2.

**Table 2. The results related to validity and reliability of the SCSP scale**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
<th>Variance explained (%)</th>
<th>Cumulative Variance (%)</th>
<th>Eigenvalues</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>7</td>
<td>.88</td>
<td>45.25</td>
<td>45.25</td>
<td>7.24</td>
<td>.84, .80, .65, .64, .63, .55, .51</td>
</tr>
<tr>
<td>Cooperation</td>
<td>5</td>
<td>.84</td>
<td>7.81</td>
<td>53.06</td>
<td>1.25</td>
<td>.86, .76, .65, .56, .46</td>
</tr>
<tr>
<td>Social</td>
<td>4</td>
<td>.69</td>
<td>6.52</td>
<td>59.58</td>
<td>1.04</td>
<td>.65, .51, .35, .34</td>
</tr>
<tr>
<td>Presence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

KMO= .93; Barletts’ Test of Sphericity $X^2(120) = 1832.78; p=.00$

Moreover, according to CFA, the chi-square value was found ($\chi^2/df=189.53/87=2.18; p=.000$). To improve the fit index values of the model, item 23 was removed from the model because of the low estimate value. CFA revealed the following fit indices: $CFI= .94; NFI= .90; RFI= .88,IFI= .94$ and $RMSEA=.07$. Therefore, it can be said that the model is acceptable (Hair et al., 2014; Tabachnick & Fidell, 2007). Figure 2 showed the three-factor 15-items model of the scale with its standardized path coefficients. The standardized path coefficients ranged from .54 for item 27 to .82 for item 5.
**Figure 2.** Standardized path coefficients for the three-factor model of SCSP scale

**Results Regarding the Prediction of Achievement of PsT from the Factors of SCSP Scale**

Firstly, the means, standard deviations, and correlations related to predictor and outcome variables were shown in Table 3.

**Table 3. The correlations among academic achievement and predictor variables**

<table>
<thead>
<tr>
<th></th>
<th>Academic Achievement (1)</th>
<th>Satisfaction (2)</th>
<th>Collaboration (3)</th>
<th>Social Presence (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>.24**</td>
<td>.74**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td>.14*</td>
<td>.59**</td>
<td>.61**</td>
<td>1.00</td>
</tr>
<tr>
<td>(4)</td>
<td>.17*</td>
<td>.59**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>72.30</td>
<td>27.20</td>
<td>19.15</td>
<td>11.45</td>
</tr>
<tr>
<td>SD</td>
<td>9.37</td>
<td>4.54</td>
<td>3.52</td>
<td>1.93</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .00

According to Table 3, the correlations among academic achievement and predictor variables changed between \( r = .14 \) and \( r = .24 \). The highest correlation was between satisfaction and collaboration (\( r = .74 \)). It can be inferred that when PsT collaborated with their peers more, they are satisfied in the course. Also, satisfaction and academic achievement of PsT correlated significantly in a positive direction (\( r = .24 \)). It can be said that as PsT were satisfied in the course, they obtained higher grades. Additionally, PsT who perceived higher social presence, satisfied (\( r = .59 \)) in the course, and collaborated with their peers more (\( r = .61 \)).
In this study, the outcome variable was the academic achievement, while the satisfaction, collaboration, and social presence variables were predictor variables. The predictor variables were entered into the model as shown in Table 4 to test whether the model is significantly better at predicting the academic achievement of PsT.

### Table 4. Summary of the MLR analyses for variables predicting the academic achievement

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>Sr²</th>
<th>R²</th>
<th>∆R²</th>
<th>∆F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.06**</td>
<td>.06**</td>
<td>3.16**</td>
</tr>
<tr>
<td>Constant</td>
<td>.06**</td>
<td>.06**</td>
<td></td>
<td></td>
<td>11.38**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.54</td>
<td>.26</td>
<td>.26</td>
<td>2.11*</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>-.27</td>
<td>.33</td>
<td>-.10</td>
<td>-.79</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Presence</td>
<td>.39</td>
<td>.51</td>
<td>.08</td>
<td>.77</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, ** p < .00

When the F-ratio shown in Table 4 was checked, it was found that $F (3, 145) = 3.16 \ (p < .05)$. It can be said that the model was significant in predicting the outcome variable (Field, 2009). The model explained 6% of the variance in academic achievement. In other words, the satisfaction, collaboration, and social presence variables explained 6% of the variance in academic achievement. When the t-statistics were checked to control whether the predictor variables contributing to the model significantly (Field, 2009), the results can be seen in Table 4 that only the satisfaction of PsT $t (145) = 2.11, p < .05$ significantly predicted their achievement and if all other variables were held constant, satisfaction would predict the 17% of the variance of the achievement of PsT.

### 4.3. Results Regarding the Perceptions of PsT’s Satisfaction, Collaboration, and Social Presence according to their Gender and Departments

Before the presentation of MANOVA results, descriptive statistics concerning all variables were shown in Table 5.

### Table 5. Mean scores and standard deviations for achievement and predictor variables

<table>
<thead>
<tr>
<th>Departments</th>
<th>Gender</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCG</td>
<td>F</td>
<td>79.27</td>
<td>5.94</td>
<td>28.90</td>
<td>2.84</td>
<td>20.10</td>
<td>2.83</td>
<td>11.80</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>70.40</td>
<td>7.88</td>
<td>28.13</td>
<td>5.26</td>
<td>18.27</td>
<td>2.25</td>
<td>12.13</td>
</tr>
<tr>
<td>Total PCG</td>
<td></td>
<td>76.31</td>
<td>7.80</td>
<td>28.64</td>
<td>3.79</td>
<td>19.49</td>
<td>2.77</td>
<td>11.91</td>
</tr>
<tr>
<td>EMT</td>
<td>F</td>
<td>75.53</td>
<td>7.66</td>
<td>27.82</td>
<td>3.76</td>
<td>19.71</td>
<td>2.36</td>
<td>11.18</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>76.00</td>
<td>7.07</td>
<td>22.50</td>
<td>2.38</td>
<td>18.00</td>
<td>2.45</td>
<td>11.25</td>
</tr>
<tr>
<td>Total EMT</td>
<td></td>
<td>75.62</td>
<td>7.38</td>
<td>26.81</td>
<td>4.09</td>
<td>19.38</td>
<td>2.42</td>
<td>11.19</td>
</tr>
<tr>
<td>TLT</td>
<td>F</td>
<td>66.86</td>
<td>7.87</td>
<td>27.21</td>
<td>5.71</td>
<td>19.14</td>
<td>4.64</td>
<td>11.21</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>60.78</td>
<td>5.74</td>
<td>26.56</td>
<td>4.22</td>
<td>19.44</td>
<td>3.91</td>
<td>11.78</td>
</tr>
<tr>
<td>Total TLT</td>
<td></td>
<td>64.48</td>
<td>7.60</td>
<td>26.96</td>
<td>5.09</td>
<td>19.26</td>
<td>4.28</td>
<td>11.43</td>
</tr>
<tr>
<td>SST</td>
<td>F</td>
<td>68.81</td>
<td>8.29</td>
<td>26.00</td>
<td>3.71</td>
<td>18.94</td>
<td>2.43</td>
<td>10.56</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>64.00</td>
<td>6.81</td>
<td>24.82</td>
<td>6.05</td>
<td>17.55</td>
<td>5.96</td>
<td>10.18</td>
</tr>
<tr>
<td>Total SST</td>
<td></td>
<td>66.85</td>
<td>7.96</td>
<td>25.52</td>
<td>4.73</td>
<td>18.37</td>
<td>4.19</td>
<td>10.41</td>
</tr>
<tr>
<td>CT</td>
<td>F</td>
<td>75.71</td>
<td>8.93</td>
<td>27.29</td>
<td>4.56</td>
<td>18.75</td>
<td>4.02</td>
<td>11.71</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>68.40</td>
<td>12.12</td>
<td>25.60</td>
<td>6.80</td>
<td>21.00</td>
<td>3.16</td>
<td>12.60</td>
</tr>
<tr>
<td>Total CT</td>
<td></td>
<td>74.61</td>
<td>9.63</td>
<td>27.03</td>
<td>4.87</td>
<td>19.09</td>
<td>3.95</td>
<td>11.85</td>
</tr>
<tr>
<td>Female Total</td>
<td>F</td>
<td>74.47</td>
<td>8.79</td>
<td>27.63</td>
<td>4.10</td>
<td>19.37</td>
<td>3.34</td>
<td>11.41</td>
</tr>
<tr>
<td>Male Total</td>
<td>M</td>
<td>67.11</td>
<td>8.74</td>
<td>26.18</td>
<td>5.35</td>
<td>18.61</td>
<td>3.91</td>
<td>11.55</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>72.30</td>
<td>9.37</td>
<td>27.20</td>
<td>4.54</td>
<td>19.15</td>
<td>3.52</td>
<td>11.45</td>
</tr>
</tbody>
</table>

* (PCG) stands for Psychological Counseling and Guidance Department; (EMT) stands for Elementary School Mathematics Teaching Department; (TLT) stands for the Turkish Language Teaching Department; (SST) stands for Social Sciences Teaching Department and (CT) stands for Classroom Teaching Department.
As shown in Table 5, the descriptive analysis revealed the highest academic achievement obtained by the female PsT studying at the Psychological Counseling and Guidance Department ($M = 79.27$, $SD = 5.94$), the lowest academic achievement obtained by the male PsT studying at the Turkish Language Teaching Department ($M = 60.78$, $SD = 5.74$). Moreover, while female PsT who were in the PCG were satisfied most ($M = 28.90$, $SD = 2.84$), male PsT who were in the Social Sciences Teaching Department were satisfied least ($M = 24.82$, $SD = 6.05$). For collaboration, male PsT who were in Classroom Teaching Department obtained highest mean scores ($M = 21.00$, $SD = 3.16$), male PsT who were in Social Sciences Teaching Department obtained lowest mean scores ($M = 17.55$, $SD = 5.96$). In terms of social presence, male PsT who were in the Classroom Teaching Department obtained the highest mean scores ($M = 12.60$, $SD = 0.89$), those who were in Social Sciences Teaching Department obtained lowest mean scores ($M = 10.18$, $SD = 3.16$).

In this study, MANOVA was run to find out if the PsT’s perceptions of satisfaction, collaboration, and social presence differ according to their gender and departments (Tabachnick & Fidell, 2007). The results for MANOVA were shown in Table 6.

Table 6. Multivariate and univariate analyses of variance for the perceptions of PsT’s satisfaction, collaboration, and social presence according to their gender and departments

<table>
<thead>
<tr>
<th>Variable</th>
<th>MANOVA** F (4,136)</th>
<th>ANOVA**F (1,139)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>5.51**</td>
<td>4.76</td>
</tr>
<tr>
<td>Department</td>
<td>4.06**</td>
<td>2.59</td>
</tr>
<tr>
<td>Gender *</td>
<td>1.43</td>
<td>.72</td>
</tr>
<tr>
<td>Department</td>
<td>.98</td>
<td>1.23</td>
</tr>
</tbody>
</table>

**p < .00, *p < .012

As shown in Table 6, the interaction between ‘gender’ and ‘department’ was found insignificant, $F (16, 556) = 1.43$, $p = .12$. Among the independent variables, gender ($F (4, 136) = 5.51$, $p= .00$) and the department ($F (16, 556) = 4.06$, $p= .00$) had significant effect on the dependent variables. While the alpha level for academic achievement, satisfaction, social presence was determined as (.05/4 = .012) due to the Bonferroni correction.

According to the results, it was seen that the gender had a significant effect on achievement $F (1, 139) = 12.10$, $p < .00$. $\eta^2 = .08$. However, the perceptions of satisfaction of PsT did not significantly differ according to their gender, $F (1, 139) = 4.76$, $p = .03$. Collaboration $F (1, 139) = .46$, $p = .50$ and social presence $F (1, 139) = .62$, $p = .43$. Moreover, it can be seen in Table 6 that the department had a significant effect on achievement $F (4, 139) = 10.75$, $p < .00$. $\eta^2 = .24$ and social presence $F (4, 139) = 3.49$, $p < .00$. $\eta^2 = .09$. However, the perceptions PsT did not significantly differ from each other based on their departments in terms of satisfaction, $F (4, 139) = 2.59$, $p = .04$ and collaboration $F (4, 139) = .62$, $p = .65$.

When multiple comparisons were conducted, it was found that female PsT obtained significantly higher achievement ($M = 74.47$, $SD = 8.79$) scores than males ($M = 67.11$, $SD = 8.75$). In addition, although female PsT obtained higher satisfaction ($M = 27.63$, $SD = 4.10$), and collaboration ($M = 19.37$, $SD = 3.34$) scores than male PsT which were ($M = 26.18$, $SD = 5.35$) for satisfaction and ($M = 18.61$, $SD = 3.91$) for collaboration, they were not statistically significant. However, male PsT obtained slightly higher social presence scores ($M = 11.55$, $SD = 2.13$) than female PsT ($M = 11.41$, $SD = 1.85$).

In terms of the effect of the department on PsT’s achievement, PsT in the Psychological Counseling and Guidance ($M = 76.31$, $SD = 7.00$), Elementary School Mathematics Teaching ($M = 75.62$, $SD = 7.38$), and Classroom Teaching Department ($M = 74.61$, $SD = 9.37$) obtained significantly higher grades than those in the Social Sciences Teaching Department ($M = 66.85$, $SD = 7.95$) and Turkish Language Teaching Department ($M = 64.48$, $SD = 7.60$). In terms of the effect of department on social presence, PsT in the Psychological Counseling and Guidance Department ($M = 11.91$, $SD =
1.65) and Classroom Teaching Department (M = 11.85, SD = 1.70) perceived significantly higher social presence scores than those in the Social Sciences Teaching Department (M = 10.41, SD = 2.48).

**DISCUSSION**

In this part, the findings of the study were discussed in detail. Firstly, the findings related to the validity and reliability of the SCSP scale were discussed, then the findings obtained from the implementation of this scale were discussed.

**Discussions Related to the Validity and Reliability of the SCSP Scale**

The current study aimed to develop and validate the SCSP scale to be used to investigate the perceptions of PsT in BL environments. SCSP scale included ‘Satisfaction’, ‘Collaboration’, and ‘Social Presence’ factors. These factors accounted for 59% of the total variance of the scale. While the first factor accounted for 42.25% of the total variance, the other two factors accounted for 7.81% and 6.52% of the total variance respectively. The satisfaction factor contained seven items, collaboration contained five items and social presence contained three items.

It can be considered as incorrect to identify a factor with three items; however, many researchers stated the construct validity as an important property for deciding the number of items. Raubenheimer (2004) stated that a minimum of three items must load significantly on each factor in a multidimensional scale to identify all subscales and stressed that as the more items are added per factor, the more likely the items of that factor will replicate. For instance, The SITEQUAL scale developed by Yoo & Donthu (2001) has four dimensions (ease of use (2 items), aesthetic design (3 items), processing speed (2 items), and security (2 items) and only nine items, which were considered as both parsimonious and showed acceptable psychometric properties as in the current study.

In addition, So and Brush (2008) included the questionnaire developed by Tu (2002) to measure the perceptions of social presence which was based on four factors (social context, online communication, interactivity, and privacy). In the current study, PsT could not discriminate items related to social context and privacy clearly, or the items of these sub-factors were loaded less, and this has resulted in their elimination from the SCSP scale. Similarly, Tu (2002) found a significant but weak correlation between privacy and social presence and expressed that it may vary with different subjects, media, and contexts. For this reason, in this blended educational course items like ‘Posting ideas on Edmodo was impersonal (item 23)’, ‘Posting on Edmodo is confidential (item 24)’, and ‘Posting on Edmodo is technically reliable (item 29)’ were eliminated from the social presence factor. Similarly, items related to social context were also eliminated from the scale such as ‘The place where I access Edmodo (home, office, computer labs, public areas, etc.) does not affect my desire to participate’.

Furthermore, as stated by Yong and Pearce, (2013, p. 80) factors including fewer variables are considered as reliable when the variables are highly correlated with each other; however, in the current study, correlations among factors changed between r = .59 and r = .74. The reliability coefficients for the 15-item SCSP scale were found .88, .84 and .69 for the satisfaction, collaboration, and the social presence factors respectively. While Clark and Watson (1995) stated that researchers accepted reliabilities in the .60s and .70s as good or adequate, according to Hair et al. (2014), reliability should be 0.70 or higher to indicate internal consistency, which is quite close to this point for the social presence scale. All in all, the scale implemented in the current study is thought to be valid and reliable.

**Discussions Related to the Prediction of PsT’s Achievement from Satisfaction, Collaboration, and Social Presence Variables**

This study revealed that satisfaction, collaboration, and social presence in the BL environment correlated significantly in a positive direction, which was corroborated in many studies in different courses (Allred-Oyarzun, 2016; Ferguson & DeFelice, 2010; LaPointe & Gunawardena, 2004; So &
Brush, 2008; Sorden, 2011; Tu & McIssac, 2002). However, only the satisfaction of PsT in the course of educational sciences predicted their academic achievement, which is in line with the literature (Dang et al., 2016; Weaver, 2005). The course activities, the flexibility of conducting tasks, online system, and interaction among peers and instructor might have influenced the satisfaction of PsT as also stated by Dang et al. (2016) which might be related to student persistence and course completion as also stated by Weaver (2005).

In the current study, the collaboration of PsT did not predict their achievement. This finding has been contrasted with the results of some studies, which expressed the collaborative learning environment as an important component for promoting learning, student performance, and increasing satisfaction (Allred-Oyarzun, 2016; Ferguson, & DeFelice, 2010). The reason for the result obtained in the current study might have stemmed from the course design. In this blended course, PsT might have felt the need to make more effort to get familiar with the course content, research on the internet alone, and reflect their own ideas. Moreover, some of the PsT might be passive during group tasks. For this reason, it is suggested that instructors should monitor continuously and be careful in terms of students’ relying too much on others during group studies conducted in-class.

In the current study, the social presence of PsT did not predict their achievement. This finding of the current study has been contrasted with the results of many studies in which social presence was found as a significant predictor of perceived learning and satisfaction of students (Allred-Oyarzun, 2016; Sorden, 2011). This reason for this result might be that in this blended course, PsT did not feel the lack of safety, trust, respect, rapport, and interdependence due to F2F class time, where the instructor existed and fostered these feelings, which were also stressed in many studies (Pattison, 2017; Yamada & Goda, 2012). As stated by Akyol and Garrison (2011) the F2F component of this blended course might have decreased the need for expression of emotions, use of humour, and self-disclosure to establish intimacy in the online part, which might have affected the perceived social presence of PsT.

**Discussions Related to the Perceptions of PsT’s Satisfaction, Collaboration, and Social Presence according to their Gender and Departments**

In the current study, it was found that female PsT obtained higher satisfaction collaboration scores and significantly higher achievement scores than male PsT. Different from the current study, Dang et al. (2016) did not find a gender difference in terms of satisfaction. By confirming the current study, the findings of Gonzalez-Gomez et al. (2012) found significant differences in favor of female students regarding their satisfaction in an online learning environment about the teaching methods and planning including 1.185 learners from 27 courses. The reason for the result of the current study might be that males are generally more confident about their computer knowledge and ability, which might have led to less commitment and less effort during the learning process. Another reason might be that females might have attached more importance to active participation and learning as well as valuing interaction with peers and the instructor at a higher degree compared to the males as also stated by Johnson (2011), which in turn might have affected their achievement in the course besides increasing their satisfaction and collaboration scores. In addition, male PsT obtained slightly higher social presence scores than female PsT. In this sense, one possible explanation might be that as male PsT are less than females in number, social presence might be an external stimulus for them in terms of fostering trust to share their posts on Edmodo.

Also, this study revealed that PsT in PCG, Elementary School Mathematics Teaching Department, and Classroom Teaching Departments obtained higher achievement, and satisfaction scores than those in the Social Sciences Teaching Department and Turkish Language Teaching Departments. Moreover, PsT in the PCG, and Classroom Teaching Department perceived significantly higher social presence scores than those in the Social Sciences Teaching Department. The reason for this findings might have resulted from the fact that PsT who were in PCG, Elementary School Mathematics Teaching, and Classroom Teaching Departments generally ranked higher according to University Placement Exam in Turkey. Similarly, Ramsden and Entwistle (1981) revealed the
correlation between university admission grades and academic progress. It may be inferred that PsT who were in PCG, Elementary School Mathematics Teaching and Classroom Teaching Departments are more focused on reflecting their ideas and critically evaluating the given information as the nature of the courses such as mathematics, physics, etc. they have taken compared to those in Social Sciences Teaching Department and Turkish Language Teaching Departments. For this reason, their achievement was higher so were their perceived satisfaction, collaboration and social presence which is in line with the literature (Allred-Oyarzun, 2016; Dang et al., 2016; Ferguson & DeFelice, 2010; LaPointe & Gunawardena, 2004; So & Brush, 2008; Sorden, 2011; Tu & McIssac, 2002; Weaver, 2005).

Limitations and Future Research

In the current study, findings showed that there were significant correlations among learner satisfaction, collaboration, social presence and learning in this blended course, and it may help curriculum designers, policymakers and institutions to advocate these features, take them into consideration to better meet the needs of PsT and foster more effective learning environments in teacher training institutions.

Also, female PsT obtained significantly higher achievement scores than male PsT. For this reason, it may be suggested for instructors to foster males in terms of their commitment and hard work instead of just relying on perceived computer proficiency as also suggested by Dang et al. (2016).

In the current study, the achievement of PsT was predicted by satisfaction; however, achievement may also be related to other factors besides the ones investigated in the current study such as learners’ self and autonomous learning abilities or being accustomed to learning through technology, which may affect satisfaction. Hence, future research may include these variables in predicting achievement. In this study, the achievement of PsT was determined according to the final exam. Future research may also investigate the outcomes of PsT according to the quality and the type of their contributions to Edmodo, collaborative assignments, and interaction among peers. Finally, future research may investigate the learning of PsT through differently designed blended courses such as involving group projects or wikis since the design may affect the satisfaction, collaboration and perceived social presence of PsT differently.

REFERENCES


Appendix 1.

Satisfaction

1. I was able to learn something from the discussions conducted on Edmodo.
2. The topics discussed on Edmodo encouraged me to do additional reading or research.
3. Discussions on Edmodo helped me to understand others’ points of view.
4. As a result of my experience in this course, I would like to take different lessons including online discussions in the future.
5. It was a useful learning experience for me to participate in Edmodo discussions.
19. Overall, I am happy with the co-learning experiences in this course.
20. Edmodo discussions are an efficient way of social communication.

Collaboration

6. The variety of discussion topics on Edmodo encouraged me to participate in the discussions.
13. I felt I was part of a learning community in Edmodo discussions.
14. I actively shared my ideas with peers in Edmodo discussions.
15. In Edmodo discussions, I was able to learn new knowledge and skills from other members.
16. I was able to develop problem-solving skills through peer collaboration.

Social Presence

25. The language and the attitudes of peers in Edmodo discussions are encouraging.
27. The explanations of peers in Edmodo’s discussions are easy to understand.
30. Edmodo discussions allow relationships based on information sharing and transmission.
Secondary School Teachers’ Effective School Perception: The Role of School Culture and Teacher Empowerment

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Abstract

This study investigates the extent to which school culture and teacher empowerment dimensions predict the effective school perceptions of secondary school teachers. The sample of the study includes 363 teachers [120 male (33.1%), 243 (66.9 %) female] from 24 secondary schools in four central districts (Mezitli, Yenişehir, Toroslar, Akdeniz) in Mersin. The data of the study was collected via the Personal Information Form, School Culture Inventory, the School Effectiveness Index, and the School Participant Empowerment Scale. The data was analysed through stepwise regression analysis statistical method. The alpha value of 0.01 was established as a level of significance. The results revealed that professional development which is a dimension of school culture is the most important predictive variable, and it was followed by collegial support, collegial leadership, unity of purpose, self-efficacy, decision making and teacher collaboration. Together, these seven significant predictors explained 59.1% of the variance in the teacher perception of school effectiveness. Moreover, learning partnership dimension of school culture and status, impact, autonomy and professional growth dimensions of school participant empowerment were not statistically significant in explaining the school effectiveness. According to the results of this study, school culture has stronger relations with school effectiveness than the teacher empowerment has. This may mean that a school should have a culture that values professional development of its teachers, collegiality, collaborative leadership and teamwork in order to be effective.

Keywords: School Effectiveness, School Culture, School Participant Empowerment, Teacher Collaboration.

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INTRODUCTION

Schools are organizations whose goals tend to change over time and the focus is on the administrator’s goals rather than those set by clients or the public (Hoy & Ferguson 1985). Because schools have a huge responsibility for using the resources and materials right without wasting them, it can be said that they must have accountability. As a result of the increasing interest in schools, school effectiveness researches span several decades and disciplines. The term effective school has been a desire for researchers to demonstrate it matters for children, especially after the Equality of Educational Opportunity Report (EEOR) (Coleman et al., 1966). Although it dates back to the 1960s, effective school studies started in the early 2000s in Turkey. They are initially focused on examining the characteristics of effective schools from the stakeholders’ perceptions and also determining to what degree schools have them (Çubukçu and Girmen, 2006; Gündüz, 2015; Kuşaksız, 2010; Yağız, 2016, Yaralı, 2002). There are also studies investigating the effective school perceptions of teachers and managers who work in private and public primary schools (Söğüt, 2003). Then the correlational studies follow them, which mainly concentrate on the correlation between the effective school perceptions of the stakeholders (students, teachers, parents, etc.) and various leadership styles of the school principals (Şahin Dinçsoy, 2011; Tuncel, 2013). The school culture and effective schools also take place in the correlational studies in the literature (Ayık and Ada; 2009; Cheng, 1993; Chrispeels, 1992; Olivier, 2001). On the other hand, teacher empowerment has been an isolated research area from those variables. Although there are some defining and modeling studies (Short, 1994; Wan, 2005; Zembylas & Papanastasiou; 2005) and following correlational studies with some school characteristics and organizational variables (Bogler & Somech, 2004; Short & Johnson, 1994; Short & Rinehart, 1992; Thornburg & Mungai, 2011), it can be said that teacher empowerment has not been a matter of effective school research combining with the school culture.

Klopf, Schelden & Brennan (1982), who make the most comprehensive definitions for effective school, describe it as a school that enables each student with particular intellect and ability to develop cognitive, psychomotor, affective, and social aspects. Similarly, Sammons & Bakkum (2011) define an effective school as the school where students’ cognitive, psychomotor, and social development is supported and an appropriate learning environment is created. In addition to these definitions, according to Lee & Smith (1995) effective schools are the schools that maximize student learning no matter the students’ ability level or background advantages and disadvantages. Despite all these definitions, some researchers pointed out that the difficulties and limitations of the definition of the term. Similarly, Harnes (2000) explains that school effectiveness is a difficult concept to define, and in its nature, it is difficult to measure. Sammons et al. (1995), by centralizing the teaching processes, define eleven key characteristics of the effective school as professional leadership, shared vision and goals, a learning environment, concentration on teaching and learning, purposeful teaching, high expectations, positive reinforcement, monitoring progress, pupil rights and responsibilities, home-school partnership, and a learning organization. Hence, thanks to the diversity of effectiveness definitions in organizational behavior, school effectiveness is not likely to have a universal meaning.

School culture is commonly defined as the normative adhesive that holds a school together (Barth, 2002; Hoy & Hoy, 2006; Schein, 2004; Sergiovanni, 2000). Gruenert and Valentine (1998) identifies six dimensions which are collaborative leadership, teacher collaboration, professional development, collegial support, unity of purpose, and learning partnership. By analyzing all these dimensions, a deep insight into the shared values/viewpoints, the patterns of activities, and the process of how they function and interact can be asserted (Barth, 2002). So their distinct roles can be seen in detail, at explaining effective school perceptions of the staff at a particular school. As one of the subdimensions of the school culture related to collaboration, collaborative leadership, refers to the extent to which teachers’ ideas, suggestions, and contributions are accepted by school leaders, and how much school leaders trust, encourage, and consult teachers in decision-making (Gruenert, 2000). It requires teachers to work, plan, observe, and in cooperation to lead to academic excellence in the long term (Butucha, 2013; Gentzler, 2005; Gruenert, 2000). Professional development refers to the practice of developing one’s professional expertise and capability through workshops, professional growth seminars, pieces of training, resource persons, professional publications, and other resources.
(Gruenert, 2000). To create such a teamwork harmony between teachers, other subdimensions of the school culture collegial support, unity of purpose, and learning partnership follow them. Collegial support is defined as helping each other reflect on practice and learn ways to work more adequately within the school company to promote the quality of life for students and adults (Krovetz, 1995). Unity of purpose indicates that how teachers centralize on a shared goal, such as the school’s mission (Norman, 2019). Finally, as a must for teachers to keep the collaborative hype in the school culture, learning partnership means working cooperatively, trusting, and helping each other focus on improving performance and overcoming school work for teachers, students, and parents (Arthur-Kelly et al., 2006; Butucha, 2013; Gruenert & Valentine, 1998). It is vital to understand what the teachers think about an effective school, especially within the context of the school culture they shape working together. This is also necessary because the school culture is more likely to be taken up by staff if they have the ‘power’ to form it. At this point, all these efforts need another synchronic process WITH them such as teacher empowerment.

Rappaport and his colleagues (1987) have described empowerment as a construct that personal competencies and abilities to environments that provide opportunities for choice and autonomy in demonstrating those competencies. For schools, teacher empowerment can be defined as making them involved in decision-making processes in a democratic school atmosphere through the sharing of responsibility. Short (1994) identifies six empirically-derived dimensions of teacher empowerment. Involvement in decision making is described as participation in and responsibility for decisions involving budgets, teacher selection, scheduling, curriculum, and other programmatic areas. Teacher impact refers to teachers’ perceptions that they have an effect and influence on school life (Short, 1994). Ashton and Webb (1986) regard it as a facilitator on growing teachers’ positive self-esteem. Teacher status, which is directly associated with one of the dimensions of the school culture ‘collegial support’, means that teacher perceptions that they have professional recognition and dignity from colleagues (Short, 1994). It is also associated with the teacher perceptions of the community, which generally depicts a low status. Professional growth, as a dimension of empowerment, refers to teachers’ perceptions and beliefs that the school in which they work enables them the convenience to grow and build themselves up professionally, as well as the process of continuous learning and expanding skills (Short, 1994). Firestone (1993), points out that attempts to professionalize teachers (empower) constitute teacher engagement and advance instruction quality by increasing teacher ability. Self-efficacy is explained as teachers’ perceptions that they have the skills and ability to help students learn, are competent in building effective programs for students (Short, 1994). The sense of teachers’ certainty about their competence is highly tied in with student achievement (Rosenholtz, 1985). Autonomy, as another dimension of empowerment, specifies the teachers’ perceptions of their power of control on their work-life, especially on definite parts like scheduling, curriculum, textbooks, and instructional planning (Short, 1994). Empowerment has several dimensions to construct a healthy sharing between the school leader and the teachers. That means it is not only the leader’s duty but also the teachers’ beliefs and perceptions to maintain the bridges for empowerment. That’s why it is important what teachers think and how they feel about empowerment practices.

Issues and Purpose of the Research

Thanks to the diversity of staff duties at secondary schools, it becomes almost impossible for the leader to administrate effectively such a “hot spot” without empowering teachers. By treating them as professionals and sharing authority and responsibilities, a leader can enable teachers to create a culture and work in a climate of trust and open communication (Thornton & Mattocks, 1999). Locating at the very heart of these dimensions, school culture both shapes and is shaped by this atmosphere simultaneously. That means, with a more participatory and democratic workplace, first the collaborative school culture is likely to emerge and then create a professional community (Marks & Louis, 1999). So empowerment is one of the critical variables that can be observed at the differentiation of strong culture-effective schools / weak culture-ineffective schools (Cheng, 1993). In relation, mapping a strong school culture and linking it to the school improvement is not only a must for school effectiveness but also a path to organizational learning (Lee & Louis, 2019; Louis, Marks & Kruse, 1996). As a part of this effort, all variables within the effective school concept, especially the
ones which input (teacher qualifications, school infrastructure, and per-student expenditures) and throughput (support from higher administrative levels and school location, teacher behaviors, orderly atmosphere, and the quality of school curricula, etc.) parts include, are essential to reveal how to function in effective school settings. To operate a secondary school effectively in particular, which includes a wide range of activities in tandem, it is vital to understand and analyze all those variables through its participants’ points of view, especially the teachers’. This study specifically aimed at examining the extent to which school culture and teacher empowerment predicted school effectiveness. The primary research questions of this investigation were resolved as follows:

i. Is there a significant relationship between the dimensions of school culture and teacher empowerment and school effectiveness perception of secondary school teachers?

ii. What are the predictive power of the school culture and teacher empowerment dimensions on secondary teachers’ perception of school effectiveness?

**METHOD**

**Sample and Procedure**

According to the report of Mersin Provincial Directorate for National Education, 3,823 secondary school teacher which constitute the sample of this research. The sample of this research was determined by the cluster sampling technique. 24 secondary schools were selected randomly from four central districts of the Mersin province. Later, all teachers working at these schools were included in the sample. Finally, the sample of this research was composed of 354 teachers working in these secondary schools. The sample consisted of 120 male (33.1%), 243 (66.9 %) female teachers from 24 secondary schools. The teachers' professional experience was as follows: 7.7 % between 0-5 years; 16.5 % between 6-10 years; 26.4% between 11-15 years; 21.8% between 16-20 years; 27.5% over 20 years. The average length of teaching experience of teachers at the schools was 2.82 years. When it comes to the education level, 313 teachers got an undergraduate degree, 46 teachers got a master’s degree and one teacher got a doctorate. 51.2 % of the teachers teach social science and foreign language, 32.3 % of the teachers teach mathematics, science, and information technology and 16.3 % of the teachers teach physical education and sports, music, and arts. All questionnaires were completed anonymously by paper-pencil and participation in the research was entirely voluntary.

**Research Instruments**

In addition to demographic characteristics form three data collection instruments were used in the study. Reliability measurement is performed used by Cronbach Alpha. The perception of school effectiveness was assessed by The School Effectiveness Index (SE Index) developed by Hoy (2014), consistently found high reliability with alpha coefficients ranging from 0.87 and 0.89. SE Index has a one-factor structure including an 8-item Likert-type scale that provides a collective judgment of the overall effectiveness of a school. It measures the degree to which a school is perceived to be effective by its teachers. Teachers’ responses were scored on a 6-point Likert-type ordinal scale from strongly disagree to strongly agree. The Turkish version of the scale was used in this study. The Turkish adaptation of the scale was conducted by Yıldırım and Ada (2018). The result of the adaptation of the scale showed that the loadings range between .62 and .77 while the internal consistency coefficient was .86. with a one-factor structure. In this study, the Cronbach’s alpha value of the scale is determined to be .87.

Gruenert and Valentine (1998) developed the School Culture Inventory (SCI) which consists of 35 items and the items are rated on a 5- Likert-type scale ranging from 5 (strongly agree) to 1 (strongly disagree) to measure school culture perceptions of teachers. The adapted version of the scale which was conducted by Ayık (2007) by test-retest method and construct validity was examined through factor analyses was used in this study. The SCI contains six dimensions that specifically assess teachers’ perceptions in the following areas: collaborative leadership (.89), teacher
collaboration (.76), unity of purpose (.78), professional development (.75), collegial support (.67), and learning partnership (.62). Cronbach’s alpha coefficient was found as .88 for this research.

Teacher empowerment was measured by using the School Participant Empowerment Scale (SPES) which was developed by Short and Rinehart (1992). The Cronbach’s alpha for this scale in their study was .94. The SPES was composed of 38 questions and six dimensions of teacher empowerment. It was adapted to Turkish by Gavuz (2008) and this version of the scale was used in this study. As a result of the analysis, Gavuz (2008) reported that items were loaded to six factors like decision making (.67); professional growth (.70); status (.87); self-efficacy (.87) autonomy (.80); and impact (.80) as in the original version but the questions numbered 1,2,7,11,17,25 were excluded from the scale. This 32-questioned version of the scale was applied in this research. The present study yields a reliability coefficient of 0.86.

**Data Analysis Techniques**

The data cleaning procedures and regression analyses were both conducted by the SPSS 22 program. Before carrying out the regression analyses, the Mahalanobis distance was calculated to identify anomalous cases. Overall, 16 cases were left out, representing 4.3% of the sample. A final sample of 354 valid questionnaires was used in the analysis. A multiple regression analysis was conducted to check for multivariate normality, linearity, and lack of multicollinearity. The correlation analysis among the variables was computed to determine whether there is a multicollinearity problem by using the variance inflation factor (VIF). None of the VIF values was > 2 and no tolerance value was < 0.2, indicating no problem with multicollinearity (Akinwande, Dikko, & Samson, 2015; Field, 2016). In addition to this, the Durbin-Watson (DW) test result, which was 1.90, indicating no significant correlations between the residuals (Field, 2009). Finally, stepwise multiple linear regression analyses were applied to determine the predictive power of school effectiveness perception of teachers in other variables.

**FINDINGS**

**Correlation Analysis**

To test the relationship between school effectiveness, school culture, and school participants’ empowerment, correlation analysis was performed. The finding on the relationship between variables, the correlation matrix is presented in Table 1 which shows that there are significant and positive bivariate correlations among all the variables. Moreover, the bivariate results between the independent variables and dependent variable showed that school effectiveness was positively related to collaborative leadership ($r = .65$), teacher collaboration ($r = .68$), unity of purpose ($r = .66$), professional development ($r = .70$), collegial support ($r = .64$), learning partnership ($r = .55$), decision making($r = .27$), professional growth ($r = .37$), status ($r = .44$), self-efficacy ($r = .50$), autonomy($r = .46$) and impact ($r = .42$).
which accounted for .006% of the variance as seen Table 2. Together, these seven significant predictors explained 59.1% of the variance in the teacher perception of school effectiveness (F(7, 346)= 71.570, p<.001). Moreover, the learning partnership factor which is a factor of school culture is the most important predictive variable, and accounted for .49% of the variance, collegial support which accounted for .05% of the variance, collegial leadership which explained an additional .02% of the variance, unity of purpose which accounted for .01%, self-efficacy and decision making which explained an additional .005% of the variance and school efficacy and decision making which explained an additional .001% of the variance as seen Table 2. Together, these seven significant predictors explained 59.1% of the variance in the teacher perception of school effectiveness. Hence, it is obvious that professional development which is a factor of school culture is the most important predictive variable, and accounted for .49% of the variance, followed by collegial support which accounted for .05% of the variance, collegial leadership which explained an additional .02% of the variance, unity of purpose which accounted for .01%, self-efficacy and decision making which explained an additional .005% of the variance and teacher collaboration which accounted for .006% of the variance as seen Table 2. Together, these seven significant predictors explained 59.1% of the variance in the teacher perception of school effectiveness.

Regression Analysis

According to the predictive power of variables, it is obvious that professional development which is a factor of school culture is the most important predictive variable, and accounted for .49% of the variance, followed by collegial support which accounted for .05% of the variance, collegial leadership which explained an additional .02% of the variance, unity of purpose which accounted for .01%, self-efficacy and decision making which explained an additional .005% of the variance and teacher collaboration which accounted for .006% of the variance as seen Table 2. Together, these seven significant predictors explained 59.1% of the variance in the teacher perception of school effectiveness (F(7, 346)= 71.570, p<.001). Moreover, the learning partnership factor of school culture and status, impact, autonomy, and professional growth of school participants’ empowerment were not statistically significant in explaining the school effectiveness.

Table 1. Means, Standart Deviations and Pearson Correlations of Variables

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**p < .001

Table 2 Results of Stepwise Regressions for Predictors of School Effectiveness

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<th>Variables</th>
<th>B</th>
<th>SE B</th>
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<th>R</th>
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DISCUSSION

The results indicated that the dimensions of the school culture which are professional development, collegial support, collaborative leadership, unity of purpose, and teacher collaboration had a relative power on the teachers’ perception of school effectiveness. In terms of teacher empowerment, it was found that while self-efficacy and decision making had a relative power on the teachers’ perception of school effectiveness, the dimensions of status, impact, autonomy, and professional growth had no significant predictive role on school effectiveness.

School culture which is a form of interaction that exists in the school may enhance or hinder school effectiveness. As a result of this study, it was found out that the dimensions of school culture had predictive power on teachers’ perception of school effectiveness. This finding is consistent with previous researches, in which the effectiveness of the school in education is significantly influenced by the culture of the school (Frost, 2006; Molaney & Konza, 2011). Enhancing and improving the quality of education, school culture can motivate the entire student achievement in the learning process in schools. The culture of an organization can influence its productivity and performance. Fouts (2002) states that there is no “silver bullet” that schools may employ to ensure school effectiveness and identify the characteristics of effective schools by drawing attention to school culture variables such as effective school leadership, teachers’ professional development, levels of collaboration, communication, and learning partnership.

Moreover, it was observed that among other variables, professional development of school culture is the most dominant predictor variable and it contributes .49% toward the teachers’ perception of school effectiveness. As an important element of school culture, Avalos (2011) defines teacher professional development as teachers’ learning about how they apply their knowledge to support student learning. According to Smith and Gillespie (2007), professional development is an educational process that improves teachers’ abilities in many ways and provides teachers the skills, habits, and knowledge to improve job effectiveness. It may be stated that the finding of this research is consistent with previous research which asserts professional development as a direct outcome of collaboration in school and it determines the level of school effectiveness (Evans, 1991). Similarly, Hargreaves (1995) draws attention to the importance of creating a school environment promoting trust, effective communication, and collaboration to set up superb professional development and working conditions for teachers. It may be claimed that when the teachers were encouraged to be active participants in their learning, provided learning, and are supported, they would be able to manage their class so that students learn at the optimal level and this would be followed by an increase in the effectiveness of schools.

The findings of the stepwise regression analysis also showed that collegial support was the second most predictive variable of the perception of school effectiveness. Collegial support gives information on whether teachers engage in constructive dialogue to work together voluntarily and effectively to ensure the educational efficiency of the school. Gruenert and Valentine (1998) state that...
a high score on collegial support means that teachers trust each other, discuss teaching practices, and assist each other to achieve organizational goals. In literature, there are studies which are consistent with the finding of this study, emphasize that the close relationships among school community members contribute to the quality of education and school effectiveness (Fenwick, 2004; Hargreaves, 1994; Quicke, 2000; Tschannen-Moran, 2000). Based on previous literature and findings, it could be claimed that collegial support might be regarded as an indispensable component of school effectiveness among teachers.

Collaborative leadership which was found the other predictive variable on the role of school effectiveness refers to what extent school managers set and maintain collaborative relations with teachers and support them (Gruenert & Valentine, 1998). As suggested in the related literature, school leadership acting a facilitating role in the construction of school culture makes a difference in student achievement and school effectiveness (Ninni, 2010, Owen, 2014; Waldron & McLeskey, 2010). So this part of the results proves that teachers evaluate collaborative leadership as an important element of school culture because of its positive influence on school practices.

Furthermore, the result of this study revealed that unity of purpose is one of the other important variables for teachers’ perception of school effectiveness. Gruenert and Valentine (1998) define unity of purpose as the degree to which teachers work toward a common mission for the school. In Sergiovanni’s study (2000), it was noted that unity of purpose is a key to success and it provides the school with a sense of direction. In other words, establishing a clear mission and matching it with the teaching performances of teachers, unity of purpose may be a powerful mechanism for school effectiveness. However, if the school culture is lack unity, it may be difficult to create high expectations for all students that they will be successful.

In this study, it was found that not only collegial support had a predictive power on teachers’ perception of school effectiveness but also teacher collaboration had predictive power. Collaboration has a close link with collegiality and these terms may reflect each other (Kelchtermans, 2006). Jarzabkowski (2003) makes a distinction between two terms as collaboration deals with teachers working together for professional issues and collegiality has a broader meaning including both professional and social interactions in schools. Whereas collaboration is a descriptive term, referring to cooperative actions, collegiality refers to the quality of the relationships among staff members in a school. In Bigsby and Firestone’s study (2017), it was revealed that teacher collaboration positively affects school effectiveness and it encourages teachers to participate in professional development programs. As a result of this study, the predictive power of collegial support was found higher than teacher collaboration on the role of school effectiveness. This finding may be explained that as collegiality implies a normative dimension of school culture, ensuring collegial support among teachers may be harder than ensuring collaboration. Therefore, teachers may appreciate collegial support much more than collaboration as an aspect of school effectiveness.

Teachers play a pivotal role in terms of school effectiveness. They both make the daily decision that directly affects their students’ learning and they also contribute to schools’ function with their formal or informal leadership roles. Therefore it is important to reveal how much empowered they feel in their classroom and schools. Empowerment is regarded as a process whereby school participants develop the competence to take charge of their growth and resolve their problems (Short, Greer, and Melvin, 1994). Sweetland and Hoy (2000) view teacher empowerment which is the practice that administrators allocate power and encourage teachers, as one of the crucial factors that affects school effectiveness. In this study, it was found that self-efficacy and decision making had a relative power on teachers’ perception of school effectiveness. Self-efficacy refers to the extent to which teachers perceive that they have the skills and capacity to help students learn so teachers believe that the ability to perform their job effectively (Short & Johnson, 1994). The finding of this study regarding the significant power of self-efficacy on the perception of school effectiveness is confirmed by previous researches (Sweetland & Hoy, 2000; Short & Rinehart, 1992). Thus, it may be stated that if teachers have high expectations of themselves to perform effectively, they may carry out extra functions beyond the formal ones and will feel more committed to their school. These positive teacher
and school outcomes may provide a basis for school effectiveness. As one of the other dimensions of empowerment, decision making which is identified as allowing teachers to have a role in deciding their work environment (Hirsch et al., 2006), has also a predictive power on school effectiveness. As a result and in addition to self-efficacy, teachers may feel empowered at school with the joint decision-making practices which allow them to be confident that their decisions impact the real outcomes of school practices. Prior studies indicate that for teachers to feel empowered, they must be involved in the decision making process and given autonomy to make decisions (Davidson & Dell, 2003; Sweetland & Hoy, 2000). It may be noted that involving teachers in decision making may enhance the efficacy of organizational goals. In literature, teacher’s participation in decision making is considered as one of the indicators of effective school (Hirsch et al., 2006; Reynolds & Stoll, 2002) in parallel with the results of this study. Therefore if teachers are involved in the decision-making processes, they may get involved in school life, feel a sense of self-efficacy in making personal and organizational decisions. As a result of this study, only self-efficacy and decision-making dimensions of the teacher empowerment showed significant power on school effectiveness. Surprisingly, it was found that the dimensions which are learning partnership, status, impact, autonomy, and professional growth had no significant power on the teachers’ perception of school effectiveness. Even, the correlation between these variables and school effectiveness was positive and significant. While the literature supports relative power between school effectiveness and these variables (Sweetland & Hoy, 2000; Short & Johnson, 1994; Reynolds & Stoll, 2002), this study, however, failed to document that. Difficulty in isolating factors that impact school effectiveness may have contributed to the lack of relative power for these variables. So additional research with a larger and more heterogeneous sample could address the inconsistency between study results and the literature.

CONCLUSION

In conclusion, the present study demonstrated that school culture largely predicts school effectiveness when it was compared with teacher empowerment. As a result of the decisive role it plays, school culture, with a clearer specification of teacher and student cultures and the relationships between them, has become one of the variables within school effectiveness studies due to its significant influence on the operational effectiveness of any school (Butucha, 2013; Hargreaves, 1995). The analysis provides that in the event of improvement of school culture, school effectiveness perception of teachers will increase. This may mean that a school should have a culture that values the professional development of its teachers, collegiality, collaborative leadership, and teamwork to be effective. The explicit relationship between the professional development of teachers and school effectiveness also deserves a closer look to make further documentation. Since teachers are highly active at achieving the organizational goals of the school, it can be said that they are the most critical actors in the core of the activities mentioned. So when the leader increases the involvement in decision making, one of the functional strains in an organization, teachers can firstly evoke, then enhance the sense of a democratic school culture while acting the empowerment itself. Thus, school culture and empowerment may support and also make survive each other continuously.

The findings of this study uncover the need for additional research on the relationship between teacher empowerment and school effectiveness. In addition to this, it would be worthwhile to take into consideration other variables related to teacher empowerment which need a deeper understanding to focus on school effectiveness. Two of the teacher empowerment dimensions, self-efficacy and decision making, predicted school effectiveness significantly. So, school principals should establish working conditions in which teachers perceive themselves a high level of expectation to perform effectively and are confident that their input is valued in decision-making processes in the school. Also, the results provide information about the importance of creating positive school culture to ensure school effectiveness not only to policy-makers but also to school administrators. It may be stated that teachers play a crucial role both in creating and sustaining school effectiveness which is mostly measured by students’ academic achievement. In order to improve the quality of education, teachers’ participation in professional development activities should be encouraged.
The teachers in this study were from public secondary schools in the southern part of Turkey. Future research might study the relationships among these variables in a larger context and different geographic areas. This research was conducted in secondary school teachers so it may be worthwhile to investigate primary and high schools to determine whether the results of it reflect the perception of the teachers on all levels of education. Besides, longitudinal designs, collecting quantitative and qualitative data using different research methods, may provide new insight into teacher perception of empowerment and school culture and school effectiveness.

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The Relationship Between Social Appearance Anxiety, Automatic Thoughts and Depression-Anxiety-Stress in Emerging Adulthood

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Dicle University

Özlem Çakmak Tolan
Dicle University

Abstract

The aim of study is to examine the relationship between social appearance anxiety, automatic thoughts and depression, anxiety, and stress in university students. The research was carried out on a total of 381 participants, 214 of whom were women and 167 were men. The ages of the participants were between 18 and 35 and the mean age was 22. Data were collected via Social Appearance Anxiety Scale, Automatic Thoughts Scale and Depression, Anxiety and Stress Scale and Personal Information Form. Pearson Correlation was used to examine whether there is a relationship between social appearance anxiety, automatic thoughts, and depression, anxiety, and stress. Independent sample t-test was conducted to examine whether the automatic thoughts levels differed in terms of having an emotional relationship. Analysis of variance was used to reveal whether social appearance anxiety differentiated at the level of weight and height satisfaction. Hierarchical regression analysis was conducted to examine whether automatic thoughts and social appearance anxiety predicted depression, anxiety, and stress symptoms. It was concluded that there are positive and significant relationships between social appearance anxiety, automatic thoughts, depression, anxiety, and stress. The automatic thought averages of who had an emotional relationship were found to be significantly lower than the averages of who did not have. It was determined that there is a difference in social appearance anxiety levels according to height satisfaction. It is thought that studies to reduce automatic thoughts may be effective in reducing psychological symptoms.

Keywords: Social Appearance Anxiety, Automatic Thoughts, Depression, Anxiety, Stress

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INTRODUCTION

Our social needs, such as loving, being loved, affirmed, belonging, being with other people, are considered as essential and valuable as our physical needs. Meeting our mentioned social needs brings our desire to interact and communicate with other people and create an effective impression on people. (Kılıç, 2015), stated that external appearance plays a vital role in making an effective impression on another person and that external appearance is generally evaluated before starting communication. According to (Çınar & Keskin, 2015), the person to be contacted is first tried to be influenced by images, speech, and behaviors. The idea that people who are defined as physically attractive are popular, happy, successful, exciting, and generally loved, respected, and admired people is considered to be the most exposed social message in recent years (Papadopoulos & Walker, 2003).

Social comparison theory suggests that individuals need to make accurate evaluations about their own opinions and abilities and that they can do this by comparing themselves with other individuals (Festinger, 1954). In the mentioned comparison, it is stated that individuals can make a downward comparison with those who are considered inferior to themselves and upward with those who are considered superior to them. While downward comparisons can increase self-esteem (Gibbons, 1986), upward comparisons can have the opposite effect (Tesser, 1988). When men and women compare their appearance (body size, shape, and weight) with other men and women portrayed as cultural ideals in media images, an upward social comparison takes place, which in some cases leads to dissatisfaction with body image and binge eating behaviors (Cooley & Toray, 2001; Kaye, Strober, & Rhodes, 2002) and appearance-based anxiety and depression symptoms may occur (Myers, Ridolfi, Crowther, & Ciesla, 2012).

Negative evaluation anxiety was first defined by (Watson & Friend, 1969) as anxiety about others' appraisal, worrying about negative appraisals, and expecting to be negatively evaluated by others. Negative evaluation anxiety can also indicate the individual's social anxiety in the evaluation environment (Sevimli, 2009). In the following years, Hart, Leary, & Rejeski (1989) named the anxiety caused by negative thoughts about an individual's appearance and discomfort during physical evaluation as social physical anxiety. Social physical anxiety refers to an individual's personal concerns about body shape and composition (e.g., body fat, muscle tone and overall body proportion). Social physical anxiety showed a positive correlation with fear of negative evaluation and social interaction anxiety in the non-clinical sample, and it was conceptualized as a subset of social anxiety. Although social physical anxiety expresses concern about the negative evaluation of one's appearance, it is not seen as a comprehensive variable because it focuses more on physique (height, weight, and muscle tone) rather than appearance concerns. In this context, the concept of social appearance anxiety emerges in relation to a more comprehensive assessment. Hart, Palco, Fresco, Holle, & Heimberg (2008) named the negative evaluation anxiety one experiences due to the general appearance (face shape, skin color, distance of the eyes, nose structure, etc.) including the body shape, height, weight, and muscular structure of the person as social appearance anxiety. It is seen in the relevant literature that the relationships between social appearance anxiety and many psychological variables are examined. In this context, it is seen that relationships between variables like social appearance anxiety and self-esteem (Çelik & Şenay Güzel, 2018; Doğru, 2018), social anxiety (Levinson et al., 2013; Ben, 2017; Ülkü, 2017), body image (Turel et al., 2018; Yorulmaz & Kurutçu, 2019), internet addiction (Ayar, Özlal Gerçekler, Özdemir, & Bektaş, 2018; Dikmen, 2019), depression and anxiety (Özcan et al., 2013; Turel et al., 2018), automatic thoughts (Doğru, 2018), repetitive negative thoughts (Reilly et al., 2018) and early maladjustment schemes (Makas & Çelik, 2018) are investigated. When the mentioned studies are examined, it is noteworthy that studies on social appearance anxiety have increased in recent years.

Body image is a mental image of a person's body and expresses how individuals perceive their bodies (Garner & Garfinkel, 1981). Social appearance anxiety is defined as the reaction people feel against the evaluation of their physical structures by others (Çınar & Keskin, 2015). In other words, while the person's thoughts about her/his body are at the forefront in the body image when it comes to social appearance anxiety, other people's thoughts and evaluations about the person's body and
appearance are more important. In addition, since social anxiety is also a form of anxiety experienced depending on a specific situation, it has been suggested that social appearance anxiety may be a subset of social anxiety; it has been evaluated as a result of the negative body image related to the individual's body and appearance (Hart, Palyo, Fresco, Holle, & Heimberg, 2008; Doğan, 2010). In a study by Claes et al. (2012), social appearance anxiety was found to be positively correlated with social anxiety criteria and negative body image. In another study by Levinson & Rodebaugh (2014), the participants with negative evaluation anxiety showed more food consumption and their social appearance anxiety was high. It has also been found that people with high social appearance anxiety experience high levels of body dissatisfaction. It was concluded that negative evaluation anxiety and social appearance anxiety are risk factors for social anxiety.

Individuals with social appearance anxiety think that they will be evaluated negatively by others, worrying about exclusion and humiliation. These worries can also damage the communication and interaction with the people around them and cause psychological symptoms. Especially in university environments where social relations are more intense and important, social appearance anxiety can limit students' living opportunities as well as learning opportunities (Argon, 2014). The meanings and values given to appearance vary according to the time and culture (Kılıç, 2015). Recently, beauty attributed to appearance and body; especially with the influence of social media, news, magazines, fashion programs or the social environment, may be viewed as superior to the talents, intelligence, and skills of individuals (Ozansoy, 2012; Var, Karabulut & Atasoy, 2018). Tales, movies, and beauty magazines also convey the message that beauty is malleable. In a study by Burkley et al. (2014), it is found that the belief that “beauty is malleable”; can be associated with some risks in women such as relating self-esteem to physical attraction, having appearance anxiety, and increased interest in aesthetic surgery. In another study by Turel et al. (2018); It was concluded that social appearance anxiety and depression are important determinants of the risk of eating disorders in women. Today, the importance given to being beautiful, attractive, and handsome creates the desire to be nice and admirable in almost everyone (Kılıç, 2015). When it comes to social communication, physically attractive people tend to be more self-confident and more loved. In addition, physically attractive people can be perceived as more interesting, social, skillful, and successful by other people (Eagly et al., 1991; Langlois et al., 2000). Therefore, individuals often want to communicate with attractive people and have a positive impression on other people. It is claimed that those who think they cannot leave a positive impression on other individuals in interpersonal relationships have increased anxiety and stress levels (Leary & Kowalski, 1995). According to Trekels & Eggermont (2017), encountering ideal attractiveness criteria causes people to worry that they will not comply with these criteria and will be negatively judged because of their appearance. In the study conducted by Park (2015), it was concluded that concerns about perceived attraction might also reflect anxieties about belonging and self-esteem. The idea that not being able to meet the society's criteria, may cause feelings of inadequacy and worthlessness in people. Moreover, it may lead to psychological symptoms such as depression, anxiety, and stress. In addition, it is stated that individuals who are worried about what others will think of them are more preoccupied with their body image and appearance (Smith, 2007). Fear of one that they he/she be judged negatively because of his/her appearance; appears to be one of the essential factors in understanding bulimia nervosa, anorexia nervosa and body dysmorphic disorder (Hart, Palyo, Fresco, Holle, & Heimberg, 2008).

Cognitions can play an effective role in the emergence of social appearance anxiety. The cognitive therapy model; conceptualizes an individual's cognitive structure as basic beliefs, intermediate beliefs, and automatic thoughts. According to the cognitive model, the underlying element of all disorders is distorted or dysfunctional thoughts that affect the individual's emotions and behaviors. Bringing these dysfunctional thoughts to a functional dimension and reshaping them realistically can cause changes in emotions and behaviors (Beck, 2001). Thoughts that flow rapidly through the mind, that are not noticed at the moment, but that cause emotional (anger, joy, sadness, anger), behavioral and physiological (tension in the body, breathing speed, sweating) reactions are called automatic thoughts. Automatic thoughts, which are real words or images that pass through the person's mind, are specific to the situation and are accepted as the most superficial level of cognition (Beck, 2011). Although automatic thoughts are meaningless to other individuals, they are quite logical
and persuasive to the individual who passes these thoughts through his mind. According to Freeman, Pretzer, Fleming, & Simon (2004), dysfunctional automatic thoughts have an essential role in psychopathology development. It has been suggested by Beck, Freeman, & Davis (2004) that automatic thoughts are the leading cause of negative emotions such as anxiety, hopelessness, and anger. It has been demonstrated that biases in information processing play an important role in the etiology and maintenance of emotional disorders such as generalized anxiety disorder and major depressive disorder (Mathews & MacLeod, 1994).

When the related literature is examined, it is seen that there are many studies supporting the relationship between automatic thoughts and depressive symptoms (Buschmann et al., 2017; Garber, Weiss & Shanley, 1993; Lamberton & Oei, 2008; Yolaç Yarpuz et al., 2008). When examining the studies in which social appearance anxiety is studied together with cognitions, it was observed that there were significant positive correlations between social appearance anxiety and recurrent negative thoughts (Reilly et al., 2018), dysfunctional attitudes, cognitive distortions (Gül, 2016), and irrational beliefs (Yücesoy, 2019). In a study conducted by Doğru (2018) with university students, it was concluded that social appearance anxiety and automatic thoughts had a positive and significant relationship. The person can have various automatic thoughts towards himself, towards others and the world. Appearance concerns can be related to the person's automatic thoughts, both towards himself and towards others. In this context, it is thought that in the background of social appearance anxiety, automatic thoughts, which include worthlessness, failure, and hopelessness, may play a role.

In the Diagnostic and Statistical Manual of Mental Disorders (APA, 2013); Depressive mood is discussed together with symptoms such as decreased interest, feelings of guilt and worthlessness, changes in psycho-motor activities, inability to enjoy previous activities, changes in sleep and appetite, disturbances in attention and concentration, feeling sorrow and sadness, helplessness, and suicidal thoughts. It is suggested by Seligman, Walker, & Rosenhan (2001) that anxiety is a mood that occurs without a specific stimulus. On the other hand, stress is defined as the physiological, psychological, and behavioral reactions that arise regarding the relationship between the demands from the environment and the beliefs that the person will meet or change these demands (Folkman & Lazarus, 1984). University years are a period that brings many changes in the lives of individuals. During this period, most young individuals enter new environments that they are not used to, meet new people, and establish new social interactions. Individuals need acceptance, appreciation and approval by people they have just met. The interactions they will establish to achieve these goals can first be experienced through appearance. In this context, the university period is critical in the individual's life, and stressful events experienced during this period can affect a person's relationships, academic success, self-esteem, and professional career. In this period, an individual's social appearance anxiety is also a very stressful life event. Therefore, individuals' social appearance anxiety can cause psychological symptoms such as depression, anxiety, and stress by affecting them both psychologically and physiologically. A depressed person may develop thoughts that reflect social appearance anxiety such as "other people will leave me because of my appearance", "people will not find me attractive", "People will not like me because of my appearance" through beliefs of worthlessness, not being loved, and failure. In this way, social appearance anxiety can further strengthen individuals' worthlessness and thoughts that they are not being loved, causing them to withdraw from other people and be excluded. When the relevant literature is examined, it is seen that there is no study examining social appearance anxiety and psychological variables of depression, anxiety, and stress in university students. For this reason, it is thought that the current study, which aims to examine the relationships between social appearance anxiety, automatic thoughts and depression, anxiety, and stress in university students, will contribute to the literature. In line with this purpose of the research, answers to the following questions will be sought: Is there a relationship between social appearance anxiety, automatic thoughts and depression, anxiety, stress?

1. Does the level of automatic thinking differ according to the emotional relationship of university students?
2. Does social appearance anxiety differ according to the weight satisfaction level of university students?

3. Does social appearance anxiety differ according to the height satisfaction level of university students?

4. Do social appearance anxiety and automatic thoughts predict depression level?

5. Do social appearance anxiety and automatic thoughts predict the level of anxiety?

6. Do social appearance anxiety and automatic thoughts predict stress level?

**METHOD**

**Research Design**

The research is a relational screening model that examines the relationships between social appearance anxiety, automatic thoughts, depression, anxiety and stress among university students. Relational model is a research model that aims to determine the existence and degree of change between two or more variables (Karasar, 2018).

**Participants**

The universe of the research university students in Turkey, while the working group in the 2018-2019 academic year studying at Dicle University, 381 students who are chosen by convenience sampling method. Appropriate sampling refers to the collection of data by selecting volunteer participants who are suitable and easily accessible for the study (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2013: 92). The research was carried out with a total of 381 participants, 214 (56.2%) female and 167 (43.8%) male. Participants' ages vary between 18-35 (x = 22.00). Distribution of the participants as follows; 96 (25.2%) of the participants 1st year, 129 (33.9%) 2nd year, 39 (10.2%) 3rd year, 110 (28.9%) 4th year, 7 (1.8%) were 5th year students. 59 of the participants (15.5%) were not satisfied with their weight at all, 103 (27.0%) were not satisfied with their weight, 60 (15.7%) were indecisive about their weight satisfaction, 122 (32.0%) were satisfied with their weight, 37 (9.7%) stated that they were very satisfied with their weight, 29 of the participants (7.6%) were not satisfied with their height at all, 60 (15.7%) were not satisfied with their height, 43 (11.3%) were indecisive about their height, 194 (50.9%) were satisfied with their height, 55 (14.4%) stated that they were very satisfied with their height. 207 of the participants (54.3%) stated that they were in an emotional relationship, and 172 (45.1%) stated that they were not in an emotional relationship.

**Data Collection Tools**

**Demographic Information Form:** In the form created by the researchers to obtain information about the socio-demographic characteristics of the participants; There are questions such as gender, age, faculty, department, class, place of residence, number of people living together, marital status, place of life, how satisfied you are with your current weight and height, whether you have a girlfriend or boyfriend.

**Social Appearance Anxiety Scale (SAAS):** Through Hart, Palyo, Fresco, Holle, & Heimberg (2008) it is possible to measure responses that are generally considered negative by others, including body shape with code. The scale consists of 16 items and items are evaluated on a five-point Likert-type scale (1 = not at all appropriate, 5 = completely appropriate). Item 1 of the scale is reverse coded. High scores from the scale indicate high social appearance anxiety. The validity and reliability study of the Turkish form of the scale was conducted by Doğan (2010). In the study, the internal consistency coefficient was found to be .93, the test-retest reliability coefficient as .85, and the
reliability coefficient calculated by the test halving method as .88. In the present study, the Cronbach alpha value was found to be .93.

**Automatic Thoughts Scale (ATS):** It was developed by Hollon & Kendall (1980) to measure the frequency of automatic negative thoughts associated with depression. The scale consists of 30 items. Items are evaluated on a five-point Likert-type scale (1 = never, 5 = always). Scores that can be obtained range from 30 to 150. High scores indicate that the person uses automatic negative thoughts about himself more often. The validity and reliability study of the Turkish form was done by Şahin & Şahin (1992). According to the factor analysis conducted in this study, five factors were determined: "negative thoughts about self, confusion and thoughts about avoid, negative thoughts about personal disharmony, negative thoughts about loneliness, and negative thoughts about hopelessness." These factors were found in parallel with the factors in the study of Hollon and Kendall. In the Turkish validity and reliability study conducted by Şahin & Şahin (1992), it was observed that item-total correlations ranged between .36 and .69. The internal consistency coefficient of the scale was found .93. In the present study, the Cronbach alpha value was found to be .96.

**Depression Anxiety Stress Scales (DASS):** Developed by Lovibond & Lovibond (1995), this scale consists of 42 items, 14 of which are depression, 14 anxiety, and 14 stress dimensions. Items are evaluated on a four-point Likert type scale from "not at all suitable" to "completely suitable". The high scores from each of the dimensions of depression, anxiety and stress reveal that the individual has the relevant problem. Total scores of the scale range from 0 to 42 for each sub-dimension. In the Turkish validity and reliability study conducted by Akın & Çetin (2007), the Cronbach alpha internal consistency coefficient was .89 for the whole scale, and .90, .92 and .92 for depression, anxiety, and stress, respectively. In the present study, the Cronbach alpha value was found as .96 for the total scale, .92, .89 and .90 for depression, anxiety, and stress, respectively.

**Data Collection**

After obtaining the necessary ethical permission from the Dicle University Social and Human Sciences Ethics Committee, the students who volunteered to participate in the study at Dicle University were given information about the study; Informed Consent Form, Demographic Information Form, Social Appearance Anxiety Scale, Automatic Thoughts Scale and Depression Anxiety Stress Scale were distributed. In order to control the habituation and fatigue effect, balancing was made during the administration of the scales. The scales were applied to the participants in a classroom environment. It took approximately 15-20 minutes for the participants to fill out the forms and scales.

**Data Analysis**

Before analyzing the research data, the arithmetic means, standard deviation, skewness and kurtosis values of the variables were examined. The data obtained are presented in Table 1. Since the data on social appearance anxiety, automatic thoughts and depression-anxiety-stress given in Table 1 are between-1.5 and +1.5, it can be said that the data show a normal distribution (Tabachnick & Fidell, 2013). As the data show normal distribution; Pearson Correlation Coefficient Method was used to examine whether there is a relationship between demographic variables and main variables, social appearance anxiety, automatic thoughts, depression, anxiety and stress. Independent sample t-test analysis was conducted to examine whether the automatic thought levels of the participants differed in terms of having a boyfriend / girlfriend. Analysis of variance (ANOVA) was used to reveal whether social appearance anxiety differentiated at the level of weight and height satisfaction. In the study, VIF (Variance Increase Factors) values were examined to determine whether there was a multiple linear connection problem between the independent variables, which is one of the basic assumptions of multiple regression analysis. VIF values for independent variables were found to be between 1.00 and 1.34. Since VIF values were seen to be below 10, it was determined that there was no multi-linear connection problem and the data met the multiple regression assumptions (Padem, Göksu, & Konaklı, 2012). In the study, the Durbin-Watson coefficient was calculated to determine whether there is
autocorrelation between variables and it was found as $d = 1.989$. The Durbin-Watson coefficient, which takes a value between 1.5-2.5, shows that there is no autocorrelation problem between the variables (Kalaycı, 2010). Therefore, the Durbin-Watson value calculated in the present study shows that there is no autocorrelation between the variables. Since it was seen that the data of the study met the parametric test and multiple regression assumptions, regression analysis was used. Hierarchical regression analysis was conducted to examine whether social appearance anxiety and automatic thoughts predicted depression-anxiety-stress. SPSS 21 package program was used to analyze the data.

**Tablo 1. Average, Standard Deviation, Skewness and Kurtosis Values of the Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>$\bar{x}$</th>
<th>Ss</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Anxiety Appearance</td>
<td>381</td>
<td>1.94</td>
<td>.79</td>
<td>1.12</td>
<td>1.03</td>
</tr>
<tr>
<td>Negative Automatic Thoughts</td>
<td>381</td>
<td>2.07</td>
<td>.89</td>
<td>.95</td>
<td>.52</td>
</tr>
<tr>
<td>Negative Thoughts on Loneliness</td>
<td>381</td>
<td>2.17</td>
<td>.97</td>
<td>.78</td>
<td>.11</td>
</tr>
<tr>
<td>Negative Thoughts about Self</td>
<td>381</td>
<td>1.84</td>
<td>.87</td>
<td>1.33</td>
<td>1.51</td>
</tr>
<tr>
<td>Negative Thoughts on Hopelessness</td>
<td>381</td>
<td>1.95</td>
<td>1.01</td>
<td>1.15</td>
<td>.63</td>
</tr>
<tr>
<td>Negative Thoughts on Personal Disharmony</td>
<td>381</td>
<td>2.51</td>
<td>1.10</td>
<td>.37</td>
<td>-.72</td>
</tr>
<tr>
<td>Negative Automatic Thoughts about Confusion and Avoidance</td>
<td>381</td>
<td>2.23</td>
<td>1.02</td>
<td>.67</td>
<td>-.21</td>
</tr>
<tr>
<td>Stress</td>
<td>380</td>
<td>1.05</td>
<td>.66</td>
<td>.50</td>
<td>-.26</td>
</tr>
<tr>
<td>Anxiety</td>
<td>380</td>
<td>.82</td>
<td>.61</td>
<td>.91</td>
<td>.38</td>
</tr>
<tr>
<td>Depression</td>
<td>380</td>
<td>.80</td>
<td>.67</td>
<td>.86</td>
<td>.06</td>
</tr>
</tbody>
</table>

**FINDINGS**

*Findings Concerning the Relationships Between Social Appearance Anxiety, Automatic Thoughts, Depression, Anxiety and Stress*

Pearson Correlation Coefficient Method was used to examine the relationships between variables in the study. Findings showing the relationships between variables are included in Table 2.

**Tablo 2. Pearson Correlation Coefficient Analysis Results on the Relationship between Appearance Anxiety, Automatic Thoughts, Depression, Anxiety, Stress**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Appearance Anxiety (1)</td>
<td>.50**</td>
<td>.54**</td>
<td>.41**</td>
<td>.46**</td>
<td>.33**</td>
<td>.44**</td>
<td>.53**</td>
<td>.56**</td>
<td>.49**</td>
<td>-.13**</td>
<td>-.18**</td>
<td></td>
</tr>
<tr>
<td>Anxiety (2)</td>
<td></td>
<td>.93**</td>
<td>.90**</td>
<td>.91**</td>
<td>.85**</td>
<td>.94**</td>
<td>.78**</td>
<td>.69**</td>
<td>.69**</td>
<td>-.18**</td>
<td>-.21**</td>
<td></td>
</tr>
<tr>
<td>Automatic Thoughts about Self (3)</td>
<td></td>
<td>.78**</td>
<td>.82**</td>
<td>.70**</td>
<td>.81**</td>
<td>.73**</td>
<td>.65**</td>
<td>.63**</td>
<td>-.14**</td>
<td>-.21**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Thoughts about Loneliness (4)</td>
<td></td>
<td>.77**</td>
<td>.78**</td>
<td>.84**</td>
<td>.72**</td>
<td>.65**</td>
<td>.67**</td>
<td>-.18**</td>
<td>-.18**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Thoughts about Hopelessness (5)</td>
<td></td>
<td>.75**</td>
<td>.83**</td>
<td>.74**</td>
<td>.64**</td>
<td>.60**</td>
<td>-.22**</td>
<td>-.22**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Thoughts about Personal disharmony (6)</td>
<td></td>
<td>.81**</td>
<td>.73**</td>
<td>.56**</td>
<td>.61**</td>
<td>-.12**</td>
<td>-.13**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Thoughts about Confusion and Avoidance (7)</td>
<td></td>
<td>.73**</td>
<td>.65**</td>
<td>.67**</td>
<td>-.18**</td>
<td>-.18**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression (8)</td>
<td></td>
<td>.80**</td>
<td>.79**</td>
<td>-.15**</td>
<td>-.17**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety (9)</td>
<td></td>
<td>.85**</td>
<td>-.18**</td>
<td>-.16**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress (10)</td>
<td></td>
<td>1</td>
<td>-.14**</td>
<td>-.11*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight satisfaction (11)</td>
<td></td>
<td>1</td>
<td>.34**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height Satisfaction (12)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.01

As seen in Table 2, positively significant relationships were found between the level of social appearance anxiety and the level of automatic thoughts ($r=.50$, $p < .01$), depression ($r=.78$, $p < .01$), anxiety ($r=.69$, $p < .01$) and stress ($r=.69$, $p < .01$). Accordingly, as the level of automatic thoughts increases, so does the level of social appearance anxiety. A positively significant relationship was
found between the level of social appearance anxiety and the level of depression (r=.53, p < .01), anxiety level (r=.56, p < .01), stress level (r=.49, p < .01), and healthy eating level (r=.20, p < .01). A significant negative relationship was found between the level of social appearance anxiety and the level of weight satisfaction (r=.13, p < .01) and height satisfaction (r=.18, p < .01). A positive relationship was found between negative thoughts on self (r=.54, p < .01), which are the lower dimensions of social appearance anxiety and automatic thoughts, and (r=.41, p < .01), negative thoughts about hopelessness (r=.46, p < .01), negative thoughts about personal disharmony (r=.33, p < .01), and negative thoughts about confusion and avoidance (r=.44, p < .01).

Findings on Comparing Participants' Automatic Thoughts Based on Emotional Relationship Status

Independent samples t-test analysis was conducted to examine if the participants' automatic thought levels differ in terms of having an emotional relationship. The results are shown in Table 3.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Yes (N=207)</th>
<th>No (N=172)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Automatic thoughts</td>
<td>1.98 .85</td>
<td>2.17 .92</td>
<td>-2.121</td>
<td>.03*</td>
</tr>
<tr>
<td>About Loneliness</td>
<td>2.05 .92</td>
<td>2.31 1.01</td>
<td>-2.565</td>
<td>.01*</td>
</tr>
<tr>
<td>About Self</td>
<td>1.77 .83</td>
<td>1.92 .92</td>
<td>-1.602</td>
<td>.11</td>
</tr>
<tr>
<td>About Hopelessness</td>
<td>1.87 .98</td>
<td>2.06 1.04</td>
<td>-1.778</td>
<td>.07</td>
</tr>
<tr>
<td>About Personal Disharmony</td>
<td>2.39 1.08</td>
<td>2.66 1.11</td>
<td>-2.420</td>
<td>.01*</td>
</tr>
<tr>
<td>About Confusion and Avoidance</td>
<td>2.51 .99</td>
<td>2.34 1.06</td>
<td>-1.792</td>
<td>.07</td>
</tr>
</tbody>
</table>

*p<.05

When the values given in Table 3 were examined, it is seen that the level of automatic thoughts differ in terms of having an emotional relationship. Accordingly, the automatic thoughts score averages of those who have an emotional relationship (x̄ = 1.98, sd = .85) are significantly lower than the automatic thought mean scores (x̄ = 2.17, sd = .92) of those who do not have an emotional relationship (p <.05). Analysis results show that the level of automatic thought about loneliness, which is the sub-dimension of automatic thoughts, differs in terms of having an emotional relationship. Accordingly, the automatic thoughts mean scores of those who have emotional relationships (x̄ = 2.05, sd = .92) are significantly lower than the automatic thoughts mean scores (x̄ = 2.31, sd = 1.01) of those who do not have an emotional relationship (p <.05). It is observed that the level of automatic thought on personal disharmony, the sub-dimension of automatic thoughts, differs in terms of having an emotional relationship. Accordingly, the automatic thoughts mean scores (x̄ = 2.39, sd = 1.08) of those who have an emotional relationship are significantly lower than the automatic thoughts mean scores (x̄ = 2.66, sd = 1.11) of those who do not have an emotional relationship (p <.05).

Findings Regarding the Comparison of Social Appearance Anxiety Levels According to Weight and Height Satisfaction Levels

One-way variance analysis (ANOVA) was performed to determine whether there was any difference in terms of social appearance anxiety between groups with different weight and height satisfaction levels. Social appearance anxiety score averages according to weight and height satisfaction status are shown in Table 4 and Table 5.
As seen in Table 4, it is determined that there is no difference in participants’ social appearance anxiety levels according to weight satisfaction level \((F(4,376)= 2,079, p>.05, \eta^2=.02)\).

Looking at Table 5, it is determined that the participants’ social appearance anxiety score averages differ according to height satisfaction level \((F(4,376)= 5,977, p<.05, \eta^2=.05)\). According to the results of the Scheffe multiple comparison test that aims to find out which levels of satisfaction this difference is between; there is a difference between social appearance anxiety score averages (\(\bar{x}=1.58, \text{ss}=1.05\)) and social appearance anxiety averages of participants who are very satisfied with height (\(\bar{x}=.78, \text{ss}=.74\)) and satisfied (\(\bar{x}=.88, \text{ss}=.74\)) and dissatisfied (\(\bar{x}=.90, \text{ss}=.74\)) when the groups are compared, those who are not satisfied with the height length are found to have the highest social appearance score average.

**Hierarchical Regression Analysis Findings on the Procedure of Depression Symptoms of Automatic Thoughts and Social Appearance Anxiety Variables**

Automatic thoughts sub-dimensions were included in the first step of the hierarchical regression analysis, which consists of two stages and examines the variables that predict the depression symptom level. In the second step, social appearance anxiety was included in the equation in addition to automatic thoughts sub-dimensions. Information on the results of the two-step hierarchical regression analysis performed for depression symptoms is given in Table 6.
As seen in Table 6, automatic thoughts about loneliness (β = .20, p < .01), automatic thoughts about self (β = .23, p < .01) and automatic thoughts about hopelessness (β = .25, p < .01), the predictor role on depression symptoms was found to be statistically significant (R² = .62, F (5, 374) = 125.15 p < .01). The model explains 62% of the variance of depression symptoms. In the second stage, with the addition of the social appearance anxiety variable to the model, it is seen that the explained variance increased to 65% (R² = .65, F (1, 373) = 116.40 p < .01). In the second model, automatic thoughts about loneliness (β = .20, p < .01), automatic thoughts about self (β = .13, p < .05), automatic thoughts about hopelessness (β = .23, p < .01) and social appearance, the role of anxiety (β = .19, p < .01) on depression symptoms were found to be statistically significant.

Hierarchical Regression Analysis Findings Related to the Prediction of Automatic Thoughts and Social Appearance Anxiety Variables on Anxiety Symptoms

Automatic thoughts sub-dimensions were included in the first step of the hierarchical regression analysis, which consists of two stages and examines the variables that predict anxiety level. In the second stage, social appearance anxiety was included in the equation in addition to automatic thoughts sub-dimensions. Information on the results of the two-step hierarchical regression analysis performed for anxiety symptoms is given in Table 7.

| Tablo 7. Hierarchical Regression Analysis Results Examining the Prediction of Anxiety Symptoms by Automatic Thoughts and Social Appearance Anxiety Variables |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Model | Variables | B | SH | β | t | p | R² | ΔR² | F |
| (constant) | -.14 | .05 | -.05 | -.21 | .01 | .70 | .49 | .48 | 73.20 |
| 1 | Automatic thoughts about loneliness | .17 | .04 | .27 | 3.65 | .00 | ** |
| Automatic thoughts about self | .17 | .05 | .24 | 3.35 | .00 | ** |
| Automatic thoughts about hopelessness | .10 | .04 | .17 | 2.19 | .02 | * |
| Automatic thoughts about personal disharmony | -.01 | .03 | -.03 | -.44 | .65 | |
| Automatic thoughts about confusion & avoidance (constant) | .05 | .05 | .09 | 1.04 | .29 | |
| Automatic thoughts about loneliness | -.16 | .06 | -.17 | -.63 | .00 | ** | .74 | .55 | .55 | 78.87 |
| Automatic thoughts about self | .17 | .04 | .27 | 3.87 | .00 | ** |
| Automatic thoughts about hopelessness | .06 | .05 | .08 | 1.18 | .23 | |
| Automatic thoughts about personal disharmony | .08 | .04 | .14 | 1.95 | .05 | |
| Social appearance anxiety | .23 | .03 | .30 | 7.39 | .00 | ** |

* p < .05 ** p < .01

As seen in Table 7, automatic thoughts about loneliness (β = .27, p < .01), automatic thoughts about self (β = .24, p < .01) and automatic thoughts about hopelessness (β = .17, p < .01), the predictor role on anxiety symptoms was found to be statistically significant (R² = .49, F (5, 374) = 73.20 p < .01). The model explains 49% of the variance of anxiety symptoms. In the second stage, with the addition of the social appearance anxiety variable to the model, it is seen that the explained variance increased to 55% (R² = .55, F (1, 373) = 78.87 p < .01). In the second model, the role of automatic
thoughts about loneliness ($\beta = .27$, $p < .01$) and social appearance anxiety ($\beta = .30$, $p < .01$) on anxiety symptoms was found to be statistically significant.

*Hierarchical Regression Analysis Results Related to the Prediction of Automatic Thoughts and Social Appearance Anxiety Variables on Stress Symptoms*

Automatic thoughts sub-dimensions were included in the first step of the hierarchical regression analysis, which consists of two stages and examines the variables that predict the stress symptom level. In the second step, in addition to automatic thoughts sub-dimensions, the social appearance anxiety variable was included in the equation. Information on the results of the two-step hierarchical regression analysis for stress is given in Table 8.

**Tablo 8. Hierarchical Regression Analysis Results Examining the Exhaustion of Stress by Variables of Automatic Thoughts and Social Appearance Anxiety**

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables</th>
<th>$B$</th>
<th>$SH$</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td></td>
<td>-.05</td>
<td>.06</td>
<td>-.79</td>
<td>.42</td>
<td>.70</td>
<td>.50</td>
<td>.49</td>
<td>75.56</td>
</tr>
<tr>
<td>1</td>
<td>Automatic thoughts about loneliness</td>
<td>.31</td>
<td>.05</td>
<td>.31</td>
<td>4.23</td>
<td>.00**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about self</td>
<td>.19</td>
<td>.05</td>
<td>.19</td>
<td>2.63</td>
<td>.00**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about hopelessness</td>
<td>-.03</td>
<td>.05</td>
<td>-.03</td>
<td>-5.0</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about personal disharmony</td>
<td>.09</td>
<td>.04</td>
<td>.09</td>
<td>1.35</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about confusion&amp; avoidance</td>
<td>.19</td>
<td>.05</td>
<td>.19</td>
<td>2.22</td>
<td>.02*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(constant)</td>
<td></td>
<td>-.25</td>
<td>.07</td>
<td>-3.54</td>
<td>.00**</td>
<td>.73</td>
<td>.53</td>
<td>.53</td>
<td>72.24</td>
</tr>
<tr>
<td>2</td>
<td>Automatic thoughts about loneliness</td>
<td>.21</td>
<td>.04</td>
<td>.31</td>
<td>4.38</td>
<td>.00**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about self</td>
<td>.05</td>
<td>.05</td>
<td>.07</td>
<td>.99</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about hopelessness</td>
<td>-.03</td>
<td>.04</td>
<td>-.06</td>
<td>-8.0</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about personal disharmony</td>
<td>.07</td>
<td>.04</td>
<td>.12</td>
<td>1.94</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automatic thoughts about confusion&amp; avoidance</td>
<td>.11</td>
<td>.05</td>
<td>.18</td>
<td>2.14</td>
<td>.03*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social appearance anxiety</td>
<td>.18</td>
<td>.03</td>
<td>.22</td>
<td>5.30</td>
<td>.00**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p<.05$ ** $p<.01$

As seen in Table 8, the predicating roles of automatic thoughts about loneliness ($\beta = .31$, $p < .01$), automatic thoughts about self ($\beta = .19$, $p < .05$) automatic thoughts about confusion and avoidance ($\beta = .19$, $p < .05$), on stress symptoms were found to be statistically significant ($R^2 = .50$, $F (5, 374) = 75.56 p < .01$). The model explains 50% of the variance of stress symptoms. In the second stage, with the addition of the social appearance anxiety variable to the model, it is seen that the explained variance increased to 53% ($R^2 = .53$, $F (1, 373) = 72.24 p < .01$). In the second model, the role of automatic thoughts about loneliness ($\beta = .31$, $p < .01$), automatic thoughts about confusion and avoidance ($\beta = .18$, $p < .05$), and stress symptoms of social appearance anxiety ($\beta = .22$, $p < .01$) on stress symptoms were found to be significant.

**DISCUSSION, CONCLUSION AND SUGGESTIONS**

In the present study, the relationships between social appearance anxiety and automatic thoughts and depression, anxiety, and stress level in university students were examined. According to the results obtained from the research; It was concluded that there is a relationship between social appearance anxiety, automatic thoughts and depression, anxiety and stress variables. In addition, it was determined that automatic thoughts and social appearance anxiety variables significantly predicts depression, anxiety and stress variables.

The first finding in the research; All sub-dimensions of the automatic thoughts variable (negative thoughts about self, negative thoughts about loneliness, negative thoughts about hopelessness, negative thoughts about personal disharmony, and confusion and thoughts about avoid)
and social appearance anxiety have a positive and significant relationship. Accordingly, as the level of having automatic thoughts increases, the level of social appearance anxiety also increases. This result of the research is consistent with other studies in the literature. In a study conducted by Doğru (2018) with high school students, it was concluded that there is a positive relationship between social appearance anxiety and automatic thoughts. As a result of the research by Reilly et al. (2018) using an experimental manipulation, they evaluated repetitive negative thinking in the maintenance of social appearance anxiety; It has been revealed that there is a positive relationship between recurrent negative thoughts and social appearance anxiety. In a study conducted on high school students, it was concluded that there is a positive relationship between dysfunctional attitudes and cognitive distortions and social appearance anxiety (Gül, 2016). In a different study conducted on university students, it was determined that there is a positive relationship between irrational beliefs and social appearance anxiety (Yücesoy, 2019). Considering that the negative cognitions and automatic thoughts of the person lead to many psychological problems, it is thought that the negative thoughts of the person “about himself, about loneliness, hopelessness, personal disharmony, confusion and avoidance” influence the anxiety he/she experiences regarding how others are evaluation him/her. According to another result of the research, a significant positive correlation was found between social appearance anxiety and depression, anxiety, stress levels. Accordingly, as social appearance anxiety increases, depression, anxiety and stress levels also increase. Again, according to another result of the study, it was concluded that social appearance anxiety predicted depression, anxiety, and stress symptoms. The results obtained are consistent with other studies in the literature. In a study by Claes et al. (2012); social appearance anxiety was found to be positively correlated with social anxiety measures. In another study by Levinson & Rodebaugh (2014); It was concluded that social appearance anxiety is a risk factor for social anxiety. In a study conducted on university students; It was found that the depression, anxiety and stress scores of the participants who were worried about their appearance were higher than the other participants (Öncü et al., 2013). As a result of the study conducted by Doğru (2018) on high school students, it was found that there is a positive relationship between social appearance anxiety and anxiety. The dissatisfaction of the person with his/her appearance as a whole and his/her thoughts that he/she will be evaluated negatively by other people because of his/her appearance can cause avoidant behaviors in most of his life. With the concern that being evaluated negatively because of one’s appearance, especially at a time like university period when he/she meets many new people and opens up new interests and curiosities in his life; people can withdraw themselves from friends, do not want to go to school, and may be in a great deal with themselves and their body. As a result of all these, areas of life satisfaction decrease, and deterioration may occur in academic performance and interpersonal relationships (Akyol, Yıldırım & Sertel, 2018; Seki, 2014; Şanlıer et al., 2017; Tekeli, 2017). Therefore, symptoms of depression, anxiety and stress may occur after the mentioned negative experiences.

As another finding of the research is that significant positive correlations were found between automatic thoughts and depression, anxiety, stress symptoms. Accordingly, as the level of automatic thinking increases, the levels of depression, anxiety and stress also increase. These results are consistent with other studies in the literature (Buschmann et al., 2017; Doğru, 2018; Katriç, 2018; Parim, 2019; Yapan, 2018). Negative thoughts of individuals themselves, their environment and the world can cause various psychological symptoms. According to the cognitive model, automatic thoughts have been suggested as the main cause of negative emotions such as anxiety, hopelessness, and anger (Beck et al., 2004). In the related literature, there are studies that reveal the relationship between automatic thoughts and depression, anxiety (Sinanoğlu, 2016; Katriç, 2018; Turel et al., 2018; Parim, 2019). In this context, emerging automatic thoughts affect the psychological well-being levels of individuals. According to the other results of the research, automatic thoughts about loneliness, automatic thoughts about self and automatic thoughts about hopelessness, and social appearance anxiety, which are sub-dimensions of automatic thoughts, were found to predict depression and anxiety symptoms. In addition, it was concluded that automatic thoughts about loneliness, automatic thoughts about self, confusion, and automatic thoughts towards avoid, and social appearance anxiety predicted the stress level. According to APA (2013), among the symptoms of depression; There are symptoms such as hopelessness, despair, and pessimism about the person's situation, and perceiving himself/herself as inadequate and worthless. It is thought that the lack of
expectations about the future and focusing on negative situations constantly may increase the feelings of pessimism and helplessness and reveal the state of depression. Loneliness is considered to be a clinically significant cognitive state that has negative effects on physical and mental health (Van Beljouw et al., 2014). In a study conducted by Campagne (2019), it was concluded that loneliness leads to various health problems caused by the stress hormone. Therefore, the person's automatic thoughts about loneliness and being away from social support sources can cause the person to show stress symptoms and experience various health problems.

According to the results of a study conducted on university students by Hiçdurmaz, İnci, & Karahan (2017); It has been observed that automatic thoughts have a significant predictive effect on mental health symptoms. As a result of a study conducted on university students, it was observed that automatic thoughts were the strongest and most significant predictors of depression and anxiety (Yapan, 2018). As a result of a study conducted by Buschmann et al. (2017) on university students, it was found that high levels of automatic thoughts were associated with high levels of depression and automatic thoughts were one of the predictors of depression. As a result of another research conducted on university students; It was concluded that depression and anxiety are explained by negative cognitions rather than positive cognitions (Alsaleh et al., 2016). Accordingly, the decrease in depression and anxiety levels was found to be associated with a decrease in negative cognition rather than an increase in positive cognition. According to the cognitive model, the person's thoughts and perceptions about the situation or event affect the reactions and behaviors shown, not the event or situation itself. The person's automatic thoughts are shaped as a result of his genetic predispositions, early schemas and relationships with other people. According to Beck & Haigh (2014), schemas are also strengthened especially by negative, stressful and powerful life events. Thus, powered schemes can easily become effective and gain control over the information processing system. Therefore, with the introduction of dysfunctional or maladjustment schemes, the possibility of psychological symptoms in the individual may increase. In addition, the person's social appearance anxiety can cause depression, anxiety and stress symptoms because it leads to thoughts that other people will evaluate him/her negatively due to his/her appearance. As a matter of fact, the result of the present study shows that social appearance anxiety and automatic thoughts together predict depression, anxiety, and stress symptoms.

Another result obtained from the present study is that there is a significant negative relationship between social appearance anxiety and weight and height satisfaction. Accordingly, as the level of social appearance anxiety increases, weight and height satisfaction decrease. As a result of the study conducted by Çetinkaya, Gulaçt, & Çifçi (2019) on high school students, it was concluded that students who do not like their physical appearance have high social appearance anxiety. In another study conducted by Özkan (2017), the social appearance anxiety of the participants who were not satisfied with their physical appearance was found to be high. The dissatisfaction of the person with his height, weight and physical appearance is also related to the body perception of the person. There are studies in the literature that reveal that body perception is related to social appearance anxiety (Ben, 2017; Turel et al., 2018). In a study by Özteke Kozan & Hamarta (2017), it was concluded that as social appearance anxiety increased, the individual's appearance correction scores also increased. As the negative feelings, perceptions, and attitudes of the person about his/her body, height, weight, himself/herself in the mirror and his/her appearance as a whole increase; It is expected that the person will think that other people around him/her will consider him/her negatively because of his/her appearance and therefore social appearance anxiety increases.

According to another finding of the study, the automatic thought score averages of the participants who have an emotional relationship were found to be significantly lower than the automatic thought score average of those who do not have an emotional relationship. The automatic thoughts score averages of those who have emotional relationships, about loneliness and personal disharmony, are significantly lower than the automatic thought scores of those who do not have an emotional relationship. The beliefs of worthlessness, inadequacy, and not being loved are the basis of automatic thoughts (Beck, 1987). Therefore, people who have an emotional relationship, feel loved by
another person, feel appreciated and feel not alone; this can contribute to the person having fewer automatic thoughts by creating a protective effect.

University years emerge as an important transition period for individuals to take firm steps into adulthood as an independent individual. For this reason, it is thought that it is important to investigate the variables that may be experienced during this period and related psychological problems to produce solutions to contribute to the mental health of the community. As a matter of fact, in the present study, it was concluded that automatic thoughts and social appearance anxiety variables were related. University period is a period when the individual starts to socialize, enter new environments, and establish new friendships, and the social appearance anxiety of a person during this period causes various psychological symptoms such as depression, anxiety, and stress. A person's showing these psychological symptoms can affect the quality of life and especially friendship relations. In our study, it is seen that social appearance anxiety is negatively correlated with height and weight satisfaction level. Therefore, it is thought that conducting studies to increase body affirmation and self-esteem with young individuals may be help to in reduce social appearance anxiety.

According to another result of the study, it is seen that automatic thoughts are associated with the variables of depression, anxiety and stress symptoms and social appearance anxiety. In this context, it is thought that studies to reduce automatic thoughts may be effective in reducing people's social appearance anxiety and psychological symptoms. In addition, it is seen that participants who have an emotional relationship have lower automatic thoughts than those who do not have an emotional relationship. This result shows that having emotional support and being in intimate relationships are a protective factor towards reducing automatic thoughts. Therefore, it is thought that it will be beneficial to encourage students to have close relationships and to socialize. These suggestions of the research are more oriented towards practice. For future studies, it is thought that addressing social appearance anxiety with different groups such as adolescents and adults and various psychopathologies such as eating disorders, anxiety disorders and obsessive-compulsive disorder may contribute to the relevant literature.

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English Language Teaching and Language Teacher Education in Turkey- An Evolutionary Overview

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Necmettin Erbakan University

Abstract

This study provides a much-needed socio-political perspective on language teaching in Turkey and identifies key influences and orthodoxies past and present and their impact on current practices of language learning. The researchers provide a refreshing critique of successive cycles of policies and how they have variously sought to secure starting with imperial, nationalist, and contemporary populist ambitions of language teaching in the classroom and beyond. Almost 150 years of such efforts have frequently shoehorned teaching practices with inevitable consequences for language acquisition from primary education to university. Along with the contemporary educational changes before and after the foundation of the Turkish Republic, the researchers aim to shed light on the chronological records of language teacher education by drawing parallelism between general teacher education and language teacher education in Turkey. The paper concludes with suggestions for improving our understanding of present-day challenges in a field that remains fundamental to the future of the country.

Keywords: Language Teacher Education; The Ottoman Empire; Turkish Republic Era; Language Policy in Turkey; Curriculum Reform

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INTRODUCTION

Educational policies have a long background and have been influenced in various ways for mercantile reasons, and by their geography, religious and sociological circumstances. For this reason, understanding a current policy requires analysis of its history (Pennycook, 1998), and care should be taken for a deeper understanding of the socio-historical context when studying policy changes in language teacher training programs (Brown, 2000; Crystal, 2003; Hu, 2005; Hamid, Nguyen, & Baldauf, 2013; Nunan, 2003; Özdemir, 2006). A notable example that can be used to exemplify this assertion is the famous proposal made by the United States President John Adams to the American Academy in the 18th century. As the second president of the United States, he was unequivocal in his opinion that ‘English is destined to be in the next and succeeding centuries, more generally the language of the world, than Latin was in the last, or French is in the present age’ (“From John Adams to the President of Congress”, 1780). He went on to state the reasons for this as the population increase in America, the undeniable global influence of Britain, and the benefits that would accrue from corresponding with many nations in the medium of English.

Literature Review

Today we know that under conditions of a global liberal economy and aided by technological developments, English has become the universal language of communication far outweighing the number of native speakers in the United States, the United Kingdom, Australia, Canada, New Zealand, South Africa and several Caribbean countries (Bayraktaroğlu, 2015; Crystal, 2001; Graddol, 1997; Kachru, 1990; Kramsch & Thorne, 2002). English has gained more status in the countries where it functions as a means of communication in various contexts such as the government, the law courts, the media, and the educational system. Located at the intersection of Asia and Europe, Turkey is one of the countries influenced by the political, educational, and cultural role of English. This chapter displays an evolutionary overview of the historical development of language teaching in Turkey, and how English is embraced in language teacher education programs. Turkey has been a member of NATO since 1952 and has more recently committed itself to acquire membership of the EU. Throughout the history of the Turkish education system, religion and politics have played a prominent role in language instruction. Arabic, French and German were early examples of foreign language instruction in certain educational institutions (Altundiş, 2006; Aygün, 2008; Bektaş-Altıok, 2006; Kartal & Başol, 2019; Nergis, 2011 and Tok, 2006).

METHODOLOGY

The current study is based on a qualitative method of research and on government documents, analysis of primary sand secondary sources published in the literature and posted on official websites, using the method of historicism.

RESULTS AND DISCUSSION

The Foundations of Language Teaching in Turkey

Until the 18th century, the teaching of western languages was not promoted as the Ottoman Empire was often in conflict with European powers and pursued Islamophile foreign relations in an effort to counter the influence of its predominantly Christian opponents. The Westernization movement regarding language teaching had its origins mainly in The Tanzimat Period (Reform Period in administration, law and social order between 1839-1876). In a limited way, French teachers, materials, and methods were introduced as part of a desperate effort to modernize the Ottoman military. As a consequence, science and French appeared on the curriculum of elite military training schools. This was followed by the founding of the first French-medium medical school by Sultan Mahmut II which became part and parcel of what became known as the Reform Movement, which sought to introduce western methods and ideas selectively to Ottoman society.
By 1848 a program to train French language teachers was underway locally, soon followed by the ‘Darulmuallimin-i Aliye’ (Teachers’ College) syllabi for raising school teachers according to notions of western educational philosophy. However, these were frequently amended not least to reflect the Ottoman Empire’s shifting alliances with competing European powers (Demircan, 1988). They were also influenced by the sentiments of Western backers of missionary schools in Anatolia such as Robert College and Galatasaray Imperial Lycée, established in 1863 and 1869 respectively (Özdemir, 2006; Selvi, 2011). During the early years of the Tanzimat Period, young and promising people were selected by the Ministry of National Education (MoNE from now on) to be sent to France to learn French and teach French in Turkey when they returned. However, little success was achieved concerning this attempt which led to the opening of a foreign language teacher training school by the government through demanding assistance from the French government in 1867. The Enderun Schools were established to train government officers under the name of Galatasaray Sultanisi (Galatasaray Imperial Lycée) which is a landmark in foreign language teacher education history of Turkey, and soon earned a reputation for its quality education in Europe.

Located in Istanbul, an American School was founded outside the United States of America, in 1863, first for boys and eight years later for girls entitled as ‘American College for Girls’. Both schools were unified under the name Robert College operating as a high school. The American merchant Christopher Rhinelander Robert supported the school economically which led to moving to a more extensive campus and increasing reputation and prestige in the region together with the grants from individuals. Robert College was the first English medium educational institution, founded by Cyrus Hamlin to provide American style education. In the early stages of their education, Armenian, Bulgarian, Jewish and Greek students were enrolled in the programs (Demircan, 1988; Sarıçoban, 2012). A curriculum designed during the height of World War I in 1915 became the basis for teacher training in the first years of the Turkish Republic in the 1920s. This was followed by a certified program based on the methods of the École Normale Superieure, the French Teacher Training School (Tok, 2006).

The Republic Era- From 1923 onwards

After the fall of the Ottoman Empire, the Turkish Republic was founded in 1923. During the early years of the young Republic, non-formal basic education was given priority. Major cultural, financial and social changes accompanied the pursuit of modernization, purification and authentication of education which was made equally accessible to all citizens. The founder of the Turkish Republic, Mustafa Kemal Atatürk, influenced the vision, mission and educational goals of teaching the Turkish language to reduce illiteracy in society. Tevhid-i Tedrisat Law (Unification of Education) was enacted in 1924 to unify all religious schools called ‘Tekke, Zaviye and Medrese’ and minority groups’ schools as a part of the secularization movement in education. In the same year, the American educational expert John Dewey was invited to Turkey to analyze and make recommendations for restructuring the system. His two reports recommended redefinition of the educational system and improved teacher training along with the transformation of schools to serve as community centers, improved hygiene in schools and management of discipline (Dewey, 1924; Küçükoğlu, 2012; Turan, 1997).

The Arabic alphabet was replaced by the Latin alphabet in 1928. During this period ‘public courses’ were given in ‘national schools’ in an effort to support the drive for literacy. The Turkish Language Association was established in 1932 to set the vision, mission and goals of teaching Turkish and to produce language policy. With Dewey’s visit to Turkey, 16 students started their teacher training in Konya (a city in Central Anatolia). The school was then moved to the capital, Ankara (Dewey, 1929).

By the 1940s, demand for teachers of German, French and English saw the first foreign language teaching institutions established in Ankara Gazi and Istanbul Çapa Educational Institutes. French Language Teaching Department started in 1941-1942 academic year, English Language Teaching Department in 1944-1945 and German Language Teaching in 1947-1948.
successively. During the 3rd National Education Council in 1946, it was decided to open a number of foreign language teacher training departments in several educational institutes. However, it was not until the 1962-1963 academic year that language teacher education was prolonged to three years. As years passed the need for foreign language teachers increased, which led to the opening of more language teaching departments in educational institutes. Trainee teachers would be recruited from the graduates of secondary schools. As English came to replace French in areas of diplomacy, science, and business and as Turkey became a member of international organizations such as NATO (North Atlantic Treaty Organization founded in 1949) under the influence of the USA, French-medium instruction schools gave way to English-medium ones (Büyükkantarçoğlu, 2004). This trend saw the Turkish Education Foundation offer English-medium instruction with the opening of its well-regarded TED Ankara College in 1952 (‘college’ in the common understanding of the term in Turkey referring to private high schools where the medium of instruction in some courses is English). Turkish remained the sole medium of instruction in all schools at all state schools until the opening of Maarif Schools in 1955 where instruction in science and mathematics could be given in a foreign language. Regarding language teacher education, in the same decade, the first teacher training courses were taught by distinguished academics of the time until 1946 when a law was enacted that would curtail university faculty from teaching at other institutions, and a very enlightening era for teacher training came to a halt. The professors who offered courses at these programs before the change in the law were called ‘müzakereci’ (negotiators encouraging discussions and debate), which refers to their open-minded approach. Their involvement had served both to ease the overcrowding of classrooms in education faculties and to increase the quality of teacher training programs. Their withdrawal was accompanied by an acceleration of industrialization in the 1950s and significant growth in urban settlements whose new populations tended to favor the acquisition of technical skills. Observing this trend, educational reformist Hakkı Baltacıoğlu reiterated the importance of the profession and encouraged teachers to develop critical awareness, partly through the acquisition of higher education and obtaining a culture of philosophy (Güngör, 2008). For these reasons in the 1959-60 academic year, graduates of language teacher training programs were given the opportunity to be candidates for university-level education. The criteria for selecting promising candidates were a dramatically modern one: that the students were intelligent and hardworking, but also questioning, analyzing, and idealistic. These three features stood out as traits of a model teacher. Hence teacher training curricula today too is to have objectives that help develop critical awareness for students to think more highly of their profession’s potentials.

In the 1950s teacher training schools in Turkey were distributed around the country with the intention of reaching out to its remote corners. In the 1958-59 academic year, 75% of the students attending 52 elementary school education programs were from rural towns (Eşme, 2001). Equality of opportunity was further facilitated by preservice teachers being able to attend their classes free of boarding and tuition fees. The program on offer at these schools resembled the one that was taught in the Village Institutes, which in the period between 1940 and their recent closure had produced about 16000 transformative, intellectual teachers (Tezgiden-Cakcak, 2019, p. 104). The Village Institutes aimed to teach theory in direct relation to practice. Practicality mattered most. Hands-on teaching was the common methodology and students were encouraged to be responsible and autonomous. Above all, the common good of society was the target and teachers were expected to empower their students passionately.

The advent of higher education entry to teaching was brought a step closer when Ankara University opened its ‘Education Faculty’ in the 1965-66 academic year. By 1973, a university degree was required to be able to teach at elementary, secondary and high schools. Teachers were given the social responsibility to transform Turkish culture into a modern, Western society, that is to say, teachers bore a sacred and nationalistic mission to help advance the country, teaching the values of enlightenment. The 3-year-educational institutes were transformed into 4-year-teacher training schools and based on Istanbul University Foreign languages teacher training program; certain language examinations were administered to teachers to be recruited as language teachers. Also, the graduates of teacher training institutes were given the opportunity to be recruited as a language teacher by taking the examination but without obligatory attendance to formal education at the educational institutes.
Regarding secondary and high school language education, between 1975 and 2002, state-run Anatolian High schools gave intensive English classes and science courses were taught in English (Doğançay-Aktuna & Kızıltepe, 2015). Today, English-medium instruction prevails especially at the tertiary level and in foundation universities. Robert College was transformed into Boğaziçi University in 1971 and became one of the most prominent English-medium universities in Turkey. English-medium instruction was then written into The Higher Education Law enacted in 1981 which also made English courses compulsory in Turkish educational institutions (Demircan, 1988). As in most countries, education policy in Turkey tends to be set by the government of the day and political fluctuations have generated some structural problems too. While the public common good of the nation-state was emphasized in education after the Turkish Republic was founded, in the 1950s single-party regime conservative social practices were emphasized at schools (Değirmencioğlu, 2012). A 1960 coup brought about a progressive constitution that reflected itself in education as well. Until the 1980s the practices at schools were rather more fitting to a socialist ideology, private schools were limited in number. There were no teacher education programs, and no private or foundation universities. With the 1980 coup, the Turkish political arena was divided between leftist authoritarian republicans and the more conservative rightist wings. The military was a limiting force in any democratic practice (Değirmencioğlu, 2012; Doğan, 2010).

When it comes to language teaching, 1970s was an important decade in Turkey with the number of teacher institutes rising from 10 to 18 institutes by the end of the decade (Aydın, 2007; Dursunoğlu, 2003). The quality of teacher education was to be enhanced and candidate teachers could receive up to 4 years of training from 1978. With the establishment of HEC (Higher Education Council), all 4-year teacher training institutions and 3-year foreign language high schools were transformed into 4-year faculties of education following higher education law numbered 2547 (Deniz & Şahin, 2006).

The historical background of language teacher training programs in Turkey bears significance when trying to understand the standards and objectives expected today from teacher training departments at Education Faculties, and the social status attached to teaching and teaching English since the decisions made by MoNE and HEC had triggering factors rooted in social, economic and political realities of the time (Girgin, 2013). While in the era between the 1960s and 80s emphasized the ‘revolutionary teacher’ role, after the 1980s, the teacher identity was not that of an idealist one, but a rather ‘technician-like’ role in Turkey (Yıldız, Ünlü, Alica & Sarpkaya, 2013). The technician teacher image which was maintained in the 1990s as well was expected to transfer a body of knowledge to the students rather than transforming students to be modern and rational individuals. Yıldız, Ünlü, Alica and Sarpkaya (2013) summarize the new role of teachers very effectively when they state that teaching was perceived as an individual act divorced of its responsibilities (as cited in Tezgiden-Cakcak, 2015).

Leaving behind the idealistic teacher identity which had more responsibilities attached to it in addition to teaching content, teaching in Turkey meant mostly doing the expected transfer of information. Yıldız, Ünlü, Alica and Sarpkaya (2013) define this role as ‘robotic’ which is an expression that reveals the limited role of the teacher (as cited in Tezgiden-Cakcak, 2015). Following the exam-oriented path in teaching, preparing students for exams replaced the romantic mission of considering and contributing to the well-being of society at large (Giroux, 2012). Teacher autonomy was very limited because teachers did not have a say in designing the curriculum or choosing their own course materials (Apple, 2001; Büyüköztürk, Akbaba-Altun & Yıldırım, 2010). Yıldız and his colleagues underscore the fact that under these circumstances, teachers have become hopeless about the future of their professions (Yıldız et al., 2013). Today teaching is not a profession that is regarded as highly as it used to be in the early years of the Turkish Republic, and idealist teachers with a mission to foster a modern and developed society are hard to find.

Currently, Foreign language teacher education has shifted its focus to teaching of the language, teaching methods, teaching materials development, foundations of learning and teaching, teaching practicum, measurement and evaluation, research skills, advanced reading, writing, speaking
and listening skills (Doğan, 2020; Seferoğlu, 2004). After the 1997-1998 academic year, it was announced by the MoNE that receiving teaching certificates given by educational centers in universities was also accepted to be able to work as teachers in public schools. Teaching certificate programs contain a training program of 31 study hours a week and around 34 universities all over Turkey offer these kinds of programs (Bektaş-Altıok, 2006). It is necessary to consider the special interest in teaching and learning the English language in Turkey, because English language teaching bears a unique significance for several reasons inherently adherent to Turkey. To start with, Turkey is a strategically important trade crossroad located between Asia and Europe. Having a young workforce population, Turkey has had intense relationships with Asian, Middle Eastern and European countries using English as the means to communicate for international affairs. Never having been a colonial country, English language teaching policy plans were independently made by the Turkish Ministry of Education responding to the global influence of English after the foundation of the Turkish Republic in 1923 (Bayraktaroğlu, 2015; Kırkgöz, 2017). Today, English is a compulsory course at all levels of education in state schools in Turkey which is a self-explanatory indicator of the prominence attached to the teaching of English. The Turkish Ministry of National Education administers the compulsory English courses offered at state schools. Just as an ‘ideal’ teacher meets the needs of their teaching circumstances, policymakers consider the needs of their country when determining the requirements for teacher training programs. Compulsory English courses offered at all levels of education required significant changes to the curriculum of undergraduate English Language Teaching departments. English language teacher training programs at Turkish universities have had a dynamic past, with significant educational reforms, changes in the curricula depending on global affairs, and the changes in the understanding of the concept of education, language education, and English language education, the personnel and funding available, and advances in information technology, computer-assisted learning and the spread of the internet. The undeniable importance of English in today's globalized world has made it an indispensable part of education. The demand for English language classes fueled the growth of private schools and the need for qualified English language teachers increased which triggered some inevitable central changes in English language teacher education. After the Higher Education Council was established in 1982, higher education was centralized, and a standard curriculum was determined for all Foreign Language Education (FLE) departments.

**ELT Curriculum Reform at the Turn of the 20th Century**

Turkey’s Teacher Education Programs were reconstructed under the auspices of university Education Faculties in 1997. The Ministry of National Education and Higher Education Council were provided with World Bank funding to combine the Education Faculties with the Teaching Practicum Schools, (Hismanoğlu, 2012; Ulum, 2015). With the 1997 ELT curriculum reform, more methodology-related courses were offered at language education programs at universities with the intention to harmonize with the EU. The number of practicum opportunities was also increased to provide the opportunity for prospective teachers to experience their profession firsthand. Also, teaching English to Young Learners courses was added to the curriculum (Kırkgöz, 2005). An open teacher education program was offered by Anadolu University because there was an English language teacher shortage with the 1997 reform, which was later closed. In 2004 an EU project in collaboration with MoNE which involved 7000 teachers was initiated, which also coincided with the start of EU exchange programs (Kırkgöz, 2017). A follow-up revision to ameliorate for insufficiencies emerging during the implementation of the 1997 curriculum reform took place in 2006-2007. Several changes were made in the type of compulsory and elective courses required to be undertaken for field knowledge (linguistic competence), teacher education (pedagogic competence), general knowledge (Altundiş, 2006; Nergis, 2011) and teaching practice. The revisions sought improvements in teaching methodology and practice and to improve all four language skills, as part of a period of adaptation to the new curricula (Karakaş, 2012). Now spread across sophomore, junior and senior levels, courses were to be more varied and more professionally oriented to equip language teachers with general and pedagogic knowledge alongside linguistic competence. At the senior level, trainee teachers would be required to observe classes either in primary or secondary schools and conduct actual teaching practice under the supervision of mentors from faculty and the placement school.
In May 2018, the contents of 25 undergraduate teaching departments were updated and the new version was put into practice in September 2018 at the beginning of the academic year. As an impact of the Bologna process in education, there was a time shift for some courses in the program (Public Service, Turkish Educational System, School Management); some new courses were introduced in the curriculum (Ethics in Education), some courses were unified and added as a one-semester course (English Structure, English Education Programs, Translation, Approaches and Methods). Although the courses increased in number, the fall in the number of credits resulted in fewer course hours. The wide variety of courses for future language teachers could be considered as enrichment in alternatives. On the other hand, several foundation courses; namely, Approaches and Methods in Language Teaching, Measurement and Evaluation in ELT could be one of the drawbacks of the newly introduced curriculum. 25% of the obligatory courses were replaced with the elective courses to substitute for any provisional weaknesses concerning the content of the courses in the program (Yaman, 2018). Following the principles of Constructivism, learner autonomy has gained central focus while the teacher’s role moved towards a facilitator rather than the sole information source in the classroom. However, the new role required more qualifications on behalf of the teachers.

The update in language teacher education curriculum aimed to equip the teachers with necessary skills to qualify for their profession in the best way. Mentored micro-teaching tasks might help to bridge the gap between theory and practice and improve teaching skills, they do not allow for effective feedback as the students are in their own classroom setting and working together with their peers. (Cosgun-Ögeyik, 2016; Balbay et al., 2018). Therefore, it would be better if more importance is attached to practicum for the students to be able to start integrating themselves into the school community through receiving immediate feedback and acting accordingly.

Despite the above-mentioned reforms, graduates of English Language Departments “do not have the time or the will to update their professional knowledge mainly because self-development may not have an effect on their future hiring as teachers” (Diaz & Arikan, 2016, p. 158). Moreover, the courses offered by different English language teacher training programs at universities continue to vary considerably depending on the faculty staff employed at the departments and their areas of expertise (Balbay, Pamuk, Temir & Doğan, 2018; Çınar & Doğan, 2019). For the standard courses required by HEC, especially for the first-year language proficiency courses, the content is elusive. Also, introducing students to the multiple aspects of language teaching for the development of their professional vision at the most opportune moment was lacking from the objectives of the courses. This is widely recognized when they commence their training. At first glance, the teacher training undergraduate program is not found to be motivating critical thinking and reflection. In a recent study conducted at a prominent state university in Turkey, it was observed that the curriculum did not prepare teachers as reflective practitioners although there are some “reflective dimensions to the program” (Tezgiden-Cakcak, 2015). There may be several reasons for the future teachers being less critical and reflective. The first reason could be the academic background of students coming to receive language education. They are mostly graduates of Vocational/Technical, Anatolian, Science, Social Sciences, Fine Arts, Sports, Imam Hatip, and Medical Vocational High Schools. The so-called high schools provide extra courses added into their curriculum besides the core curriculum depending on their mission, however, this diversity does not hinder their graduates to take the centralized exam for attending language departments by having the equal chance with all high school graduates. On the other hand, the extra curriculum covered at an Anatolian High School is different from a Vocational High School regarding students’ foreign language competences. In order to be placed at an undergraduate program that would later lend itself to become an English language teacher, students take several multiple choice high stakes central exams: The TYT (Temel Yeterlilik Testi: Basic Proficiency Test on courses that are not English language oriented) and YDT (Yabancı Diller Testi: Foreign Language Test on English language proficiency) This exam is on mostly reading comprehension skills. Listening, writing and speaking skills are not evaluated in this exam. Both exams are used for university program placement and the generic name used for both is YKS (Yüksek Öğretim Kurumlar Sınavı: Examination for Higher Education Institutions). After receiving the required scores from the so-called centralized exam, the candidates may make their preferences among the following programs: English Language Teaching Department (at Educational Faculties), English Language and Literature, American Language and Literature, Translation and Interpretation and
Linguistics Departments (at Faculty of Letters and/or Social Sciences). There are around 120 English Language Teaching Department programs, graduates of which have the right to be recruited as English language teachers in Ministry of National Education schools and higher education institutions in Turkey (İngilizce Öğretmenliği Programı Bulunan Tüm Üniversiteler, n.d.). If the teacher candidate is not a graduate of the Education Faculty affiliated language teacher education undergraduate program but is a graduate of a literature, translation or linguistics oriented undergraduate program, operating under Faculties of Letters and/or Social Sciences, the graduate students have to receive pedagogical formation certificates from the Educational Faculties to be able to start teaching languages in MoNE schools. The diversified content of the faculty programs could be the second reason for attributing less attention to developing higher order thinking skills through reflective teacher training practices focusing on the actual circumstances of real-life teaching settings. Except for English Language Teaching graduates, the remaining departments’ graduates have to take extra pedagogical formation courses to become language teachers (Cephe, 2014; Taneri, 2016). This gives way to inequality regarding teacher competencies. What is more, after graduation Public Personnel Selection Examination (KPSS), Test of Teaching Professional Knowledge and interviews have to be taken to be eligible as a language teacher to work at state schools in Turkey. As for positions at higher educational institutions, the credentials to become a language instructor or a research assistant in language departments in general are taking Academic Personnel and Postgraduate Education Entrance Examination and Foreign Language Examination. The undergraduate grade point average teacher candidates and interview results are also integral parts of the evaluation process when applying for instructor or research assistant positions at higher education institutions. The examination-oriented structure to become a language teacher distracts departmental focus and puts less emphasis on raising critical and reflective teachers.

The Turkish education system passionately promoted a monotype homogenous national identity especially in the post-republic era until the minor changes in certain regulations and requirements taking place recently in the 2000s acknowledging the existence of the other cultures living in Turkey. Çelik, Gümüş, and Gür (2017) explore the changes towards a more democratic attitude in the Turkish education system and analyze them in three different categories: “ethnolinguistic, religious and cultural domain”. In their article, they define the mono-cultural education system in Turkey as a system with nationalistic and militaristic discourse, exclusionary and discriminatory toward the Non-Sunni Turkish” (Çelik, Gümüş & Gür, 2017, p. 104). In monoculture education systems, there is a centralized institution that schools are affiliated with which decides on the pedagogical policies agreeing with the dominant culture (Nieto, 1994). In the Turkish centralized system, the MoNE is responsible for a central arrangement of financing state schools in Turkey and appointing teachers, deciding on the common curriculum to be followed in all schools and providing course books and materials. According to the OECD research conducted on countries who participated in the PISA 2012 survey, Turkey ranks among the countries which give the least autonomy to schools when it comes to preparing the curriculum (OECD, 2013). Turkey is home to several minorities including, but not limited to Kurds, Armenians, Arabs, Circassians, Lazs, Assyrians, from different races and cultural backgrounds, speaking different mother tongues than Turkish. In the democratization project of the current government in Turkey, an elective course to teach languages other than Turkish, English, French or German was introduced as an inclusive policy to respect the existence of the languages of ethnic minorities, such as Kurdish, Laz language and Georgian, in Turkey, in 2012 (Çelik et al., 2013). In 2013, places on such elective courses for learning languages “conventionally spoken by Turkish citizens in daily life” were taken up by 43 thousand students in middle school (Çelik et al., 2017, p. 109).

English language teachers use materials that represent different cultures when teaching English. Many textbooks address an international audience, a multicultural class, global values rather than locally accepted ones. The Turkish education system has also come under increasing socio-political pressure in part from the forces of globalization, in part from demands for greater acceptance of minority languages, culture, and religions, which requires many procedural changes in practice at Turkish schools. In fact, today, many developed or developing countries face a rapid change in their rather monolithic, homogenous culture and the growth of mobility of people from one country to the
other. It has been observed that students in multicultural classrooms are disadvantaged when their language, culture, and religion are absent from the curriculum or the course materials. A multicultural education that is more fitting to the classrooms of 21st-century schools requires restructuring education to provide equal opportunities to students of different genders, social classes and ethnic backgrounds’ (Banks, & Banks, 2010, p. 446). Bearing these afore-mentioned idiosyncratic characteristics of the Turkish context, raising, educating and training English language teachers bears even more significance since English language courses are an opportunity for students to perceive themselves as global citizens, introduced to global values with the intention to prepare students to survive in the international arena when using English as a means for communication. As stated in the TALIS (2019) report, teachers who participate in systematic professional development activities add to their professionalism especially when they are given the opportunity to address their contextual needs through systematic reflection. Hence, English language teachers should no doubt be reflective human beings, rather than just being transmitters of the structure and vocabulary of the language that they are teaching.

CONCLUSION

Teacher education and language teacher education came a long way, shifting focus depending on the national and international politics of the time. While focus was a unified education system in the nationalist era, as was the case all over the world, the focus has shifted to a more democratic and inclusive system much later on. MoNE is still a context for many European Court of Human rights cases when it comes to meeting the demands of the minorities. For the monoculture system to gradually fade away without the presence of appropriate changes to curricula, for more democratic, pluralistic and inclusive education, teachers should practice and internalize being open-minded and accepting, ridding themselves of prejudices and biases, developing a critical awareness of the dynamics at play in the particular culture they are teaching in.

The recent COVID 19 outbreak is a challenge transforming educational practices drastically around the world. Language teaching has also been affected by the transition to online or hybrid education. According to the digital age educational plan of the European Commission (2020), digital technology can facilitate more personalized, flexible and student-centered learning, help learners and educators access, create and share digital content. It can also allow learning to take place beyond the lecture hall walls, classroom or workplace, providing more freedom from the constraints of physical settings and timetable. Although it provides the ease of reaching many from the comfort of home, equipping all learners and teachers with digital competencies and the technological tools, the infrastructure, the inclusion of online learning into curricula, it is still the policymakers who will shape the educational agenda. The crisis is an accurate display that digital education is no longer an island of its own but considered an integral part of education. The survey conducted by the European Union reveals that digital technology should be integrated into education and a consistent set of quality standards and guidelines should ensure an appropriate mix of digital and face-to-face learning experiences. It is still too early to conclude on the long-term consequences of online education on language teaching, yet the preliminary experience published in the most recent literature seems to be promising. Hence, the new issues introduced by online education are on the agenda of countries to stay. All in all, paying a visit to Turkish educational history may inspire educators to take the proper steps and invest in the future education policies of Turkey.

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Metaphoric Perceptions of Teachers and Parents Regarding the Concept of Specific Learning Difficulty (SLD)

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Abstract

The purpose of this study is to reveal the metaphorical perceptions of parents with children with SLD and teachers who work with the children who have SLD. The design of this study is phenomenology, which is one of the qualitative research designs. The data collected in the study were analyzed by content analysis method. A total of 218 participants, including 117 teachers and 101 parents, took part in the study. In the research findings, the number of metaphors produced by the teachers is 59, and the number of metaphors produced by the parents is 49. While the metaphor most used by teachers is “the person who struggles”, the metaphor most produced by the parents is “maze”. While the conceptual category in which teachers produced the most metaphors is "a complex situation", the conceptual category in which parents produced the most metaphors is "a situation in which progress is slow”. When the conceptual categories obtained from the study were examined, teachers and parents produced six common categories. These are 1) a complex situation, 2) a situation that requires effort, 3) a situation that makes you feel different from the others, 4) a situation that creates a feeling of not knowing what to do, 5) a challenging situation, and 6) a situation where progress is slow. Except for these common categories, parents have also produced the category of a situation that feels desperate. When the metaphors produced are considered from both parent and teacher perspectives, it is seen that the perception about SLD is generally negative.

Keywords: Metaphorical Perceptions, Specific Learning Difficulty, Phenomenological Approach, Metaphor

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INTRODUCTION

Specific Learning Difficulty (SLD) is a biological neurodevelopmental disorder with cognitive differences (American Psychiatric Association [APA], 2013). In this study, Specific Learning Difficulties (SLD) notion will be used as general term including its sub-types. The reason for this is that specific learning disabilities include a very heterogeneous group (McDowell, 2018; Melekoğlu, 2017). For SLD diagnosis, features such as slow and inaccurate reading, difficulty in reading comprehension, difficulty in writing letters and written expression, difficulty in calculation and number perception, and difficulty in basic reasoning skills should continue for at least six months. Besides, the academic skills of the child should be significantly lower than their peers at school and daily life skills should be affected by SLD. In addition, it should be determined that these features are not caused by mental disability, vision and hearing problems or other mental disorders. Considering that 10-15% of school-age children are affected by SLD, students with SLD constitute the most common group among special needs students (Wong et al., 2011).

The most common types of SLD found in the literature can be explained as reading difficulties (dyslexia), mathematics learning difficulties (dyscalculia), and writing difficulties (dysgraphia) (Cortiella & Horowitz, 2014). Reading difficulty affects approximately 80% of students diagnosed with SLD (Shaywitz & Shaywitz, 2004). Students who have reading difficulties generally have difficulties in skills such as phonological awareness, word recognition, word analysis, correct reading and reading fluency (Fletcher, 2009). In addition, difficulties are experienced especially in the areas of language and memory. Difficulties in the field of language can be explained as remembering words and concepts, rapid naming, pronunciation errors, delay in language skills, and problems in expressive and receptive language (Rief & Stern, 2010). Another feature that affects language skills is memory, one of the cognitive features. It is stated that students with reading difficulties have difficulties in short-term memory, working memory and phonological short memory compared to their peers. Problems experienced in memory can cause students to quickly forget what they have learned (Fletcher, et al., 2018). It is stated that students with mathematics learning difficulties often have difficulties in feeling the true value of numbers, correct and fluent calculation operations, mathematical reasoning, mathematical problem solving, and understanding numerical patterns (Desoete & Baten, 2017). The symbolic expression of numbers is stated to perceive and process these expressions more slowly for children with learning difficulties compared to their peers (Desoete, et al., 2012). It is observed that students with math learning difficulties have more difficulties in working memory, executive functions and attention, especially in cognitive areas (Swanson & Siegel, 2011). It can be stated that students with writing difficulties generally have difficulties in two main areas: writing letters correctly and written expression. The fact that writing skill is based on hand and eye coordination shows that writing is a physical process. In this case, the features that affect writing difficulty are motor coordination and planning. This situation causes students with writing difficulties to have difficulties in fine motor skills (Wong, et al., 2011). Preston and Stultz (2018) stressed how researchers in education, mental health, and any other areas need to act from a contextually sensitive perspective to understand and identify issues to come with evidence-based education strategies and services. Therefore, from such a contextual perspective, the researchers in this study consider it very important to reveal how SLD is conceptually perceived by individuals who are in direct contact with students with SLD, who are among the most common needs group. This was the starting point of this study.

Concepts can be expressed as the abstract and general common name of objects or thoughts in the human mind. Concepts form the building blocks of thoughts that make it easier for people to understand and perceive the world (Yılmaz & Çolak, 2011).

Metaphors created by resembling to concepts are use of the words corresponding to a structure based on similarity in place of another figurative word (Ricoeur, 1976). Human thought and conceptual systems tend to think metaphorically (Knowles & Moon, 2006). While metaphor is expressed as a tool used to explain the complex structures of a field and facilitate its comprehension (Low, 2008), it is similarly interpreted as a powerful tool that can be used to understand and explain...
highly abstract, complex or theoretical events. Metaphor is the explanation of the expression of a concept in the mind with other concepts that are not related to each other. At the same time, metaphors bear traces of individuals’ personal creativity, observation ability, experiences, knowledge levels, and cultural values (Saban, et al., 2006).

Metaphors are frequently used concepts in education and science (Low, 2008). In education, there are examples in which complex concepts and phenomena are explained with familiar concepts through analogy (Geçit & Gencer, 2011). When the literature is examined in general, it is seen that there are many metaphor studies about educational terms (Aydın & Sulak, 2015; Saban, 2004; Yılmaz et al., 2013). Especially in the field of special education, it is seen that there are studies on the metaphorical perceptions of teacher candidates about special education (Flight, 2016), the metaphorical perceptions of pre-school teacher candidates about gifted children (Duran & Dağlıoğlu, 2017), college students’ perception of SLD (Öğülmüş et al., 2021), and the metaphorical perceptions of classroom teachers about special education (Başgül & Sağır, 2017).

The present study is important in terms of revealing how parents and teachers perceive the concept of “learning difficulty” as a result of their lives with children diagnosed with SLD and how they give meaning to it in their minds. In addition, this study is important in terms of revealing the similarities and differences that families who have children with SLD and teachers working in the field have in terms of metaphors about the concept of SLD.

In this context, the general purpose of the study is to determine the metaphorical perceptions of families with children with specific learning difficulties and teachers who work with children with learning difficulties about the concept of “learning difficulty”. In order to achieve this purpose, it was looked for an answer for the following questions;

1) What are the metaphors in the minds of teachers who work with children with SLD regarding the concept of ‘learning difficulty’?

2) What are the metaphors in the minds of the parents with children with SLD regarding the concept of ‘learning difficulty’?

3) How do teachers define the metaphors they associate with the concept of “learning difficulty”? 

4) How do parents define the metaphors they associate with the concept of “learning difficulty”?

5) Are there any similar conceptual categories related to the metaphors that parents and teachers associate with the concept of “learning difficulty”?

**METHOD**

**Research Pattern**

In this study, the phenomenological design, which is a qualitative research, was used. Phenomena is experiences, opinions, tendencies and concepts in the world we live in. The phenomenological pattern focuses on events that we cannot understand in depth and detail (Yıldırım & Şimşek, 2011). Personal experiences form the basis of the phenomenological pattern. In this design, researchers are concerned with the subjective experiences of the participants and their perceptions and meanings attributed to the event (Eatough & Smith, 2008). Phenomenology is a descriptive research design. Instead of generalizing, the most crucial goal of phenomenology is describing participants’ perception of a phenomena (Tuffour, 2017). Metaphor studies used in qualitative research can be expressed as a rich source in qualitative data (Botha, 2009; Fennel, 1996). In this study, metaphors were used to determine the perceptions of teachers and parents regarding the concept of SLD.
Participants

This study was conducted in the spring term of 2021 with the participation of 105 parents with children with SLD and 115 teachers working with students with SLD, with a total of 220 participants. Purposeful sampling was used in the selection of the participants. Participants meeting certain criteria were included in the study. Participating parents were required to have a child with SLD and for participating teachers to work with students diagnosed with SLD.

Data collected from both parents and teachers were collected on a voluntary basis in order to compare the participants' perceptions of the SLD concept. 87% (191) of the participants are women, 13% (29) are men. 48% (105) of the participants are parents, 52% (115) are teachers. 90% (94) of the parents participating in the study are women and 10% are men. 85% (97) of the teachers are female and 15% (18) are male.

Data Collection Process

The data obtained in the study were collected through a form created by the researchers. The form consists of three parts. The first part includes information about the research and a participant consent form. The second section contains personal information. In the last part, there are statements about the metaphor perceptions of parents and teachers. From the parents and teachers who participated in the study were asked to fill out the following form: "Learning difficulty is similar with ……….; the reason of this …………….” The sentences in the form written by the participants are considered as a data source. Data has been collected online. The online data collection form (Google Forms) was sent online to teachers and families, and participants were asked to fill in these forms. The online data collection form includes voluntary participation statements, demographic information and metaphor questions. It is also stated in the statement that the answers given to the forms will be used only by researchers for scientific purposes.

Data Analysis

The data collected in the study were analyzed by content analysis method. Also, categorical analysis techniques were used. The process of analyzing the metaphors obtained from the participants in the study consists of following phases a) naming phase, b) elimination, c) recompilation, d) category development, e) validity and reliability study, and f) determining the frequencies of the metaphors obtained. In order to ensure validity and reliability, it is necessary to be consistent in data collection, data analysis and interpretation in the research process and to express all stages of the research process (Yıldırım & Şimşek, 2011). In the study, the opinions of two field experts, who work as an academician in a special education department of a university, were used to check whether the collected data represented the appropriate category in order to ensure internal reliability.

During the naming and elimination phase, the data were transferred to Microsoft Excel program. The data that emerged due to incomplete understanding or misunderstanding in the specified data were not included in the study. The metaphors of 220 valid forms in total were evaluated. It was determined that the participants produced 59 metaphors for teachers and 49 for parents. In the category development phase, in each form, the reasons answered with "the reason of this” in metaphor were taken into consideration. Then, relationships were established between the stated reasons and themes. As a result, six different conceptual categories were determined for the teacher and seven different conceptual categories for the parents.

In qualitative studies, at the stage of credibility, it is necessary to explain in detail what has been done first. Also, how the results of the data are reached should be explained (Yıldırım & Şimşek, 2011). After that, the themes and conceptual categories obtained were compared with those of the experts. Similarities and differences in opinions were evaluated. It was calculated as 93.5% as a percentage of agreement. While organizing the data, the frequency values of the participants showing
59 metaphors and six categories for teachers, 49 metaphors and seven categories for parents were examined. The metaphor themes obtained were expressed in tables as a conceptual category.

**FINDINGS**

A total of 108 metaphors were produced in this study, which was carried out to reveal how the concept of SLD was perceived by teachers working with students with SLD and parents with children with SLD. The metaphors produced by the teachers were discussed in six categories. These are; a complex situation, a situation that requires effort, a situation that makes you feel different from the others, a situation that creates a feeling of not knowing what to do, a challenging situation, and a situation where progress is slow. In addition to these categories produced by the teachers, the category of the situation that feels desperate was produced by the families. A total of 59 metaphors were produced by the teachers, while 49 metaphors were produced by the parents. While the metaphor most used by teachers is the person who struggles (f:8), the metaphor most produced by the parents is maze (f:4).

**Findings Regarding Teachers**

<table>
<thead>
<tr>
<th>Conceptual Category</th>
<th>Number of Metaphors</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>A complex situation</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>A situation that requires effort</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>A situation that makes you feel different from the others</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>A situation that creates a feeling of not knowing what to do</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>A challenging situation</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>A situation where progress is slow</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>89</td>
</tr>
</tbody>
</table>

SLD as a complex situation

In the category of SLD as a complex situation, a total of 10 metaphors were produced by 27 participants. The metaphors produced in this category and their frequency of expression are; puzzle (f: 7), chaos (f: 6), maze (f: 4), ball of string (f: 3), knot (f: 2), space (f: 1), hazy image (f: 1), processor (f: 1), still lake (f: 1), and bubble (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“The connection between the beginning and the end of the rope is long and knotted” (Teacher: 61).

“It is complex like a maze, s/he knows what to do but does not know how to do it” (T: 65).

“It takes effort to solve it” (T: 68).

“You can overcome a difficulty, nothingness has no solution. There are three keys to solve it: to believe, to be patient and most importantly to be grateful for every single progress” (T: 73).

“When you unwind a tangled ball of string, you can achieve your goal of making the desired product (sweater, scarf, etc.). Similarly, in learning disability, the confusion in cognitive functions should be regulated in order to achieve the desired goal” (T: 85).
SLD as a situation that requires effort

In the category of SLD as a situation that requires effort, a total of 16 metaphors were produced by 24 participants. The metaphors produced in this category and their frequency of expression are; the person who struggles (f: 8), mine (f: 2), a bird which can't fly (f: 2), hidden treasure (f: 1), newly learned song (f: 1), cooking (f: 1), kite (f: 1), dehydrated flower (f: 1), influenza (f: 1), flower (f: 1), bamboo tree (f: 1), baby (f: 1), old person (f: 1), and excluded child (f: 1). Some parts of the participants’ own statements regarding the metaphors in this category are given below:

“If the education s/he needs is not given, s/he will withdraw and fail and will give up and fade” (T: 7).

“If you cannot add the right pieces at the right time, you cannot achieve the consistency” (T: 10).

“In the hands of someone who does not know how to fly, you fly away, if someone who knows how to fly gets you, you float in the sky and dance” (T: 12).

“They do not know how to use their wings” (T: 14).

SLD as a situation that makes you feel different from the others

A total of 20 metaphors were produced by 22 participants in the category of SLD as a situation that makes you feel different from the others. The metaphors produced in this category and their frequency of expression are; rainbow (f: 3), broken electronic device (f: 3), creative human (f: 2), broken CD (f: 2), Volkswagen Beetle (f: 1), vitamin deficiency (f: 1), third eye (f: 1), engine (f: 1), blessing (f: 1), locked door (f: 1), dream (f: 1), circle (f: 1), sun (f: 1), sky (f: 1), brain that thinks differently (f: 1), pressure cooker (f: 1), broken car (f: 1), painting (f: 1), brain (f: 1), volcano (f: 1). Some parts of the participants’ own statements regarding the metaphors in this category are given below:

“Because just as different colors create integrity and makes the rainbow looks beautiful; what makes the learning disability and learning styles of these children beautiful is that the situation they are in makes a difference in them. Every individual is different. All of them are vivid parts of rainbow colors” (T: 14).

“Its engine is at the rear, different from most cars. But its function is the same. It does not have any lacks and even looks cute, it is a kind that supports creativity with this difference” (T: 34).

“At the end of the road, they arrive at the same point, but they arrive by working differently and being supported differently. They are not short of other people. Only their brains work differently” (T: 35).

“All cars have a hard time going uphill, but some have less difficulty, some more. By supporting these children, we can make them climb the slope more comfortably” (T: 51).

SLD as a situation that creates a feeling of not knowing what to do

A total of five metaphors were produced by seven participants in the category of SLD as a situation that creates a feeling of not knowing what to do. The metaphors produced in this category and their frequency of expression are; ship (f: 2), sea (f: 2), drowning while swimming (f: 1), being lost (f: 1), mirror (f: 1). Some parts of the participants’ own statements regarding the metaphors in this category are given below:
“Because individuals with learning difficulties are trying to be kept in the routes of others. What should be is to create a new route specific to them” (T: 92).

“There is a long and difficult path that awaits a person with dyslexia, this path is often weary and his only consolation is a correct and entertaining guide to accompany him on this path” (T: 96).

“It contains many unknowns. A person cannot know how to move and find the direction” (T: 99).

“If they know how to use their arms when swimming, they will be saved, but because they don't know how to do it, they will struggle in the classroom as if they will be drowned at any moment” (T: 101).

**SLD as a challenging situation**

A total of five metaphors were produced by five participants in the category of SLD as a challenging situation. The metaphors produced in this category and their frequency of expression are; rugged road (f: 3), long journey (f: 1), Ferrari with Şahin motor (Şahin is an old car model in Turkey) (f: 1), marathon (f: 1), staying in balance (f: 1), paralysis of the brain (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“If you give up because it is cold, you cannot reach the top of the mountain, if you climb up faithfully without giving up, you will reach the peak, if you think that working with a child with learning difficulties is difficult, you will not achieve success, but if you continue without giving up, and you will see that you get results” (T: 106).

“On that path, you should always track the child's patience, excitement, distress and motivation, and you should always create side paths for the specific solution for the child” (T: 107).

“It requires effort” (T: 111).

“Although it looks like there is no problem, there are many problems in academic situations” (T: 113).

**LD as situation where progress is slow**

A total of three metaphors were produced by four participants in the category of SLD as a challenging situation. The metaphors produced in this category and their frequency of expression are; crawling baby (f: 2), escalator (f: 1), the wheel that burst (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“It is difficult for them to walk on their own without support” (T: 56).

“No matter how much air you give, it doesn't work if you can't find the burst part on the wheel; but if the hole in the wheel is discovered and repaired it may be restored even if the wheel is patched and you can learn to live with the patch” (T: 57).

“Learning has a challenge for every individual. In order to overcome this, it is necessary to read those lines until you understand” (T: 58).

“S/he tries to learn but cannot understand enough and learn. It means "I'm doing, I'm trying, but it's not working" (T: 59).
Findings Regarding Parents

Table 2 Conceptual Categories, Number of Metaphors Produced and Number of Producers

<table>
<thead>
<tr>
<th>Conceptual Category</th>
<th>Number of Metaphors</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>A situation where progress is slow</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>A challenging situation</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>A complex situation</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>A situation that requires effort</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>A situation that creates a feeling of not knowing what to do</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>A situation that makes you feel different from the others</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>A situation that feels desperate</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>61</td>
</tr>
</tbody>
</table>

SLD as situation where progress is slow

A total of eight metaphors were produced by 13 participants in the category of SLD as a situation where progress is slow. The metaphors produced in this category and their frequency of expression are: janissary band (Ottoman military band) (f: 3), turtle (f: 2), drilled bucket (f: 2), memory lose (f: 2), water (f: 1), butterfly (f: 1), bike throwing the chain (f: 1), dream (f: 1). Some parts of the participants’ own statements regarding the metaphors in this category are given below:

“When the individual goes two steps forward, s/he goes one step back” (P: 38).

“When their progress and learning is always get stuck at a young age” (P: 44).

“No matter how much water the child carries, the bucket is always empty, leaking somehow” (P: 47).

“Suddenly increasing or decreasing gear while driving on the road; (approaching the individual with learning difficulties with a learning style that is not suitable for his needs) causes the chain to come off the gears (unable to complete the learning process, completely confused, decreased self-confidence, etc.). Or the reason why the chain is constantly thrown; the chain is a bit longer for that bike. (Learning difficulty is not mental retardation, on the contrary it can indicate superior intelligence. The individual does not adapt to the learning process in the same way as other individuals, is like the chain being long on the bicycle.) In order to keep the bike moving constantly on the road and not to cause throwing chain, it is necessary to first recognize the bike and then bring the chain to a suitable length. If this is also okay; It is necessary to ride the bicycle with the correct gear setting and without increasing / decreasing the gear continuously (To progress in a controlled manner with the learning styles determined according to the needs of the individual is similar to a bicycle that moves on the road without throwing chain). In short, it is possible for an individual with learning difficulties to complete the learning process and progress in his/her life with correct support and controls” (P: 50).

SLD as a challenging situation

A total of seven metaphors were produced by 10 participants in the category of SLD as a challenging situation. The metaphors produced in this category and their frequency of expression are: climbing a mountain (f: 3), puzzle (f: 2), road (f: 1), broken white goods (f: 1), a person struggling with waves (f: 1), a not working program (f: 1), snowy mountain (f: 1). Some parts of the participants’ own statements regarding the metaphors in this category are given below:

“Always trying to do something right but somehow cannot being right and complete, moreover the child understands that this is a different situation and does not understand why” (P: 88).
“Nothing moves calmly in a certain order and flows by itself. Sometimes it moves quickly and throws shore and surprises, but it is necessary to hold on well there, or it can pull it back in and take it back. But it is very deep and fascinating” (P: 90).

“You can never walk comfortably, it is always rough, ups and downs, you cannot see your front fully” (P: 93).

“The reason of this, you move one or two steps, you fall, then you move forward again and fall again, but you continue to move slowly anyway, and you learn to stand alone. While you are learning, your knees bleed many times, it hurts a lot, but you continue without stopping” (P: 99).

**SLD as a complex situation**

A total of 6 metaphors were produced by 10 participants in the category of SLD as a complex situation. The metaphors produced in this category and their frequency of expression are; maze (f: 4), ball of string (f: 2), deep gap (f: 1), knot (f: 1), memory loss (f: 1), cogwheel (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“There is everything but not organized” (P:52).

“The rope can be untied, but s/he does not know how to solve it” (P: 57).

“Your days are passing by always completing something and trying to catch up” (P: 63).

“As soon as we think that we have found a way and moving, we turn to where we started” (P: 65).

“When I say “I took care of this”, another problem arises, there is always a problem and an incident” (P: 69).

**SLD as a situation that requires effort**

A total of 9 metaphors were produced by 9 participants in the category of SLD as a situation that requires effort. The metaphors produced in this category and their frequency of expression are; slow cooking food (f: 1), sailing (f: 1), long road (f: 1), right triangle (f: 1), budgerigar (f: 1), ship (f: 1), mirror (f: 1), digging a well with a needle (f: 1), stubbornness (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“It takes a lot of effort, but you will have a very delicious meal” (P: 2).

“Concept confusion means gaining victory sooner or later in return for the path taken by explaining some things over and over again while there is a lot of talent for other things” (P: 5).

“If you work on it you can train and get it talked. But if you say "I'm tired, I give up, that's enough! This bird doesn't speak" you shouldn't have any expectations from the bird either. We must first turn the mirror to ourselves and then to the other one. But after you make an effort and when you see that the bird is talking and trying to learn, there is nobody happier than you. Yes you get tired; but, when you see that s/he succeeded, the moment you say yes we succeeded, I think is the best moment” (P: 7).

“What can eyes and hands do when the brain cannot understand?” (P: 14)
SLD as a situation that creates a feeling of not knowing what to do

A total of nine metaphors were produced by nine participants in the category of SLD as a situation that creates a feeling of not knowing what to do. The metaphors produced in this category and their frequency of expression are; a person who walks in the dark (f: 1), a complex path (f: 1), sea (f: 1), fictional hero (f: 1), eagle that can't fly (f: 1), sleepy person (f: 1), living abroad (f: 1), broken compass (f: 1), a person who lost in the desert (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“It is not clear when and what you will encounter, sometimes wavy, and sometimes flat like a sheet” (P: 73).

“Because I think s/he will always need support in order to fly independently, even when support is provided in areas where academic skills are insufficient or lacking” (P: 76).

“There is potential, but there is no guide that shows the direction to reveal it” (P: 79).

“You cannot know where you are, how to go and how to find your way” (P: 80).

SLD as a situation that makes you feel different from the others

A total of seven metaphors were produced by seven participants in the category of SLD as a situation that makes you feel different from the others. The metaphors produced in this category and their frequency of expression are; mirror (f: 1), deserted island (f: 1), a person who carry overload (f: 1), computer (f: 1), bird without wings (f: 1), miracle (f: 1), ability (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“Her brain and perception are as if imported from another world” (P: 20).

“While everyone other than you came to the end of the book, you could not learn the alphabet” (P: 27).

“While individuals without dyslexia perceive correctly, they see and think from different angles and see different directions. He behaves reluctantly about things that do not attract his attention, and when something is in his mind at that moment, because he wants to solve it first” (P: 30).

“S/he sees the details that other individuals look but cannot see. S/he has a different productivity. But s/he gets very battered in reading and math in classes. This is a huge challenge” (P: 33).

SLD as a situation that feels desperate

A total of three metaphors were produced by three participants in the category of SLD as a situation that feels desperate. The metaphors produced in this category and their frequency of expression are; pressure (f: 1), myopic (f: 1), dead end street (f: 1). Some parts of the participants' own statements regarding the metaphors in this category are given below:

“You feel stuck. You feel alone, desperate and under pressure” (P: 16).

“There is awareness about the problem but there is no solution” (P: 17).

“He was not noticed in primary school and he always exposed to this treatment. They made fun of him. Whereas, he is a desperate, innocent individual who has to experience this situation as a Turk in that class” (P: 18).
“We are stuck” (P: 19).

DISCUSSION, CONCLUSION AND SUGGESTIONS

This study was carried out to reveal how the concept of SLD is perceived by teachers working with students with SLD and parents with children with SLD. When the conceptual categories obtained from the study were examined, teachers and parents produced 6 common categories. These are; 1) a complex situation, 2) a situation that requires effort, 3) a situation that makes you feel different from the others, 4) a situation that creates a feeling of not knowing what to do, 5) a challenging situation, 6) a situation where progress is slow. Except these common categories, parents have also produced the category of a situation that feels desperate. Although similar categories are produced, it is seen that the metaphors formed under the categories and their frequencies differ. A total of 108 metaphors were reached in the study. Teachers produced 59 metaphors and parents produced 49 metaphors. Teachers have produced more metaphors. It can be said that this situation stems from the SLD trainings they attended and their professional experiences. In addition, it can be assumed that teachers do not experience feelings of helplessness felt by families because they know more about students' performances. The first of the common conceptual categories is the situation in which SLD is seen as “a complex situation”. In this category, while the most frequently repeated metaphors by the teachers were puzzle and confusion; they were maze and ball of string by the parents. These metaphors show that participants have more negative perceptions about SLD. When metaphors produced by teachers and parents are compared with the literature, it is seen that there are explanations about the confusion and complex process in explaining and defining SLD (Akhutina, & Pylaeva, 2012; Brigham & Scruggs, 2011). There are many theories and approaches explaining SLD, it is difficult to diagnose, and students' performances are very different (Schultz et al., 2006). These situations may have caused the process to be described as complex.

In the second common category, it is seen that SLD is expressed as "a situation that requires effort". In the literature, expressing SLD as a situation that requires effort in terms of intervention programs, teaching processes and coping strategies with learning difficulties (Meltzer, et al., 2004; Spekman & Goldberg, 1992) is in line with these findings. Similarly, Güner (2012) found similar themes in his study. In this category, the most repeated metaphors by teachers were the person who struggles, mine and a bird which cannot fly, while the most repeated metaphors by parents were slow cooking food and sailing. It can be said that an individual with SLD is in a constant struggle and effort due to difficulties in school or home life (Grant et al., 2010). The need for more systematic and repetitive studies especially on academic skills compared to their peers (Rief & Stern, 2010) can be associated with this situation.

In the fourth conceptual category, SLD is expressed as “a situation that creates a feeling of not knowing what to do”. In this category, while the metaphors of ship, sea and drowning while swimming were mostly repeated by the teachers, the metaphor of a person who walks in the dark and broken compass were used by the parents. And an important amount of the participants reported SLD as a situation that is difficult for others to know what to do from time to time. In particular, the difficulties experienced by families in school life, the cannot have a continuous support, sometimes
not knowing how to progress, and not meeting with the right educators or teachers can put the family and the child in a situation of not knowing what to do (Reid, 2011). Difficulties experienced by students with SLD in regulating their emotional states make it difficult to control their emotions and behaviors (Pavri & Monda-Amaya, 2000). This can cause confusion for parents about what to do in this situation. In terms of teachers, it is seen that this situation is expressed mostly with instructional analogies.

As the fifth conceptual category; it expressed as "a challenging situation”. While the most frequently repeated metaphors of rugged road, long journey (f: 1) and Ferrari with Şahin motor (Şahin is an old car model in Turkey) by the teachers in this category, climbing the mountain and puzzle are the metaphors used by the parents. It can be said that this situation arises from the fact that coping with problem behaviors faced by parents with children with SLD is both a challenging and an extra stressful situation (Howie-Davies & McKenzie, 2007; Lardieri et al., 2000). In the recent and quite innovative OPV study on SLD, college students also reported many main themes related to this concept that SLD is challenging process and requires support. In addition, because children with SLD are emotionally sensitive, the excessive stress they experience increase the risk of depression, and may cause them to need continuous support from family members or relatives in social and emotional terms (Bender et al., 1999). However, it may be difficult for families and sometimes teachers to support a child with SLD continuously as found by some other researchers (Studenska, 2017).

The sixth conceptual category is “a situation where progress is slow”. In this category, while the crawling baby and the wheel that burst metaphors are mostly repeated by the teachers; janissary band (Ottoman military band), turtle and the drilled bucket metaphors were used by the parents. For this situation, it can be said that the progress is slow due to the problems of attention, working memory, focus and forgetting that affect the learning process of children with SLD (Swanson, 1994). In addition, it is known that the cognitive processing abilities of children with SLD differ from their peers (Johnson et al., 2010). This situation may cause learning and progress in various fields to occur slowly. It is known that especially SLD students have difficulties in processing speed, which is caused by the learning and reading speed (Moll, et al., 2016).

Except common categories, "a situation that feels desperate" category emerged from the findings obtained from families. In this category, the metaphors of pressure, myopic, dead end street are the most frequently repeated by families. It can be said that this is due to the fact that the speed of information processing is low in individuals with SLD (Moll, et al., 2016) and that SLD decreases the learning speed by affecting the visual and auditory processing speed (Weiler et al., 2003). In addition, one of the main characteristics affecting the learning and progress process of the individual with SLD is the problems experienced in memory (Swanson, 1994). Other features affecting the learning process and progress are difficulties experienced in areas such as attention, executive functions, working memory, processing speed, and reasoning (Fletcher et al., 2018). When families cannot find solutions to the difficulties experienced by their children over time, they may feel desperate. Tuttle and Paquette (1993) state that this may be due to the insufficient knowledge and experience of teachers, whom children with SLD encounter or receive education, in the field of SLD.

As a result, it has been seen that the conceptual categories and metaphors that emerged within the scope of the research support the explanations in the literature. For teachers who work with students with SLD, environments can be created in which they can benefit more from instructive training on SLD (Gokool-Baurhoo & Asghar, 2019; Marjoribanks, 1994). Therefore, more interventions that bring family, children with SLD, and their teachers and others spent time with the children are needed. It is thought that informing families to increase their self-confidence and capacity to support their children by knowing the strengths and weaknesses of children will be beneficial. More psychoeducational face-to-face and distance/online mental health support can be provided to the parents.

This study was conducted with a limited number of teachers and parent’s participation. Similar studies can be conducted with different sample groups. Furthermore, metaphor studies in the
field of SLD can also be performed in subtypes such as dyslexia, dyscalculia, and dysgraphia. Participants can also be composed from different occupational groups or students with SLD.

REFERENCES


