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Gender-Aware Media Literacy Training: A Needs Analysis Study for Prospective Teachers

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Abstract

The main objective of this study is to determine the training needs of prospective teachers for gender-aware media literacy training. In this study, within the scope of which qualitative research methods were employed, case study model was used. The study group was designated by using maximum variation sampling method, as one of the purposeful sampling methods. The study group of the research consisted of 32 prospective teachers in total (16 female students, 16 male students), receiving education in Gazi University Faculty of Education. Data was collected through a semi-structured interview form generated by the researchers and the form includes six headings and thirteen open-ended questions. In the process of analyzing data obtained as a result of the interviews performed face-to-face, content analysis method was used. In the light of the findings obtained from the research, it has become evident that prospective teachers are in need of training concerning the issues of accessing exact and reliable information, inquiring the reliability of information and sources, analyzing media messages, media editing, media literacy, gender equality and analyzing sexism in the media.

Keywords: *Gender equality, media literacy, prospective teachers, training needs analysis.*

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Introduction

Within the context of education, the concept of need is described as a difference or deficiency between the current states of learners and acceptable norms (Tyler, 2014). Study of needs analysis in the determination of training objectives so that the content and activities are able to be projected and also in ensuring these training objectives to be able to address the actual needs has a significant role in terms of programme development study. In this sense, the detection of needs relevant to the society, individual and subject area will provide important data in setting the targets expected to be materialized by education (Demirel, 2015).

In this study, for the purpose of determining the needs of the society and subject area with regard to gender equality and media literacy, the literature has been reviewed, and in order to determine the individual's needs, data obtained through the interviews carried out with the prospective teachers participated in the research have been analyzed.

Needs of the Society and Subject Area on the Gender-Aware Media Literacy Training

While biological sex indicates the traits which cannot be changed apart from exceptional circumstances, social gender is the concept that can alter, be altered and including the process of construction in meaning (Vatandaş, 2007). Therefore, inequalities between woman and man are not natural and biological, and are constructed socially (Erol, 2014). Although women, constituting the half of Turkey's population, are equal by law, the equality for rights cannot be realized in practical terms. The main reason for this is the perception towards woman which is still prevailing within the society. The stereotypes existing in the society, biological traits such as pregnancy and so on, cause woman to meet with some obstacles in their rights for accessing to education and being employed (Tuskan, 2012).

In today's world, there has been a great of documents imposing legal and political liability and obligations for the countries, corporations and individuals to protect the human rights and support these rights. In the period following the World War II, important actions in the field of international law were taken for enhancing the current state of all the groups, especially including women, which had been exposed to discrimination. That the United Nations (UN) adopted the Universal Declaration of Human Rights (UDHR) in 1948 and signed the Convention on the Political Rights of Women in 1952 is considered as a crucial step with regards to the fact that women have the right for exercising universal human rights at an equal rate, to carry this new concept onto the international scene and promote the status of women. Also, 'Convention on the Elimination of all forms of Discrimination against Women' (CEDAW) was adopted in 1979 by the UN General Assembly (The European Students' Union, 2008). Turkey, together with all these conventions, has also accepted to fulfil the legal acts and obligations within the scope of the Beijing

Declaration and Platform for Action in the Fourth World Conference on Women which was held in Beijing in 1995 (TBMM Kadın Erkek Fırsat Eşitliği Komisyonu, 2012a).

Gender equality in education means that female and male children are not subjected to any gender-based discrimination for the access to the opportunities, sources and services presented within the process of education, benefit from these opportunities at an equal rate and are treated equally (ETCEP, 2016). United Nations (UN) considers gender equality and the empowerment of women as the basic aspects of human development. Besides this, in the Human Development Report published by the UN Development Programme (2016), women have lower Human Development Index (HDI) than men do, on the overage and in all regions. In the Global Gender Gap Report which the World Economic Forum published in 2017, the gender equality oriented progresses of 144 countries were investigated and Turkey was at the 131st rank among 144 countries in the overall assessment and at the 101st rank in terms of accessing to education. Additionally, the studies conducted as relevant to gender in education in Turkey (Engin-Demir and Çobanoğlu, 2012; ERG, 2015; Esen, 2013; ETCEP, 2016) reveals that education of gender equality is required in the trainings for teachers. Results of the researches carried out at both international and national level underline once and again that gender equality awareness is essential in terms of the public education.

Media also plays a fundamental role in the constitution and maintenance of perceptions and stereotypes related to gender in the society and in the reinforcement of disparities and/or inequalities. Media releases gender-related constructs into circulation in a way that it is not based on the principle of equality in social relations and is gendered; and again, through these constructs, it reproduces the unequal positions or roles of the women (Aydın, 2014; Çimen, 2011; Erol, 2014; Ertung, 2013; Erzurum, 2014; Kalaycı, 2015; Sevim, 2013). Social gender inequality, the delivery of messages including cultural stereotypes in media in a continuing and recurring way can lead to the occurrence of some mindsets over time (Silverblatt, Smith, Miller, Smith and Brown; 2014). Kellner and Share (2007) stated that a training which would sensitize individuals to discrimination and disparities based on race and sex, in terms of the development of multicultural understanding and democracy, and additionally would enable understanding the role of media in the increase or decrease of this discrimination and inequalities might be important. In this regard, critical media literacy will enable learners to enhance their skills to ensure their being good citizens by providing them with the competency in resisting the manipulative nature of media and also being an active participant in social life (Kellner and Share, 2007). Also, media and information literacy will enable the inequalities existing and the ideologies and stereotypes generated by the media in social structures and in individuals' minds to be criticized and questioned (Eryaman, 2006; Grizzle, 2014).

The education of media literacy is presented as an elective course at any grades of the secondary school in Turkey. Teachers giving this course, although they teach at different branches, have not received any training related to this subject during their undergraduate education. This case has led to the result that

debates on which branch teachers need to give the course of media literacy comes until today. According to Işkın and Kesten (2016), however there have been some certain attempts to enable media literacy training to gain the due consideration for almost ten years, expected results could not be reached. On the other hand, conditions such as the inadequacy of materials used within the scope of the course of media literacy, the lack of teacher training in this field and the reality that the efficiency of course is limited to teachers' efforts and requests are regarded as obstacles to the effectiveness of media literacy education (TBMM Kadın Erkek Fırsat Eşitliği Komisyonu, 2012b).

Studies analyzing the effect of gender education (Esen, 2013; Özcan, 2012) and of media literacy education (Barut, Demirer, Erbaş, Dikmen and Sak, 2016) on prospective teachers are available, as well. However, in these studies, media literacy and gender-related issues have been dealt with separately. In addition to this, the number of studies addressing gender and media literacy together is quite few (Erdoğan, 2010; Sevim, 2013). Also, in literature, there are two needs analysis studies concerning the subjects of gender equality and media literacy. One of these two studies is the study of needs analysis for training needs of secondary school students that are related to the Instruction Schedule for Gender Equality by Acar Erdol and Gözütok (2017); and the other one is the study of needs analysis concerning prospective teachers' skills for media literacy, that was carried out by Barut, Erbaş, Dikmen, Sak and Demirer (2014). Any study discussing the training needs of prospective teachers as related to the issue of gender equality has not been encountered in the body of literature.

In conclusion, it is seen that gender inequality is an important problem both in the society and in the field of education. Media has also an important role in the maintenance and reoccurrence of the stereotypes and biases regarding gender in society. In this sense, raising the awareness of the individuals constituting the society on gender equality and gender representations in media and enabling them to gain awareness are required.

Needs of the Individual on the Gender-Aware Media Literacy Training

In this part, a needs analysis research concerning the needs of the individual is included. In the research, the needs of prospective teachers for 'Gender-Aware Media Literacy Training' will be tried to be introduced.

The main objective of the research is to determine the training needs of prospective teachers for gender-aware media literacy training. Within the scope of this main objective, answers to the following questions have been sought:

Of the prospective teachers;

1. What are their opinions on the access to the content of media?
2. What are their opinions on analyzing the content of media?
3. What are their opinions on the concepts of media and media literacy?
4. What are their opinions on the concepts of gender and gender equality?
5. What are their opinions on sexism in media?
6. Why do they consider the issues of gender and media literacy required in teacher training as a prospective teacher?

Method

Research Model

This research has been structured in accordance with qualitative research paradigm, with the object of determining the training needs of prospective teachers for media literacy that is aware towards gender equality. In this study, case study design which is one of the qualitative research methods has been employed. Case study is a research model preferred when the main research questions are 'how' and 'why'; the researcher has little or no control over the behavioural cases and a current phenomenon within the context of real life is focused on (Yin, 2014). Case treated through in the research is composed of the needs of prospective teachers for being trained in media literacy which is gender-aware, especially in terms of gender equality.

Working Group

The research was performed on 32 prospective teachers in total, who have been receiving education in the departments of Elementary School Mathematics Teaching (n=4), German Teaching (n=4), Science Teaching (n=2), Turkish Language and Literature Teaching (n=2), Paint and Art Teaching (n=2), French Teaching (n=5), Preschool Teaching (n=2), English Teaching (n=4), Special Education Teaching (n=5) and Turkish Teaching (n=2) in Gazi University Faculty of Education in the fall term of the academic year 2017-2018. These prospective teachers were tried to be selected by maximum variation sampling method, from purposeful sampling methods, which is specific to qualitative researches. While the study group was being determined accordingly, in order that the variety could be ensured, students' gender and the departments in which they have been receiving education were taken into consideration. The 50% of the students (n=16) participated in the research is female and the rest 50% (n=16) is male students.

Role of Researchers

One of the researchers is a faculty member in the field of Curriculum and Instruction and lectures in educational sciences to the students in the faculty of education. The other researcher has had an academic study on media literacy in master's program. This situation has provided convenience in terms of reaching the prospective teachers participated in the research, the designation of interview form and the realization of interviews with the prospective teachers by sound recording, and also the interpretation of the experiences related to media which prospective teachers have had till then.

Data Collection Instrument

In the research, data were collected by means of a semi-structured interview form that had been designated by the researchers. While preparing the interview form, the researchers had primarily reviewed the relevant literature; and then, the necessary arrangements for the form were made in line with the remarks and suggestions put forward by the three faculty members from educational sciences. In an attempt to test the functionality of questions in the arranged form, the pilot scheme of the form was practised on two students and the interview form was finalized by the rearrangement of interview questions. The interview form was dealt with under six headings as (i) access to the content of media, (ii) analyzing media messages, (iii) media literacy and (iv) gender concepts, (v) noticing sexism in media, (vi) the necessity of media literacy and gender equality issues in teacher training. The interview form consists of 13 open-ended questions for detecting training needs of students. The interviews have been carried out face-to-face with the prospective teachers and taken 20 minutes averagely. During interview, by gaining consent from the students initially, sound recording was conducted and afterwards, those records were turned into text.

Data Analysis

Content analysis method was used in the analysis of data obtained in the research. In the method of content analysis; data gathered from written or verbal expressions are coded and classified in a systematic manner, and following that the correlations among data are established, it is attempted to realize the statistical inference (Marvasti, 2004). In this regard, data obtained by means of sound recordings were turned into text. Later, written data were coded, composed under sub-themes according to the similarity in meaning and then, those created sub-themes were collected under main themes. Finally, correlations among themes which had been created as based upon data were attempted to be explained. In order to ensure the reliability, all data were coded by the two researchers. On the codifications made by the both researchers, the formula of $\text{Reliability} = \text{Consensus} / (\text{Consensus} + \text{Dissensus}) \times 100$ (Miles & Huberman, 1994; as cited in Merriam, 2009) was applied. Matching percentage of the two codifications made was calculated as 81%.

Validity and Reliability

Validity in qualitative research is related to the conformity of research results with to the extent of which they are correct and the general framework of the research; as for the reliability, it means that research results are free of any sort of prejudice and error, and as well, they can be repeated by different researchers (Yin, 2009; McMillan, 2004). In this sense, in order to raise the internal validity of the research, during the interview, the participants were reassured about the fact that their opinions would be used only in that research and their identities would kept confidential; and so, that they could express their opinions frankly and free heartedly was tried to be achieved. Accordingly, it was aimed that data provided during the interview would reflect the real case. For the purpose of raising the external validity of the research, the research process was explained in detail. To increase the internal research reliability, findings revealed as a result of content analysis were conveyed without being interpreted. All dealings in the process of research were presented in a detailed manner, so as to increase the external research reliability. The obtained data and codifications are reserved by the researchers in a way that they can be examined again.

Findings

In this part, data obtained as a consequence of the interviews for the sub goals in the research are presented in order, accompanied with the main themes and sub-themes.

Access to the Media Content

Prospective teachers' opinions under the theme of accessing to the media content have been presented in Table 1.

Table 1. Prospective Teachers' Opinions on the Access to the Content of Media

Question 1: Which sources do you generally use while exploring a subject?				
Theme			Sub-themes	N
Source of Information			Internet	31
			Book	7
			Library	4
			A specialist	4
Question 2: Do you question the reliability of information which you access?				
Theme		N	Sub-themes	N
Questioning the Reliability of Information	I do not question (why?)	19	Not paying attention to the assignments	10
			Not having knowledge on this matter	6
			Not need	5
	I question (how?)	13	Comparing the sources/information	8
			Paying attention to its author / references	4
			Paying attention to not including any comment	2
			Checking whether it is current, or not	1

As it is seen in Table 1, almost all prospective teachers (n=31) generally prefer to use the internet while they are exploring a subject. Among the websites which are mostly used by the prospective teachers, Wikipedia is the leading one (n=22). However, due to the fact that access to Wikipedia was denied, it has been observed that a considerable majority of prospective teachers searches in any website (n=18), and this is followed by corporational / official web sites (n=3), scientific publications (n=2) and Ekşi Sözlük (n=1), respectively. Prospective teachers have stated that they benefit from the reference books (n=7), library (n=4) and specialists in the subject area (n=4), apart from the internet, while they are searching for a subject.

Opinions expressed by the three prospective teachers as related to the sources of information from which they get benefit while exploring a subject are in the following:

Mainly I use the internet. Searching in the internet is easier and more convenient... As website, we used to apply to the Wikipedia before. But, I began not to use it for some unfortunate cases. Now, I use whichever site appears at the first ranks, when I type the topic title, since given sites generally become prominent in this case (E11).

Internet was the source for me to search formerly; and now, since we came here to the university, I have been paying more attention to use the books as our university has a magnificent library (K6).

Prospective teachers have been asked whether they question the reliability of sources or information to which they have accessed, and directed 'why' if they do not question and 'how' if they question. More than half of the prospective teachers (n=19) have stated that they do not question whether the information or source they have accessed to is reliable or not, and also that they generally do not pay much attention to the reliability of information in the assignments (n=10); and some of them have indicated that they do not have any knowledge about this matter (n=6) and that they do not need to do so (n=5). As for the prospective teachers who question the reliability of information (n=13), they have expressed that they are sure about the reliability of information or its source by comparing the sources/information (n=8), paying attention to its author or references (n=4), observing that the information is not commented on (n=2) and checking its being current (n=1).

Opinions shared by the prospective teachers for questioning the reliability of information or source to which they access are in this way:

No, I do not observe. I have never had such a need for observing this so far. More precisely, I have not needed much to investigate or check these criteria. Generally, we have been given assignments and we have gotten it over with, too (E3).

I mean, I do not know; I have no idea about it (K3).

I usually pay attention to the source I use in order to access the reliable information; and then, I compare this information with the one(s) in different sources. I try to find out the similarities and/or common grounds, as far as possible (K13).

Analyzing the Content of Media

The answers which prospective teachers have given to the questions related to the theme of analyzing media content are shown in Table 2.

Table 2. Prospective Teachers' Opinions on Analyzing the Content of Media

Question 3: How do you analyze a movie or a TV series in terms of the message it intends to convey? How do you distinguish the reality and the editing?		
Theme	Sub-themes	N
Analyzing the content of series / movie	Not paying attention to the message	11
	Leaving an impression on someone	10
	Message	
	Contribution of message	4
	Content editing	3
	No message is conveyed	2
	Not watching	2
	Editing	
	Fantastic / not reflecting the real life (fiction)	13
	Possible to happen / reflecting the real life (reality)	13
	It is not understood in general	1
Question 4: Do you keep up with the news? How do you find out whether a news is biased, or not?		
Theme	Sub-themes	N
Analyzing the news (Finding out the biased news)	Taking a side	14
	Expression/opinion/comment	11
	Reflecting the events objectively	7
	Not realizing much	2
	Comparing	1
Question 5: What sort of methods are employed in the commercials in order to have an effect upon people's purchasing behaviours?		
Theme	Sub-themes	N
Analyzing the commercial	Colour / Visual quality	11
	Flattery advertising	9
	False representation	9
	Giving a coverage to the celebrities	8
	Making people feel a need	6
	Belief / feeling	5
	Sexism/sexual object/idealized image	5
	Catch line	3

As seen in the Table, a certain part of prospective teachers (n=11) has put forward that they do not examine or analyze the content presented in TV series and/or movies in terms of the messages these intend to convey. In addition to this, a considerable amount of prospective teachers (n=10) has pointed out that the messages are given to leave an effect; and some of them have expressed that what the content provides for or adds to them is important (n=4) and the message given can be understood from the editing of the content

(n=3). Two of the prospective teachers have mentioned about that no message is conveyed in series and/or movies and the other two ones have stated that they do not watch TV series and movies.

Considering how the prospective teachers analyze the series and/or movies in terms of the message these intend to convey, their statements are in the following:

It is just for the sake of editing; Well, I suppose, just for the scenario, their acting, I mean. I criticize this sort of things. I do not notice too much, extra about it. Turkish TV series are a bit mockery, acting is too unnatural (E1).

Well, now, to tell the truth, I do not think TV series produced in our country convey a message. Because only sameness is in the ones shot in our country. Just you know, the usual ones; rich girl - poor boy, and so on (K8).

Again, in an attempt to reveal the prospective teachers' opinions on the reality and editing in media, it has been sought an answer for how they distinguish fact from fiction; in other words, the reality from the editing in series/movie content. In response, prospective teachers have stated that the contents of series and movies which are fantastic and/or do not reflect the real life are an editing (n=13), and the contents which are possible to happen or occur in the real life and reflect the aspects of real life stand for a reality (n=13). One prospective teacher has also expressed opinion in the way that the reality and editing cannot be understood in general terms.

The answers given by the prospective teachers to the question of how they notice and realize the fact and fiction in the productions such as series and movies are as below:

I take the possibility of its happening or to happen in the real life into the consideration. Well, I mean, I may see whether it is related or relevant to the real life, or not, by looking at my own life experiences (K1).

Fiction can be distinguished. Things unreal or beyond the reality rather appeal to me, in fact. I am a person with a vivid imagination and also enjoying imagination. I am not much interested in the realities (K4).

Most of the prospective teachers participating in the research (n=18) have stated that they rarely keep up with the news. Many of them have expressed that they realize whether or not the news is biased by evaluating if the news gives weight to only one-side (n=14), the expressions/remarks/comments used in the news (n=11), and if the happenings are reflected in an objective manner (n=7), and also one of them by checking the news against through different sources. Two of the prospective teachers have also explained that they cannot understand the bias in the news much.

When considered how they realize a biased news, the opinions expressed by the two prospective teachers are in the following:

That is to say, it can be clear. Especially if I mention about the case in Turkey, political things seem obvious; more particularly, it varies from one TV channel to the other. In fact there is one unbiased, but I am not sure - Can I give its name? I only watch ... channel for example, really unbiased there. In other channels, namely in major ones, the news are very sided. Especially in political matters. Only when it deals with the both sides at an equal rate, it becomes unbiased (K7).

I never watch the news from a single medium. Well, I follow it by several sources. Actually, as is known, there is a right-left wing controversy in the agenda of the country. I generally get the things in common from the opposing views. And in this way, I try to reach the most accurate one (E6).

Additionally, the question of what types of methods are employed in the commercials in order to have an effect upon the people's behaviours for purchasing has been directed to the prospective teachers. In line with the answers they have given, colour / visual quality (n=11), flattery (n=9) and false representation (n=9) have been ranked as the first three. These are, respectively, followed by the themes of giving a coverage to the celebrities (n=8), making one feel a need (n=6), belief / feeling (n=5), sexism/sexual object/idealized image (n=5) and catch line (n=3).

The opinions expressed by the prospective teachers concerning the methods applied in commercials to create an effect on people's purchasing behaviours are given below:

Colours significantly have an effect on human psychology. For this reason, green is safe; red appeals to the one and attracts his attention, and like this. I think they make benefit from this well in the commercials (K4).

Generally the celebrities; famous actors/actress, fashion models whom the young and people keep tabs on. You see, people put themselves into their shoes (E10).

The Concepts of Media and Media Literacy

Knowledge and opinions which the prospective teachers held on the concepts of media and media literacy are presented in the Table 3.

Table 3. Prospective Teachers' Opinions on the Concepts of Media and Media Literacy

Question 6: What does the concept of media mean to you?		
Theme	Sub-themes	N
Media	Product of Media	18
	Mass Medium	17
	Function of Media	10
	Means of Influence	6
Question 7: What does the concept of media literacy mean to you?		
Theme	Sub-themes	N
Media Literacy	No knowledge	11
	Figures interested in the media	10
	Department/Discipline	6
	Media staff/field of profession	4
	Using the internet actively and efficiently	1
	Being aware of the coverage in media	1
	Noticing the biased-unbiased news	1

As it is seen in the Table above, while the most of the prospective teachers (n=18) define the concept of media as the products of media (news, social media, programmes and commercials); nearly half of them (n=17) relates the mass media (television, internet, radio, newspaper, the press and telephone) to the concept of media. While defining the media concept, some of the prospective teachers (n=10) have emphasized the functions of media (informative, communicative, recreational and instructional) and some others (n=6) stated that media is a means of influencing.

Concerning the media concept, opinions expressed by the prospective teachers are as below:

Media seems to me as a matter dealt with around the news. Those headlines, news, television, means of communication, etc. It seems to me a something expected to be announced to everyone. It brings something like to my mind. Like rather a means, not like a medium, the means itself (K5).

Internet, social media, news, and such sort of things; relevant concepts generally bring to my mind (E9).

When the opinions on the concept of media literacy which have been put forward by the prospective teachers are analyzed, it is realized that a certain part of teachers (n=11) does not know the concept, and also some of them (n=10) are observed to have defined the media literacy by relating it to the figures interested in media. Besides these, they have described the media literacy as department/discipline (n=6), media staff/field of profession (n=4), using the internet in an active and efficient manner (n=1), the one who is aware of the coverage in media (n=1) and who recognizes the biased - unbiased news (n=1).

The prospective teachers have explained their opinions for the concept of media literacy in the following way:

No, I have not heard about this concept. Is it something like in the way of which the meanings of words 'reader' and 'writer' fit for the meaning of concept? If it is so, I have media readership, but I do not have media authorship. Well, I think, I do not know (K3).

The ones who follow the media closely, who have an interest in and/or relation with the media, literate people, in short. This comes to my mind (E5).

As based on its name, it is like a discipline which reads, writes and analyzes the happenings in media; which analyzes the readers and the texts to be written (E4).

The Concepts of Gender and Gender Equality

The prospective teachers' opinions for the concepts of gender and gender equality have been presented in Table 4.

Table 4. Prospective Teachers' Opinions on the Concepts of Gender

Question 8: Have you ever heard the concept of gender? What does it mean to you?		
Theme	Sub-themes	N
Gender	Dominant (prominent) gender in the society	13
	Social perspective to gender	9
	Female and male roles	6
	Having no idea	3
	Discrimination	1
Question 9: How do you define the concept of gender equality?		
Theme	Sub-themes	N
Gender Equality	That women and men have equal rights	12
	Equality of woman and man	8
	That woman is able to do what the man can	8
	No knowledge	6
	Being physically different, not being totally equal	2

As is seen in the Table, considering the opinions on gender which have been provided by the prospective teachers, the definition of dominant gender in the society (n=13) is placed on the top. This is followed by the themes of social perspective to gender (n=9), female and male roles (n=6) and discrimination (n=1). Apart from this, three prospective teachers have also stated that they have no idea about the meaning of the concept mentioned.

The prospective teachers have expressed their opinions concerning gender in the following way:

Biological sexes exist; woman or man. However, in social gender, only one has been admitted and the superiority of one of these is regarded. This is something really disturbing, and it should not be something like social gender (K1).

I do not know what it is, so I cannot express an opinion. Social one generalizes more; namely, it does not make dependent on a single concept. I could not put forward at all (E2).

A significant part of prospective teachers has defined gender equality as the condition on which women and men have equal rights (n=12), while some of them have described it as the equality of woman and man (n=8) and some others as the case indicating that woman is able to do what the man can (n=8). Some part of the prospective teachers have expressed that they do not know the subject of gender equality (n=6), and two of the teachers have pointed out that women and men cannot be totally equal due to their physical differences.

As relevant to the concept of gender equality, the prospective teachers have stated their opinions in this way:

Gender equality means that every individual has the same and equal rights, regardless of sex (K16).

The equality of woman and man. As a society; for example, woman also does whatever man does in the society. I think equality is this (K5).

Sexism in Media

As regards to the theme of sexism in media, the opinions expressed by the prospective teachers are given in Table 5.

Table 5. Prospective Teachers' Opinions on Sexism in Media

Question 10: What do you think about the roles of woman and man projected in TV series and/or movies?			
Theme	Sub-themes	N	
Sexism in TV series and/or movies	Woman	Weak / oppressed	15
		Housewife	9
		Strong	5
		Sexual object	5
		Victim of violence	4
		Coquette	4
		Improvement towards equality	3
	Man	Strong	13
		Dominant / superior	7
		Working	1
Question 11: What do you think about the news related to the women?			
Theme	Sub-themes	N	
Sexism in News	Violence	20	
	Sexual abuse	12	
	Less coverage in terms of women's success or gender emphasis	11	
	Sufferer/Victim	6	
	Social prejudices / stereotypes	5	
	Socio-political	3	
	No sexism	2	
	Not paying attention	1	

Question 12: Do you think how the product and sex are related in the commercial?		
Theme	Sub-themes	N
Sexism in Commercials	Stereotype	11
	Sexual object	7
	To whomever the product appeals, he / she acts in its commercial	6
	Idealized image	4
	The colour of the product	4
	Have no idea	3

As it is seen from the Table, most of the prospective teachers have stated that women are represented as weak / oppressed in the commercial films (n=15), but men are shown in the roles and characters which are strong and powerful (n=13). Furthermore, the prospective teachers have also pointed out that women are represented in the roles such as housewife (n=9), sexual object (n=5), victim of violence (n=4), coquette (n=4); men, on the other side, are represented in the roles such as dominant / superior (n=7), working (n=1). Unlike the others, the opinions expressed by a part of prospective teachers are in the way that women have been introduced in strong characters and roles (n=5), and also an improvement towards equality in these roles (n=3) is being seen.

The prospective teachers' opinions on the female and male roles that are reflected in TV series and/or movies are in the following:

Generally, among the ones which I watch, the man is in a stronger position. And the girl is in a more oppressed one. In any TV series I have watched so far, I have never seen that woman is empowered and man is suppressed (K3).

Men in general are in the role of the mafia, in the character of policeman. A schema in which the man has a gun at hand, usually runs in and around gunfights, and has difficulty in taking care of his family and continually breaks up and then again makes up with his wife, on the other side, is designed (E10).

With regard to the women-oriented news, it has been put forward by the prospective teachers that they mainly encounter with the news indicating violence against women (n=20), and this is followed by the news related to sexual abuse (n=12), the news on which the success of women is less screened or in which an emphasis upon gender is placed (n=11), the news related to the victimization of women (n=6), the news including social prejudices or stereotypes (n=5). Differently from these findings, some prospective teachers have also stated that women-related news are socio-political (n=3), and the two of them have expressed that sexism is not included in the news, and one has also explained that he has never paid attention in this respect.

Rape, unfortunately, sexual abuses, their being up against the wall, not being able to act as they wish; in short, they are always sufferers. Even if they had been raped, they would be found guilty,

because they are supposed to either be out at a late hour or wear a mini skirt. In fact, our women are really sufferers (E7).

Seeing the women's being brought low in this way is a really terrible sensation. ... There are stories of success. For instance, an eleven-year-old girl has been introduced as the youngest inventor in America. Such kind of exalters exist, but very little in our country (K12).

As for the opinions on the relation between product and sex in the commercial films, prospective teachers have mostly expressed that gender-related stereotypes are used in the commercials (n=11). When the other opinions are assessed, respectively, the representation of people as a sexual object in the commercials (n=7), acting of the person of relevant sex in the commercial as based on which sex the product appeals to (n=6), idealized image (n=4), and the colour of the product (n=4) are involved. Besides this, three prospective teachers have stated that they have no idea about it.

The opinions expressed by the prospective teachers, concerning the relation of product and sex in the commercials, are in that way:

What the most obvious is that the women in the commercials try to present the things which feature their femininity, in this way as a sexual object. And as for the men, power, strength, ... Men are strong, their taking something with reason or logic... Except that, no commercials drawing the attention are available (E7).

In general, in many of the commercials on clothes, women are acted and all of them have to be thin (K11).

Indeed, I have never considered the commercials in terms of whether they include sexual discrimination, or not (E2).

The Subjects of Gender Equality and Media Literacy in Teacher Training

The prospective teachers' opinions about whether the subjects of media literacy and gender equality are necessary in teacher training have been presented in Table 6.

Table 6. Prospective Teachers' Opinions on the Necessity of the Subjects of Media Literacy and Gender Equality in Teacher Training

Theme	Sub-themes	N
Gender Equality and Media Literacy in Teacher Training (Why is it necessary?)	For students	22
	For raising all the society	11
	For equal treatment of students	4
	Not only for teachers, but for everyone	4

As media is in our lives	4
In order to raise individuals who are aware of gender equality	2
Taking an interest in social concerns	1
In order to make education free from sexism	1
For not knowing	1
In order to change the people through education	1

All of the prospective teachers, especially by stating that the subjects of media literacy and gender equality are necessary in teacher training, and also a great majority of them (n=22) have explained that teachers must be aware of these subjects for their students. Again, a part of prospective teachers (n=11) has mentioned that these subjects are essential since teachers have a mission for raising all the society. In addition to these, they have put forward that the subjects of media literacy and gender equality are necessary in teacher training, in order to be able to treat female and male students equally (n=4); since it is necessary not only for teachers but also for each individual (n=4); as media takes its own place in our lives (n=4); in order to raise individuals who are aware of gender equality (n=2); since teacher must be interested in social concerns (n=1); in order to make education free from sexism and gender biased concepts (n=1), and finally, because of self-incompetency in these respects (n=1).

Personally I think that teachers should receive training for this. And even, they should teach this to children, as well. In conclusion, if you are teacher, you must learn this, too. Because children grow up in the same way that they have been raised from. It can be easier to teach a child; teaching the equality, the concept of equality, and that women and men are equal, indeed. Therefore, I think it is much better for teachers to receive this course during their education (K11).

Epecially for teachers, it is necessary to receive. Because we are the ones who raise the society, in fact. We have been shaping the future. Teachers raising the society, since they have raised the society in this way, in this manner ... The buck stops at teachers, that's all (E7).

Conclusion and Discussion

In this study, it has been aimed to determine the training needs for the prospective teachers, as related to the subjects of gender equality and media literacy. The research findings reveal that prospective teachers mostly use the internet as a source of research. This result is also consistent with the results of other researches that have been conducted on this subject (Ata and Yıldırım, 2016; Karaman, 2010). By the virtue of easy-access to the internet, it is the most preferred source of information by the users. However, on the ground that the internet environment is a medium in which even the ordinary users can convey the information easily, by its structure, it may involve false and unreliable information (Çelik, 2014). For this reason, which websites on the internet the prospective teachers use while searching for information and whether they take the cognizance of the reliability of the information they access, or not, have been

attempted to be detected. Most of the prospective teachers have stated that they used to benefit from the Wikipedia as a source of information before access to that source was denied. That the Wikipedia, which is one of the top websites all around the world, is an online encyclopaedia whose content is generated by the users has led to some certain debates concerning to what extent its content can be reliable and correct. However, much as this topic is controversial, it is considered by the university students as a source of knowledge and information (Selwyn and Gorard, 2016). As a result of the ban on the access to the content of Wikipedia, many of the prospective teachers connect to any websites in reaching the information. This case shows that prospective teachers are in need of training in terms of accessing to the reliable information on the internet. Ozan, Kurt and Odabaşı (2014), in their studies which they have conducted on the prospective teachers in the Department of Computer and International Technologies Education, found out that prospective teachers were not informed and/or conscious enough in respect of the use of Wikipedia and other Web 2.0 means.

In the research, most of the prospective teachers have stated that they do not question the reliability of information or source they have reached on the Internet, and among the reasons for these, that their searches are related to the assignments given, they do not know how to question the reliability of information and they do not need such a questioning procedure is included. As for the prospective teachers who question the reliability of information accessed, they have stated that they compare the sources or information, pay attention to the author or its references and to their being current and not involving any comment. Although these methods applied by the prospective teachers or the points of which they take the cognizance are important steps for assessing the media content with a critical approach, they are not adequate. These results indicate that most of the prospective teachers do not have enough competency and awareness towards analyzing the reliability of information they access. In the study carried out by Ata and Yıldırım (2016), it was revealed that prospective teachers check the validity and reliability of information on the Internet while they are searching for their assignments, and question the reliability and objectivity of the information source by various methods.

When the opinions expressed by the prospective teachers within the scope of the theme of accessing to the media content are evaluated generally, it can be said that they are in need of training for how the reliable information sources on the internet can be accessed to, how the reliability of information and sources accessed can be inquired, and also in respect of observing the codes of conduct in the attempts related to access to information and spreading the information.

In the scope of the theme related to the analysis of media content, the prospective teachers' opinions have been tried to be detected, in order to see how they analyze the content of media in general terms. Firstly, how they analyze the TV series or movies in terms of the message intended to be conveyed has been reviewed; and as a result, that most of the prospective teachers do not have enough knowledge on analyzing

the media messages has revealed. Moreover, they have stated that contents possible to occur or exist in the real life are fact; the ones which do not reflect the aspects of real life are fiction. These findings also demonstrate that prospective teachers are not able to analyze the messages in media content adequately from a critical perspective and do not have enough knowledge on media reality and media editing. Since all inscriptive, audio-visual messages in media are the outcome of editing and in order to analyze the media messages, it is required to have knowledge on by whom, for whom, for which purpose, through which methods, and etc., these media messages are built (Türkoğlu, 2007).

In addition, again under the theme of analyzing the content of media, most of the prospective teachers stating that the bias in a news can be understood from the single side overemphasized or supported have put forward that such a case is a political bias. Considering the opinions on how to recognize a biased news in general, it has been realized that prospective teachers regard the news as mainly verbal or written texts; and they do not deal with the issues such as the newswriter, the source of the news or by whom the news is prepared and with the images used in the news adequately, in terms of impartiality. What will be recognized as a news, how the news will be reported and interpreted, what is correct or false are determined by the journalists' worldview, ethos and value judgments. News bureau executives and media owners can be more effective in news building. In this sense, in which way the individuals keeping tabs on the news media perceive the impartiality is of capital importance (Çaplı, 2016).

When the prospective teachers' opinions for the methods employed in the commercials in order to leave an impression on people's purchasing behaviour are analyzed, it is observed that they have exemplified the components to be encountered frequently in television commercials as colour/visual quality, flattery, false representations, the coverage of celebrities and etc. In general, it can be pointed out that prospective teachers have gained awareness towards the methods of influencing / manipulation involved in commercials. Nevertheless, it is obvious that they need more knowledge about new media advertising, product-image relation in commercials, and social prejudices and stereotypes reflected in commercials. To know about the factors such as attention drawing and persuasion in advertising is considered highly important so that the consumer is able to give the right decision and can base his/her decisions on logical grounds (Şahin, 2011).

In the scope of the theme relevant to the analysis of media content, when the opinions expressed by the prospective teachers are generally reviewed, it can be stated that they are in need of training for learning how the meaning is established in media, and how media messages are analyzed from a critical perspective. Media builds the meaning by making use of visual, auditory and written methods in order to communicate through texts. In this meaning building process of the media, several standards of judgment, personal experiences and ideologies become a part. Therefore, both discovering the language of media representations and learning how to analyze these are significant in order to comprehend what sort of meaning media texts bear (Hoechsmann and Poyntz, 2012).

While explaining the concept of media, prospective teachers have provided examples mostly related to the products of media, mass media and the function of media. Also, some of them have stated that media is a means of influence. In the body of literature, more than one definition are available for the concept of media. The word of media is primarily associated to the mass media such as newspaper, television, radio and so on; secondly to the news, advertisements, digital games, movies and similar media content; and thirdly to the media producers such as reporters, photographers and etc. (UNESCO, 2012). The prospective teachers, in parallel with these definitions, describe the media as a means/medium and mediator, as well. Furthermore, in the research conducted by Gedik (2015), it was determined that prospective teachers mentioned about the informative and recreational ones of all the functions of media and perceived media as a means of communication, recreation and technology.

A majority of prospective teachers participating in the research define media literacy as figures interested in and/or relevant to the media, department/discipline and a profession. Considering that the prospective teachers' opinions on the concept of media literacy are analyzed in general, it reveals that they do not have enough knowledge about this subject. According to Silverblatt et. al (2014, pp. 4-6), media literacy requires being able to deal with the source of information from a critical point of view, to interpret all sorts of media messages critically and independently. In this respect, it is necessary to handle a questioning for recognizing by whom the media message has been built, the aim of this message and why and how it has been generated, the one or ones constituting the target audience of the message, and so on. Following this definition, it was seen that many of the prospective teachers participating in the research did not regard the concept of media literacy as a process of critical thinking and questioning, and also could not establish the relation between media and literacy concepts in a satisfactory way. In the study which Deveci and Çengelci (2008) conducted on the prospective social studies teachers, it was found out that they explained the concept of media literacy as based on various views such as following the agenda, keeping up with the developments, commenting on the news and etc. Also, in the study by Gedik (2015), it was seen that prospective Turkish-language teachers perceived media literacy as comprehending, reading, interpreting and analyzing the events reflected in the media in a proper manner, using up-to-date technologies, keeping a tab on book, magazine, newspaper, television, radio, internet and similar sources. In Ata and Yıldırım's (2016) study, prospective teachers brought the concepts of questioning on media messages, being aware of media messages, analyzing media messages forward, while defining the concept of media literacy.

Within the scope of the research, prospective teachers were asked to explain what the concept of gender meant to them. They defined gender as dominant (prominent) sex in the society, the social perspective towards sex, female-male roles and discrimination. Social gender has been artificially shaped through discourse, language, practices, behaviours and relations, i.e., by the process of socialization (Adaçay, 2014); and points out a historical, cultural and social construction process (Köysüren, 2016; Vatandaş, 2007).

From these definitions, when the definitions provided by the prospective teachers as related to gender are taken into consideration, it can be stated that they do not have enough knowledge on the subject of gender. Moreover, when they were asked to express their opinions on gender equality, they explained in the way that women and men have equal rights, the equality of woman and man, both men and women can do the same thing. According to the United Nations, gender equality signifies that women and men have not only equal rights and duties in the society, but also equal opportunities and gains in every sphere of life (The European Students' Union, 2008). The opinions of prospective teachers on gender and gender equality shows that training needs for this subject are the point in question. Additionally, the results of different studies carried out on prospective teachers within the scope of gender equality (Aslan, 2015; Seçgin and Tural, 2011) revealed that training needs of prospective teachers in this subject still exist.

Concerning the sexism in media, prospective teachers' opinions have been examined. At this point, it is possible to state that prospective teachers have a general awareness towards sexism in media products such as TV series, movies, and etc. The results of the researches conducted for the representations of women and men in series and/or movies (Aydın, Kurt and Karbay, 2014; Ünür, 2015) show parallelism with the opinions expressed by the prospective teachers, as well. Furthermore, concerning the news towards women, most prospective teachers have put forward that they encounter with the news including violence towards women, sexual abuses, and that the stories of success are less reported in the news or gender emphasis is placed on. In literature, the studies made on this subject in Turkey have demonstrated that woman-related news regenerate gender inequalities (Çelenk, 2010; Erol, 2014; Erzurum, 2014; Evin, 2016). On the other side, for the relation between the product and sex in the commercial films, prospective teachers have been asked for their relevant opinions and a part of them has stated that the product is associated to the stereotypes. Other ones have pointed out that both woman and man are shown as a sexual object, the idealized images (ideal body weight and height, physical appearance, beauty, and etc.) are presented, the colour of the product is related to the sex. Mengü (2004) indicated that female identity in advertisements was built from a male-dominated point of view. According to Ertung (2013), the 'ideal woman' and 'ideal man' profiles introduced by means of media are shown as objects inconsistent with the reality, unattainable and excellent; and this phenomenon causes a feeling of insufficiency for the ones in front of the screen. When the opinions relevant to the questions that have been directed to the prospective teachers participating in the research under the theme of sexism in media are generally examined, it can be said that they are aware of sexism in media (in series/movie, news and commercial films). Yet, it is considered essential for them to analyze this sexism in media from social, socio-cultural, socio-economic and socio-political perspectives and in the sense of education, to be aware of the problem areas in the subject of gender and to be able to find a solution.

In conclusion, following the necessary explanations presented to the prospective teachers about gender equality and media literacy, they have been asked for their opinions on the necessity of these subjects

in teacher training. When assessed in general terms, opinions about this issue demonstrate that prospective teachers regard the subjects of gender equality and media literacy as necessary on account of the fact that the profession of teaching bears both individual and social responsibilities.

In this study, in an attempt to determine the objectives, content and instructional activities and/or practices of 'Gender-Aware Media Literacy Training', the training needs of prospective teachers have been tried to be based on a scientific ground. In consequence of literature review and research conducted, it has become evident that training needs related to the subjects of media literacy and gender equality are present, on the part of prospective teachers. However, since the research has been conducted by qualitative methods, the generalization of the results is out of question. Training needs of prospective teachers can be analyzed on broader samplings, both in gender equality and media literacy.

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Pre-service Science Teachers' Decisions and Types of Informal Reasoning about the Socioscientific Issue of Nuclear Power Plants

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Abstract

The establishment and use of nuclear power plants to meet the energy need is a controversial socioscientific issue in all the countries of the world; as in Turkey. In this regard, the current study intended to investigate the effect of the socioscientific issue-based instructional activities related to the Nuclear Energy Plants (NEP) that have been attempted to be made widespread in our country on the pre-service science teachers' decisions, positions and types of informal reasoning they use while making their decisions. The current study employed one of the mixed methods; *the data transformative design model*. At the end of the study, it was determined that the pre-service teachers had decided that the establishment of nuclear plants should not continue and that the instructional activities led them to change their positions. Moreover, it was found that while making their decisions, before the application, they were mostly engaged in the ecology-based informal reasoning; after the application, they mostly utilized the social type of informal reasoning. Thus, it was concluded that the pre-service science teachers' engagement in activities related to the socioscientific issue of nuclear energy plants increased their types of reasoning they resorted to and contributed to their sophistication in reasoning. The more types of informal reasoning are used by individuals while making their decisions, the more conscious and reasonable decisions they can make. In this regard, it can be argued that the socioscientific issue-based instructional activities brought social dimensions related to the establishment of nuclear power plants to the fore in the decisions of the pre-service science teachers. Moreover, the opinions of the pre-service science teachers who will take an important role in giving direction to the future of the society about this issue should be taken into consideration by different social associations such as administrators, politicians, non-governmental organizations and particularly by teacher training programs.

Keywords: *Science Education, Socioscientific Issues, Informal Reasoning and Nuclear Power Plants.*

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Introduction

Scientific literacy is an educational goal which all the countries in the world strive to achieve and science educators agree on. Though the definition and dimensions of scientific literacy are controversial, students' consciously addressing and analyzing socioscientific issues is considered to be an important component of scientific literacy (Pouliot, 2008; Sadler, 2004). With the rapid development of science and technology, as the citizens of democratic societies, students may encounter a wide range of socioscientific issues, and they may need to establish positions and decisions, both for themselves and for their parents (Wu and Tsai, 2007).

The term expressed as socioscientific issues refers to social problems, cases or events causing social dilemmas (Sadler, 2004), including more than one point of view and scientists cannot agree on (Kolstø, 2001). According to Simonneaux (2007), socio-scientific issues which are not easy to understand and which have more than one possible solution at the same time can be evaluated on the basis of scientific principles, theories and data. But the solutions cannot be thoroughly examined with scientific evaluations. Behavioral patterns and action plans to solve these problems are related to social factors such as political, economic, moral and ethical. A socioscientific issue in nature involves moral and controversial dilemmas (Kolstø, 2001; Sadler, 2004; Zeidler, Walker, Ackett and Simmons, 2002). Moral limitations are situations that make the solution of a socioscientific problem difficult. For example, many issues ranging from the replacement of human genes in the field of genetic engineering to human cloning involve ethical questions and moral reasoning. For instance, In medical science, questions such as is it correct to research and reveal all the ways of treatment involving genomic transformations of humans?, or do families have the right to make gene combinations in unnatural ways to have a baby?, what kind of role should be played by governments in designs and regulations concerning genetic engineering and who should decide this?" are moral and ethical questions that can be asked within certain contexts (Sadler, 2004).

Reasoning on socio-scientific issues is one of the topics of great interest in science education in recent years. According to Cerbin (1988), reasoning plays a central role in problem solving, making judgments and decisions and in the formation of ideas and beliefs. One of the most important objectives of higher education is to encourage learners to develop their reasoning skills and to be engaged in reasoning. Reasoning is important not only for academic success but also for effective daily life. In this respect, its relations with socioscientific issues are evident because, in general, addressing socioscientific issues involves the processes of argumentation, informal reasoning, and consequently decision-making about these issues (Wu and Tsai, 2007). Researchers have argued that moral and ethical factors associated with socioscientific issues affect informal reasoning and that they are the primary determinant of decision-making (Fleming, 1986; Sadler, 2004).

Formal and informal reasoning can be seen as two different forms of meaning opposite to each other. But in reality there are some common and different aspects between formal and informal reasoning (Wu and Tsai, 2007). While formal reasoning involves the derivation and production of arguments related to formal deductive systems such as logic and mathematics, informal reasoning involves claims and reinforcers supported by some evidence (Cerbin, 1988). Informal reasoning involves cognitive and affective processes employed to evaluate the complicated problems that are devoid of explicit and clear solutions and that are a part of the daily life and to take a position against them (Öztürk and Leblebicioğlu, 2015; Sadler, 2004). For individuals to be able to make decisions and to take positions in relation to socioscientific issues, their informal reasoning and argumentation skills should be enhanced by educators through proper activities. In the literature, there are studies investigating the types of reasoning used by individuals while making decisions about socioscientific issues. In the following section, these studies will be summarized.

Research on the Types of Informal Reasoning pertinent to Socioscientific Issues

When the research on informal reasoning related to socioscientific issues is reviewed, it is seen that though researchers have determined that types of informal reasoning differentiate, as each study is interpreted from different aspects, they make important contributions to the literature of science education. Some of these studies are summarized in Table 1.

Table 1. *Socioscientific Issues and Types of Informal Reasoning Explored by Researchers*

Study	Socioscientific Issue	Main Finding
Fleming (1986)	Nuclear energy and genetic engineering	At the basis of the patterns of reasoning lie ethical and personal factors.
Patronis, Potari and Spiliotopoulou (1999)	Road construction works in their regions	At the basis of the types of arguments lie social, ecologic, economic and practical factors.
Yang and Anderson (2003)	Use of nuclear energy	The modes of reasoning are scientifically, socially and equality-centered.
Sadler and Zeidler (2004)	Gene therapy and cloning	The quality of informal reasoning depends on within-scenario consistency, between-scenarios consistency and noncontradiction, construction of opposite positions and reputations.
Sadler and Zeidler (2005)	Gene therapy, cloning for reproductive and therapeutic purposes	The types of informal reasoning; rational, (logical), intuitive and affective.
Wu and Tsai (2007)	The establishment of 4 nuclear power plants in Taiwan	The modes of reasoning are socially, economically, ecologically, scientifically or technologically-centered.
Liu, Lin and Tsai (2010)	The environmental problem related to the struggle of an exotic, tropical plant species (<i>Mikania micrantha</i>) against invasive seeds	At the basis of the modes of reasoning lie ecologic, ethic, aesthetic, scientific, technologic and socio-economic factors.
Yap (2014)	Genetically-modified organisms, genetic scanning tests, reproduction technology	The approaches of informal reasoning are based on rational (logical), intuitive, affective and ethical factors.

In a study by Fleming (1986) conducted on adolescents aged 17 to 18 to investigate their opinions about nuclear energy and genetic engineering, it was concluded that adolescents define socioscientific issues mostly by focusing on their social aspects and make use of two domains of reasoning being ethical and personal. What is meant by ethical reasoning is the potential of harming everything seen as others. The concern of harm should be given higher priority than all the other domains of reasoning. It goes on being a dominant domain of reasoning while subjects are being examined. What is meant by personal domain of reasoning is defined as efforts invested to protect oneself and one's own interests. In this domain of reasoning, giving harm to others is not seen to be a very important issue; rather, what is important here is one's holding the control of his/her personal, economic and health problems in such a way as to promote his/her own interests. Investigating the qualifications of the arguments produced by 14 year olds in the process of decision making about a socioscientific issue, Patronis, Potari and Spiliotopoulou (1999) stated that the arguments produced have social, economic, ecologic and practical basis. Yang and Anderson (2003) pointed out that while the individuals who are scientifically-centered make their reasoning by using more scientific knowledge; those who are socially-centered put greater emphasis on social factors rather than scientific evidence and those who are equality-centered can adopt different perspectives of more issues. Sadler and Zeidler (2004) explored the quality of university students' informal reasoning about six scenarios related to generic engineering. They evaluated the quality of university students' informal reasoning according to four criteria (within-scenario consistency, between-scenarios consistency and noncontradiction, opposite position and refutation construction). The within-scenario consistency refers to the extent to which the logic presented in scenario having any socioscientific content about cloning and gene therapy is supported; the between-scenarios consistency and noncontradiction mean that a position or an argument presented in a scenario about gene therapy or cloning does not contradict with responses given in some other related scenarios. The opposite position and refutation construction refers to a clear opposite position taken by one of the participants against any of the arguments. Sadler and Zeidler (2005), in another study, investigated the types of informal reasoning engaged in by students in their decision-making process about socioscientific issues. The students resorted to three types of informal reasoning being logical, intuitive and affective. While students are making decisions about genetic engineering scenarios, they use logical processes. They do logical calculations based on many different factors such as patient rights, family responsibilities, alternative treatments, existence of alternatives, side effects, future applications and inconsistencies related to accessibility. Affective informal reasoning can be defined as an apprehensive point of view adopted to empathically direct decisions and behaviors for the wellbeing of others. Intuitive informal reasoning refers to instant reactions towards a scenario. Intuitive informal reasoning is the result of an instinctive reaction or sensation that cannot be explained by logical terms. Wu and Tsai (2007) examined the reasoning modes of students towards the establishment of the fourth nuclear power plant in Taiwan under four categories as social, ecological, economic, scientific or technological. Liu, Lin and Tsai (2010) have extended the classification of Wu and Tsai (2007) to explain the modes of reasoning on an environmental

problem in four categories: ecological, ethical-aesthetic, scientific-technological and social-economic. Yap (2014) examined the types of informal reasoning proposed by Sadler and Zeidler (2005) in four categories by adding ethical informal reasoning. According to the researchers, logical informal reasoning is based on reason, affective informal reasoning is based on worry, intuitive informal reasoning is based on instant reactions related to the content and ethical informal reasoning is based on value and belief-induced thoughts of anyone.

In the some studies directed to the exploration of individuals' types of informal reasoning about socioscientific issues, some factors affecting informal reasoning were also examined. They concluded that informal reasoning and decision-making processes about socioscientific issues are affected from personal content knowledge (Hogan, 2002; Sadler and Zeidler, 2004), personal expertise and experiences (Fleming, 1986), that scientific knowledge is changeable and with its unclear structure, is associated with epistemological components of thinking related to creativity (Liu, Lin and Tsai, 2010).

Significance and Rationale of the Study

Nuclear power plants are a socio-scientific issue that can be seen as a past technology by some nations of the world while as an alternative solution to energy crisis by some others. When the research on nuclear power plants in the literature is reviewed, it is seen that particularly at national level, this issue has been mostly examined within a theoretical framework. Researchers have investigated the aspects of nuclear plants such as historical development, economy, areas of use, effects on environment, society and human health, effects on foreign policies, benefits and harms, factors affecting the decision of possessing them, the public problem of acceptance and the rejection syndrome (Altın and Kaptan, 2006; İmer and Dalbudak, 2012; Kaya, 2012; Köksal and Civan, 2009; Palabıyık, Yavaş and Aydın, 2010; Soykenar and Coşkun 2015; Rebet, 2005; Temurçin and Aliagaoglu, 2003; Yıldırım and Örnek, 2007). The research on students has been determined to be mostly interested in the description of the current states. For example, Şenyuva and Bodur (2016) explored the pre-service teachers' opinions about nuclear energy and the relationship between these opinions and environmental literacy; Sürmeli, Duru and Duru (2017) investigated the pre-service teachers' attitudes in terms of different variables; Kılınç, Boyes and Stanisstreet (2013) looked into the students' perceptions of the benefits and risks of nuclear power plants; Cansız and Cansız (2015) focused on the students' opinions and knowledge, Aydeniz and Gürçay (2013) investigated the pre-service physics teachers' written argumentation quality; Wu and Tsai (2007) explored the students' informal reasoning and Yang and Anderson (2003) evaluated students' reasoning mode types and preferences. In the current study; on the other hand, the effect of socioscientific issue-based instructional activities on the pre-service science teachers' decisions about the establishment of nuclear energy power plants, their types of informal reasoning in relation to their decisions and informal reasoning levels was examined. As the current study included socioscientific issue-based instructional activities; different from the other research in the literature, it can

provide important insights about how to handle such issues in teacher training for both practitioners and researchers; thus, make important contributions to the literature. Moreover, the issues having a controversial character such as socioscientific issues are widely avoided by teachers in science classes due to concerns about classroom management and etc. Seen from this perspective, the current study can help pre-service teachers develop alternative viewpoints of such issues. In this regard, the problem statements of the current study can be expressed as follows;

- i. What are the pre-service science teachers' decisions about the establishment of nuclear power plants before and after the application of the socioscientific issue-based instructional activities?
- ii. What are the changes taking place in the pre-service science teachers' decision positions after the application of the socioscientific issue-based instructional activities?
- iii. What are the types of informal reasoning engaged in by pre-service science teachers about the establishment of nuclear power plants before and after the application of the socioscientific issue-based instructional activities?
- iv. How did the pre-service science teachers' levels of informal reasoning about the establishment of nuclear power plants change after the application of the socioscientific issue-based instructional activities?
- v. Is there a significant difference between the pre-service science teachers' informal reasoning mean levels about the establishment of nuclear power plants before and after the application of the socioscientific issue-based instructional activities?

Method

The purpose of the current study is to determine the effect of the socioscientific issue-based instructional activities on the pre-service science teachers' decisions about the establishment of nuclear power plants, their positions, types of informal reasoning in relation to their decisions and informal reasoning levels. To this end, one of the mixed methods, *the data transformative design model* as proposed by Creswell, Fetter and Ivankova (2004) was employed. In the data transformative model, researchers collect qualitative data, analyze them on the basis of the previously determined code scheme or the conceptual framework and digitize the codes or themes. In this model, on the basis of a data set, qualitative and quantitative analyses are combined in a study. The goal of the researcher is to turn quantitative data into qualitative themes or codes, or to turn codes and themes in the state of qualitative materials to quantitative numbers (Caracelli and Greene, 1997; Mertens, 2007). In this process defined as quantitizing, qualitative data are treated with quantitative techniques to be turned into quantitative data (Sandelowski, 2000). While

in mixed method research binary working model (concurrent or sequential) is viewed to be a traditional approach more widely employed, the transformative model is a relatively new approach still being developed (Creswell, 2003).

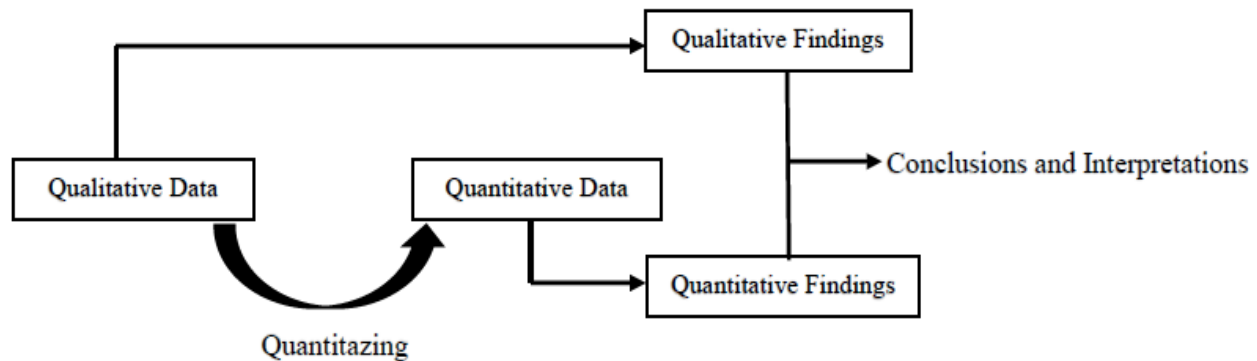


Figure 1. Flow Diagram of the Data Transformative Design Model (Creswell, Fetters and Ivankova, 2004).

The main reasons for the selection of the model based on the transformative paradigm (Mertens, 2007) are that it provides flexibility for researchers, increases the generalizability by transforming qualitative data into quantitative data sets and that the researcher sees both qualitative and quantitative research methods equally valuable.

Study Group

The study group of the current research is comprised of 51 third-year students attending the department of science teaching at the education faculty of a state university located in the Aegean Region of Turkey and taking the course of Special Issues in Chemistry in the fall term of 2016-2017 academic year. The age of the participants varies from 19 to 21. The number of the female students in the group is 43 and the number of male students is 8. Thus, it is clear that distribution of genders is not precisely heterogeneous rather dominated by female participants. The participating students had already studied the topics of nuclear physics, binding energy, natural and artificial radioactivity, nuclear reactions, (fission, fusion) and energy reactors within the context of the required course of General Physics II taken in the fall term of the second year and the topics of structure of the nucleus, radioactivity, nuclear fission and fusion, particle physics and cosmology within the context of the required course of Introduction to Modern Physics taken in the spring term of the second year.

Application Process

The socioscientific issue-based instructional activities were conducted within the context of the course of Special Issues in Chemistry taken by the third-year students attending the department of science

teaching for a total of eight class hours in a four-week period. In the first week of the study, the participating pre-service teachers were instructed about operation principles of nuclear power plants, countries having nuclear power plants, advantages and disadvantages of nuclear power plants and nuclear power plant disasters in the history by means of power point presentations and the question-answer technique. The socioscientific issue-based instructional activities included dilemma cards, problem scenarios, idea production and poster design activities.

Table 2. *Socioscientific Issue-based Instructional Activities Used During the Application*

Activity No	Utilized Method & Technique & Tool	Activity Name
Activity 1	The activity of dilemma cards	Make your choice!
Activity 2	The activity of problem scenarios	Nuclear power plant experts are on the job
Activity 3	The activity of producing ideas	I have an idea!
Activity 4	The activity of poster design	I am walking around the stations, I am designing posters

The dilemma cards are instructional tools through which students arrive at decisions on the basis of their opinions, beliefs and viewpoints about controversial issues bringing about dilemmas in the society. In this sense, they are viewed as suitable instructional tools that can be used in dealing with socioscientific issues by Evren and Kaptan (2014). Within the context of the activity of dilemma cards, cards, as the one given below, were presented to the students.

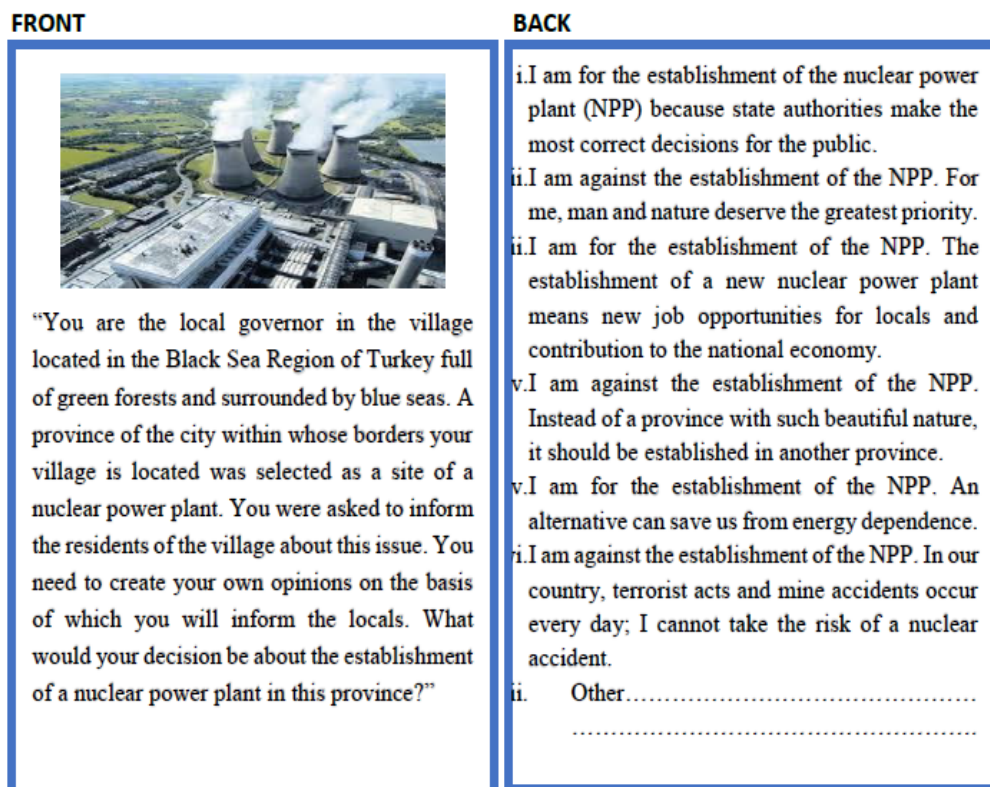


Figure 2. *A sample dilemma card*

Within the context of the socioscientific issue-based activity designed according to the idea producing technique, in every corner of the class, cards reading “I Agree”, “I Disagree”, “I am Undecided” were taped. Each student was distributed small post-it notes. Then each student was instructed to tape the post-it note on the card indicating their opinion and to wait in front of it. After that, the three groups were asked to express their reasons for their selections without initiating any discussion. In the second stage, the members of the two groups were asked to try to persuade the students in the group of “undecided” to join their groups. This stage includes a persuasion process. The role of the researcher throughout the activities is to direct the discussions. The position of the researcher in the class is neutral so as not to influence the opinions of the pre-service teachers about the socioscientific issue in question.

Data Collection Tools

An open-ended question form was developed and administered in order to explore the pre-service science teachers’ decisions and the types of informal reasoning they are engaged in about the socioscientific issue of nuclear energy. The data collection process is comprised of two stages. In the first stage, the pre-service teachers were asked to write their decisions about whether the establishment of nuclear power plants should be continued (their initial decisions about the establishment of nuclear power plants) and their rationales behind these decisions (their initial types of informal reasoning). In the second stage, by reading articles, newspaper news and watching videos broadcast on the media about nuclear power plants, a written text was produced and then a data collection tool consisted of open ended questions was developed. On the front of this data collection tool is there information about the definition of nuclear power plants (238 words), on the back is there information about the positive aspects of nuclear power plants (238 words) and the negative aspects of them (238 words). In order not to affect the pre-service teachers’ decisions, these information sections were kept equal. There are three questions following the written text: 1- Should or shouldn’t the establishment of nuclear power plants be continued?, 2-Explain the rationales (reasons) behind your answer, 3- If you were obliged to persuade a friend disagreeing with your decision about the correctness of your decision, what kind of evidence would you use to persuade him/her?. After the development of the scale, an expert experienced on nuclear power plants was asked to evaluate the scale. In line with the feedback received from the expert, it was decided how the paragraphs explaining positive and negative aspects of nuclear power plants should be placed on A4 paper format (not to affect students) and some corrections were made. Then, three doctoral students from the Natural Sciences Doctoral Program were invited to respond to the scale on a volunteer basis. After the students responded to the scale, their opinions about the scale were gathered (wording, language, comprehensibility, objectivity) and the response time was determined (45 minutes).

Data Analysis

Qualitative data analysis. In the first stage of the analysis process of the current mixed method research employing the data transformative design model, qualitative analysis methods were used. In the analysis of the data, the coding scheme proposed by Wu and Tsai (2007) was used. In this coding scheme, students' types of informal reasoning are classified into four categories as ecologic, social, economic and scientific-technologic. On the basis of these four categories, the codes used by the pre-service teachers were determined. In this stage of the research, the deductive content analysis was used. Following the stage of the deductive content analysis, numerical analysis of the qualitative data was initiated (Yıldırım and Şimşek, 2008). The categories and codes used and the section representing 25% of the raw data set were sent to an expert experienced on qualitative research methods in order to establish scoring reliability. As a result of the calculation made, the coder reliability was found to be 88%. As this value is over the level of the fit stated to be 80% by Miles and Huberman (1994), the reliability of the qualitative data coding is at a good level. In the findings of the research, the names of the pre-service science teachers were coded [PST1: (Pre-service Science Teacher 1), PST2, etc.] and some of the statements they used in deciding were displayed.

Quantitative data analysis. In the analysis of the quantitative data, descriptive and inferential statistical analyses were employed. For this purpose, Microsoft Excel and SPSS 22 program package were used. By using Microsoft Excel program, clustered bar graphs were plotted. Before the initiation of the inferential statistical analyses, the skewness and Kurtosis values of the informal reasoning type scores were examined in order to decide on the analysis test technique and it was determined that they remained within the range of normal distribution (+1, -1). Moreover, according to the results of Kolmogorow-Smirnov test, the distribution of the informal reasoning type scores complies with the normal distribution ($p > 0.05$). As the sample size is higher than 30, it was decided that the use of paired sample t-test; one of the parametric test techniques, would be suitable (Büyüköztürk, Çokluk and Köklü, 2010)

Findings

The codes used by each pre-service teacher while making their decisions about establishment of nuclear power plants were categorized by using Table 3 and frequencies were calculated. The codes determined on the basis of the categorizations in the current study are shown below.

Table 3. *Coding scheme*

Categories	Codes
Ecologic	Global warming, acid rains, nuclear energy, destruction of the environment, endangered species (plants, animals etc.), environmental pollution (water, soil, air and radioactive pollution), destruction of habitats and intervention with living organisms.
Economic	Economic contribution to the nation, contribution to energy production, energy saving, setup cost, making profit, dependence on foreign countries, high cost, reduction in the import of natural gas, uranium-induced dependence on other countries, time saving and gains.
Scientific and/or Technologic	Prevention/evaluation of security threat, implementation of precautions, explosion risk/radiation scattering, evaluation of the establishment and regular control, accident risk evaluation, expert evaluation, reduction of the effect of radiation, past technology, increase in alternative energy sources, use of natural methods/environmental-friendly energies, natural disasters (earthquake etc.) and nuclear leakage, utilization of other scientific disciplines (nuclear medicine etc.) and recycling of nuclear wastes.
Social	Harmful to human health/life, cause of cancer, important for the state, usage of it in many countries, public education, social development, increasing illnesses/health problems, desire to dominate the world, thinking of future generations, terrorist attacks, emigration of people, display of power and production of nuclear weapons.

As can be seen in Table 3, four categories of informal reasoning types which were used in Wu and Tsai (2007) that were applied in study. The findings related to the pre-service science teachers' decisions about the socioscientific issue of nuclear energy before (B.A) and after the application (A.A) of the instructional activities are shown below in the form of a clustered bar graph.

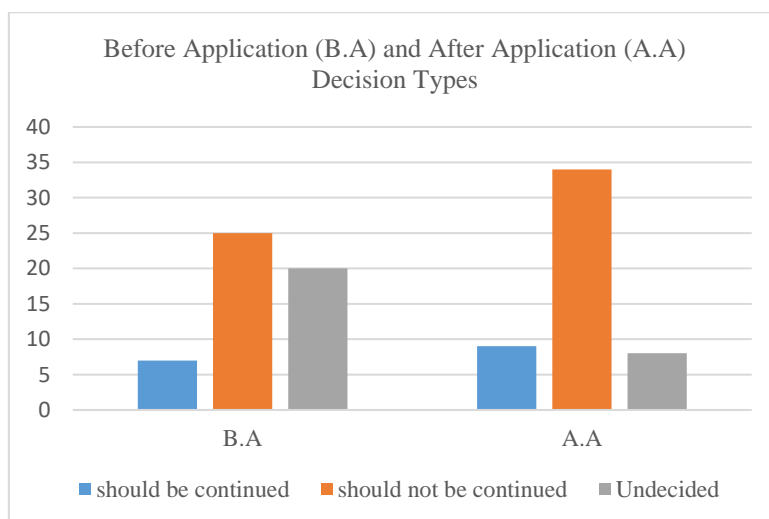


Figure 3. *B.A and A.A Decision Types*

As can be seen in Figure 3, the pre-service science teachers; both before and after the application of the socioscientific issue-based instructional activities, were of the opinion that the establishment of nuclear power plants should not be continued. Most of the pre-service teachers who were undecided about the issue

before the application, decided that the establishment of nuclear power plants should not be continued after the application. The descriptive statistics related to the pre-service teachers changing their positions (from being undecided to being decided or from the existing decision to another decision) or retaining their positions after the application of the socioscientific issue-based instructional activities are presented in Table 4.

Table 4. *Changing or retained positions after the application*

Changing or retained position	f
Undecided → Should be continued	6
Undecided → Should not be continued	9
Should be continued → Should not be continued	5
Should not be continued → Undecided	3
Should not be continued → Should be continued	1
Total Position Changes	24
Total Position Retentions	27
TOTAL	51

As can be seen in Table 4, nearly half of the participating pre-service teachers (f:24) changed their position after the application. Most of the teachers changing their position shifted from the position “undecided” to the position “should not be continued” (f:9). The pre-service teachers’ types of informal reasoning before the application of the socioscientific issue-based instructional activities are shown in Figure 4.

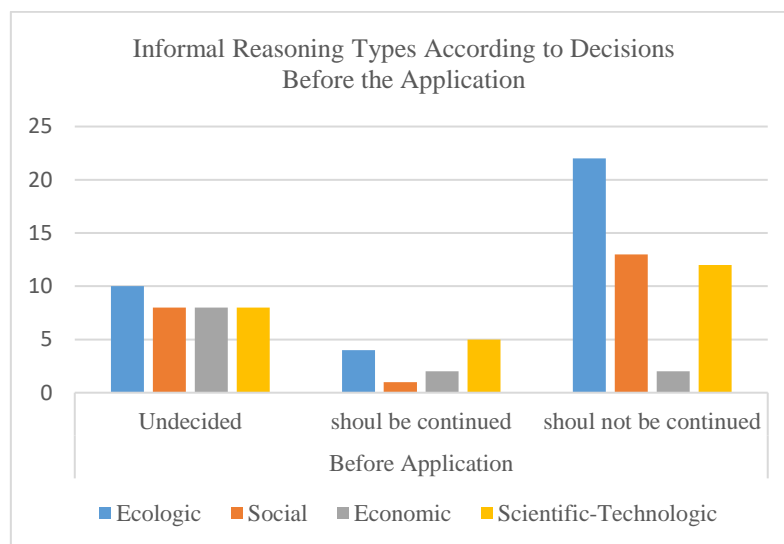


Figure 4. *Informal Reasoning Types according to the B.A Decisions*

As can be seen in Figure 4, before the application of the socioscientific issue-based instructional activities about the establishment of nuclear power plants, the pre-service teachers thinking that it should not be continued resorted to the ecologic type of informal reasoning and the pre-service teachers thinking that it

should be continued resorted to the scientific-technologic type of informal reasoning and the least preferred type of informal reasoning was economic. The pre-service teachers who were undecided about the establishment of the nuclear power plants used the ecologic type of informal reasoning the most and then they equally used the types of social, economic and scientific-technological types of informal reasoning. Some sample descriptions used by the pre-service science teachers while expressing their decisions and types of informal reasoning they were engaged in before the application of the socioscientific issue-based instructional activities are given below.

PST43(Pre-service Science Teacher43): Because I do not think that a power plant posing the risk of explosion and for which many trees must be cut down is good considering that there are many renewable energy sources in the world. Instead of using nuclear energy to develop, environmental friendly energy sources should be used so that we can leave a better world for our children (Should not be continued).

PST25: These power plants can generate high amounts of energy. When the necessary precautions are taken, they will positively affect our social development. While many developed countries utilize these power plants, it seems to be not very reasonable for us to reject them (Should be continued)

PST2: I am undecided; as I do not know what the advantages and disadvantages of nuclear power plants are, I want to say that I am undecided. I can give a better answer to this question, when I am better informed about nuclear power plants (Undecided, lack of information).

When the pre-service teachers' statements uttered before the application of the socioscientific issue-based instructional activities are examined, it is seen that the pre-service teacher coded as PST43 used scientific and technologic types of informal reasoning stating that instead of nuclear power plants, environmental-friendly renewable energy sources should be developed and nuclear power plants pose the risk of explosion and at the same time expressed concern about the destruction of trees to open space for nuclear power plants; thus, resorted to the ecologic type of informal reasoning. The pre-service science teacher coded as PST25 decided that it should be continued on the basis of social and scientific-technologic types of informal reasoning stating that social development is important and developed countries have nuclear power plants thus is it not reasonable to reject them. PST2 stated that the main reason for his/her being "undecided" is lack of information about nuclear power plants.

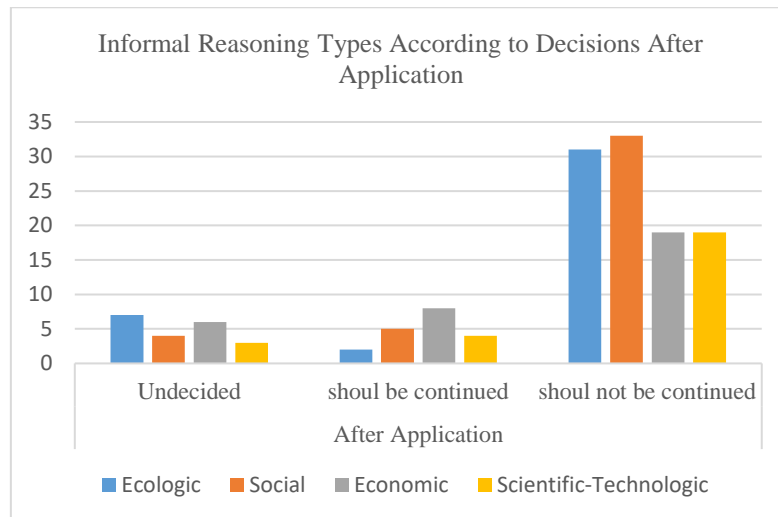


Figure 5. *Informal Reasoning Types according to the A.A Decisions*

In light of the findings reported in Figures 4 and 5, it was concluded that while the pre-service teachers were making their decisions used ecologic type of informal reasoning more before the implementation of the socio-scientific issue-based instructional activities about the establishment of nuclear power plants, they made more use of the social type of informal reasoning after the application. The pre-service teachers who were “undecided” were found to have resorted to ecologic and economic types of informal reasoning about the establishment of nuclear power plants. After the application, some sample descriptions used by them while expressing their types of informal reasoning and decisions are given below.

PST54: Their establishment may help us to get rid of our dependence on foreign countries but the harms brought about by them surpass their benefits. We are already exposed to harmful substances and inorganic foods; thus, their establishment will affect our health negatively. If even the risk of accident is minor, they can be attacked by terrorists, our enemies etc., leading to disastrous results. They can pollute our world and pose a threat to our lives. Our bodies’ indirect exposure to uranium is one of the causes of cancer. It is dangerous for future generations (Should not be continued)

PST19: Nuclear power plants are profitable way of meeting our energy need because with 1 kg U35 atomic fission, 90.000.000 MJ (Mega Joule) energy can be generated. But if we want to obtain this amount of energy from natural ways, it takes nearly ten years. Waiting so long to meet our energy needs may result in technological regression and increasing dependence on other nations (Should be continued)

PST1: Because nuclear power plants have both useful and harmful effects. While they are useful as they decrease global warming and meet our great amount of energy need, they are harmful as their

wastes give serious harms to environment, nature and living things. They make the production of nuclear weapons easier. They cause many disasters. Thus, I am undecided (Undecided)

When the excerpts of the pre-service teachers given above are examined, it is seen that while the pre-service teacher coded as PST54 is of the opinion that their establishment should not be continued due to risk of accident, terrorist attack, harms to human health and causing cancer, the pre-service teacher coded as PST19 stated that the establishment of nuclear power plants should be continued as it takes long time to generate energy by means of others means of energy production and they save us from being dependent on other nations. The pre-service teacher coded as PST1 is undecided as he/she thinks that there is a balance between benefits and harms of nuclear power plants.

Within the context of the third research problem, the change in the numbers of the types of informal reasoning the students were engaged in before and after the application of the socioscientific issue-based instructional activities was investigated (Figure 6).

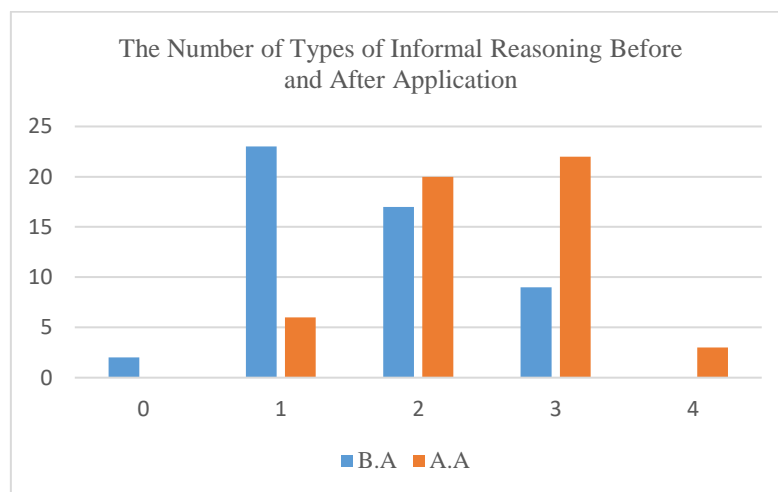


Figure 6. *The number of types of informal reasoning B.A and A.A*

As can be seen in Figure 6, most of the pre-service science teachers were found to utilize one type of informal reasoning before the application of the socio-scientific issue-based instructional activities. After the application, while the number of the pre-service teachers employing one type of informal reasoning decreased to a great extent, an increase was observed in the number of the pre-service teachers using two, three and four types of informal reasoning. Moreover, before the application, there were some students making their decisions without resorting to any type of informal reasoning. Within the context of the fourth research question, the dependent samples t-test was run to investigate the difference between the pre-service teachers' informal reasoning mean scores before and after the application and the results of this test are presented in Table 5.

Table 5. Dependent Samples t-test Results related to the Informal Reasoning Means

	N	\bar{X}_{mean}	sd	t	df	p
Pretest	51	1.84	0.94	-5.2	50	.000*
Posttest	51	2.82	1.21			

*p < .05

As can be seen in Table 5, there is a significant difference between the informal reasoning mean scores before and after the application ($t = -5.2$; $p < 0.05$). Thus, it can be argued that the socioscientific issue-based instructional activities enhance informal reasoning levels.

Results and Discussions

Today, when science and technology are rapidly developing and changing, energy demand is among the greatest problems of the modern age. The nuclear energy as an alternative source of energy has lead to serious disputes in the Turkish society but it has been becoming more and more popular in Turkey in recent years. In the Akkuyu district located in the southern part of Turkey, the government for the establishment of a nuclear power plant signed the treaty. Nuclear energy is among the issues considered to be socioscientific in the field of science. At the local, national and international levels, provision of opportunities for individuals to debate, reason and decide on socio-scientific issues is among the duties and responsibilities of democratic societies. Teaching through socioscientific issues is one of the primary goals of science education and programs.

The current study investigated the effect of the socioscientific issue-based instructional activities on the pre-service science teachers' decisions, positions, types and levels of informal reasoning according to their decisions about the establishment of nuclear power plants. The study revealed that both before and after the application, most of the pre-service teachers decided that the establishment of nuclear power plants in Turkey should not be continued. When the shift or retention of positions was examined, it was found that nearly half of the pre-service teachers changed their positions. Most of the pre-service teachers who were undecided before the applications started to think that it should not be continued and very few of them started to think that it should be continued. In light of these findings, it can be maintained that the socioscientific issue-based instructional activities can make up an effective approach in terms of undecided students to reach a decision and to take a position about the establishment of nuclear power plants. There are some studies reporting findings similar to or different from the findings of the current study. For example, Eş, Mercan and Ayas (2016) conducted a study on senior students and found that high majority of the students do not want to live in a city where there is a nuclear power plant; Şenyuva and Bodur (2016) reported that students have negative attitudes towards the use of nuclear energy; Cansız and Cansız (2015) reported that negative opinions are dominant among students. Kılınç, Boyes and Stanisstreet (2013) stated that the students living in a region where a nuclear power plant is likely to be established tend to believe in

the negative aspects of nuclear energy. Different from these findings, Yener, Aksüt and Somuncu-Demir (2017) reported that as a result of a technical field trip, the pre-service teachers' opinions changed in such a way as to support the establishment of nuclear power plants in Turkey. Moreover, Wu and Tsai (2007) found that the students making evidence-based decisions changed more positions than the students making intuition-based decisions after reading a short report about the use of nuclear energy. Yet, no information was given about the direction of the change.

Within the context of the third research problem, the pre-service science teachers' types of informal reasoning on the basis of their decisions before and after the application of the socioscientific issue-based instructional activities were examined. Before the application of the socioscientific issue-based instructional activities about the establishment of nuclear power plants, the pre-service teachers thinking that the establishment of nuclear power plants should not be continued resorted to the ecologic type of informal reasoning and the pre-service teachers thinking that it should be continued resorted to the scientific-technologic type of informal reasoning and after the application, the pre-service teachers deciding that it should be continued based their decisions on the economic type of informal reasoning and the ones deciding that it should not be continued based their decisions on the social type of informal reasoning. In the current study, it was concluded that the socioscientific issue-based instructional activities resulted in changes of positions and rationales in the students' decisions and types of informal reasoning. This might have been because the socioscientific issue-based instructional activities include both social and communal dimensions and enabled the pre-service teachers to conduct activities in groups. Wu and Tsai (2007) evaluated the high school students' judgments about nuclear energy studied in physics classes before and after reading a short report about it and found that while at first they tended to use ecology-based arguments but then they developed economy-based arguments, concurring with the finding of the current study. Liu, Lin, Tsai (2010); contrary to the current study, found that the pre-service science teachers mostly used science-technology and ecology-based reasoning. This difference might be because of the topics investigated in the studies; in the current study the socioscientific issue is nuclear power plants; however, in the study by Liu, Lin and Tsai (2010), positive and negative sides of the spread of exotic plant species were investigated. Moreover, in their study, there was no instructional process as they aimed to elicit the students' existing types and levels of reasoning. Demircioğlu and Uçar (2014) found that the students most produced ecology-based arguments and least produced social concerns-based arguments. Öztürk and Leblebicioğlu (2015) reported that the students used the socio-economic reasoning the most and ethic and aesthetic reasoning the least while making decisions about hydroelectric power plants.

Within the context of the fourth and fifth research questions of the study, the levels and types of the informal reasoning the students were engaged in before and after the application of the socioscientific issue-based instructional activities were analyzed on the basis of descriptive and predictive statistical findings. As

a result, it was found that while before the application the pre-service teachers used one type of informal reasoning the most followed by two types of informal reasoning, after the application they used three types of informal reasoning the most, followed by two types of informal reasoning. When the mean numbers of the types of informal reasoning found in the pretest and posttest were analyzed through the dependent samples t-test, the difference was found to be statistically significant. Thus, it can be concluded that the socioscientific issue-based instructional activities increased the number of the types of reasoning the students were engaged in while making their decisions about the socioscientific issue of nuclear energy. These findings of the current study concur with the study by Wu and Tsai (2007) reporting that high school students use more than two types of argumentation on average. Liu, Lin and Tsai (2010) conducted a comparative analysis of the number of the types of informal reasoning of the students attending verbal and non-verbal departments and found that pre-service science teachers used one type of reasoning the most, followed by two types of informal reasoning. The main reason for this might be that their study is a comparative study aiming to elicit the existing state. Jho, Yoon and Kim (2014) following the socioscientific issue-based instruction given about the establishment of nuclear power plants in Korea, determined that they continued similar attitudes and decisions. In the current study, contrary to the finding reported by Jho, Yoon and Kim (2014), it was found that while most of the pre-service teachers maintained similar decisions; the pre-service teachers who were undecided created a position and some changes occurred in the primary types of informal reasoning used by them. On the basis of this finding, it can be argued that the application of socioscientific issue-based approach makes students take a position on the socioscientific issues on which they are undecided. Moreover, the socioscientific issue-based activities increase the types of informal reasoning the pre-service teachers are engaged in and also lead to changes in the primary type of informal reasoning employed by the students. Without doubt, an increase in the number of the types of informal reasoning utilized by individuals while making their decisions contributes to the creation of more conscious decisions. Similarly, Gutierrez (2015) concluded that socioscientific issues integrated into classroom discussions and argumentation process result in significant developments in terms of students' generating more detailed, positive and profound explanations for their decisions. As today's pre-service teachers will be the teachers of future (Cansız and Cansız, 2015), their decisions and informal reasoning about socioscientific issues are of great importance in terms of their professional competences because teachers will educate administrators, politicians, doctors, lawyers, engineers, artists and teachers of the future who will make important decisions as responsible, sensitive and conscious individuals by means of science teaching.

Suggestions

Suggestions on the basis of the Findings of the Current Study

As a result of the study, it was found that both before and after the application of socioscientific issue-based instructional activities, majority of the pre-service teachers were of the opinion that nuclear

power plants should not be established in Turkey. Moreover, the pre-service teachers who were undecided before the application were able to reach a decision position after the application. In light of these findings, it can be argued that the socioscientific issue-based instructional activities were effective in the pre-service teachers' making clearer and more conscious decisions because they shifted from an undecided position to a decided position. Furthermore, both before and after the application, majority of the pre-service teachers did not want nuclear power plants to be established in Turkey. The opinions of the pre-service science teachers who hold the potential of giving direction to the future of the society should be taken into consideration by different social communities such as administrators, politicians, non-governmental organizations.

In the current study, the types of informal reasoning the pre-service science teachers were engaged in both before and after the application were also examined and it was found that the pre-service teachers who were of the opinion that the establishment of nuclear power plants should not be continued mostly used the ecologic type of informal reasoning before the application and the social type of informal reasoning after the application; the pre-service teachers who were of the opinion that the establishment of nuclear power plants should be continued mostly utilized the scientific-technologic type of informal reasoning before the application and the economic type of informal reasoning after the application and the pre-service teachers who were undecided about the issue after the application equally benefitted from the ecologic and economic types of informal reasoning. In light of these findings, it can be argued that the socioscientific issue-based instructional activities brought different types of informal reasoning to the fore in the decision-making processes of the pre-service teachers while deciding about the socioscientific issue of nuclear energy. The students who could not reach a decision attached equal importance to the types of informal reasoning they employed. Given that both before and after the application the number of the pre-service teachers deciding that the establishment of nuclear power plants should not be continued, it can be argued that the social type of informal reasoning was employed the most. In this regard, the socioscientific issue-based instructional activities can be suggested for bringing the social considerations to the fore in the decisions taken by students about the establishment of nuclear power plants. The social considerations emphasized in this type of informal reasoning are their harmful effects to human health, the use of nuclear power to dominate the world, the possibility of terrorist attacks and the production of nuclear weapons etc. (Table 2).

As a result of the study, it was found that the number of the types of informal reasoning the pre-service science teachers were engaged in while making their decisions increased. This increase is statistically significant. Thus, it can be argued that the socioscientific issue-based instructional activities make up an approach that can increase the number of the types of informal reasoning used by pre-service teachers. Individuals, the more conscious, utilize the more types of informal reasoning and sensitive decisions they can make.

Suggestions for Further Research

The further research may look into the effect of the socioscientific issue-based instructional approach to be used to teach different socioscientific issues on decision-making and informal reasoning.

The opinions of students from various levels of schooling (elementary, secondary, high school and university) and from different social environments (rural or urban) about the establishment of nuclear power plants can be investigated. Moreover, types of reasoning and decisions of people from different sections of the society living in Mersin Akkuyu district where a nuclear power plant is still being established or in the district determined to be a construction area for a nuclear energy plant in the city of Sinop can be explored by using the socioscientific issue-based instructional activities.

Suggestions for Practitioners

The socioscientific issue-based instructional activities used to address the socioscientific issue of nuclear energy can be used and diversified by teachers working in different educational levels. Within the context of the Course of Special Issues in Chemistry given in the science teacher training program, besides nuclear power plants, other socioscientific issues such as Kyoto Protocol, The United Nations Framework Convention on Climate Change, Greenhouse Effect and Global Warming can be studied by using a similar approach. The socioscientific issue-based instructional approach can be integrated into course contents including socioscientific issues in different disciplines for the training of pre-service teachers.

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The Relationship between Morale and Job Satisfaction of Teachers in Elementary and Secondary Schools¹

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Abstract

The purpose of this study is to examine the differences in the morale and job satisfaction levels of teachers in elementary (including primary and middle) and secondary (high) schools in terms of their demographic characteristics (gender, age, branch, marital status, teaching level – primary, middle, or high schools – and seniority) and to analyse the relationship between their morale and job satisfaction. The Purdue Teacher Morale Scale, including 100 items, and 36 items-job satisfaction scale were the data collection tools in the study. The study group was composed of branch and classroom teachers working in primary, second and high schools in Çanakkale during the 2015-2016 academic year. The findings shows that the teachers' morale and job satisfaction were both at the "Generally High" levels. According to their demographic characteristics, there were significant differences in the sub-dimensions of teachers' morale and job satisfaction in terms of their branches and teaching level. There was also a significant, positive and high correlation between the teachers' morale and job satisfaction.

Keywords: *Teacher morale, teacher job satisfaction, elementary and secondary schools*

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Introduction

Education is an important factor that has shaped community structures throughout the human history. Education aims to upskill people with necessary knowledge and abilities to expedite their adaptation to the recent conditions of their living environment (Ayaz, 1994). Having a crucial place in community life, education is generally carried out in special institutions, schools. Schools are the organisations that contribute to individuals' physical, mental and moral development. The expectations from schools are to support the individual's personal development and to help the individual to express herself/himself.

In the contemporary world, one of pre-conditions to become a developed society is to ensure the effectiveness of educational process in schools. Teachers are the most important component that influences the achievement of teaching-learning activities (Can, 2015). Teachers are the architectures of students' behaviours (Başaran, 2000). As professional educators, teachers are considered successful and efficient as much as their influence on the behavioural changes of students (Akyıldız, 1991). There is a need for qualified and influent teachers to attain the goals of educational systems (Riedler& Eryaman, 2016; Ay and Yurdabakan, 2015). Teachers who motivate and support students to become successful constitute an important part of educational systems.

Teachers also need motivation and support to increase their performance for better educational outcomes. The improvement of teachers' morale is important to empower the positiveness of their professional attitudes (Govindarajan, 2012). Teachers' morale is an assisting factor to enhance students' positive behaviours as well as their learning. If teachers have higher morale, they form better learning environment to promote students' success. For teachers, higher morale can also increase their job satisfaction as an essential organisational requirement to obtain better educational results in schools (Miller, 1981).

Their job satisfaction helps teachers to become efficient, zealous, high-performing, problem-solver, high-perceiver, effective communicator people and to provide their maximum contribution to the society (Eryaman, 2007; Eryaman & Riedler, 2010; Atay, 2001). 'Job Satisfaction' term has a great importance in education sector as in other sectors. Low job satisfaction causes stress and increases the ineffectiveness by depressing staff's psychology.

The morale level of teachers matters due to its inclusion of many factors that influence job satisfaction. The success level expected from teachers is high in the cases with higher morale level for teachers. Higher morale level for teachers (as professionals carry out educational activities) is important for their perceptions of job satisfaction and to do their job with enthusiasm, aspiration and love. When the importance of education for the country's future is taken into consideration, higher morale level of teachers leads to increase teachers' job satisfaction and to better functioning of teaching process.

Teacher Morale

Morale is an emotional and spiritual sense that a person feels about his/her job. Evans (2000) expressed morale as the sense of satisfaction when meeting individuals' needs and as emotions related to how much satisfaction the person has provided from his/her job. Teachers have the high level of morale in the medium with healthy school climate and feel themselves better in their job environment; in this way, they do their jobs with pleasure (Hoy and Miskel, 2005).

'Morale term' originated in educational organisations with the idea that collaborative and positive employee relations increase student success and expedite to achieve common goals (Mackenzie, 2007; Sturmfels, 2009). Teacher morale is a term that has an ability to influence the complete school environment. Teachers develop their relations deeper with their colleagues if the morale is high; this has an effect that decreases teachers' absenteeism (Robinson, 2010). While high morale is characterised with interest and eagerness to the job, low morale may be characterised with dissatisfaction and disappointment feelings (Govindarajan, 2012). Low teacher morale might cause the reduction in productivity, the minimisation of interest to students, the alienation to colleagues, depression, absenteeism, general tiredness and exhaustion. According to Washington and Watson (1976), teachers with higher morale cannot wait to go to work in the morning and do not hurry to leave their schools; they display necessary actions in line with the changing school rules and curriculums; they participate in school activities and meetings; they give their best to carry out duties even ones out of their responsibilities; they pride to be a part of their schools and education system at large; they perform to achieve school goals; they actively play role in the development of school-environment relationship.

Teacher Job Satisfaction

Teachers working with high motivation increase the performance and productivity in educational institutions. Teachers as essential components of educational institutions must have a high job satisfaction to reach to the high level of motivation. Satisfaction or dissatisfaction that teachers acquire from their institutions has an importance because of its influence on teaching quality (Demirtaş and Ersözlü, 2010). Effective educational programmes are closely related to teachers' job satisfaction (Robinson, 2010).

A high or low job satisfaction teachers have has a fairly great importance for students, colleagues, parents and others with whom teachers communicate with. It is of great importance that teachers acquire satisfaction in terms of fulfilling the purposes of educational institutions. When teachers get satisfaction from their work, they display positive attitudes and behaviours in the school and the environment. Teachers who cannot acquire satisfaction from their jobs display negative attitudes and behaviours in the school and the environment (Çetin, 2007). Good education is impossible without good teaching; good teaching is largely depend on teachers' job satisfaction (Sonmezer & Eryaman, 2008; Safari and Rashidi, 2015).

Employees having high job satisfaction are healthier and happier in their work life, transfer their happiness in their work life to the outside of their work and feel themselves happier in other parts of their life. On the contrary, low job satisfaction leads to alienation to the job, meaninglessness of the job for themselves, aggressive reactions, resistance to change, and similar negative consequences (Altınkurt and Yılmaz, 2014). Teacher job satisfaction has an important function in the increasement of the quality in education. Teachers' job satisfaction is closely related to the level of their morale. It is thought that if teachers who carry out the responsibilities of educational and teaching activities have higher levels of morale and do their job lovingly and satisfactorily, they increase their performances and productivity even more. In this context, the relationship between the morale and job satisfaction levels of teachers is the topic of this research. Although level of teacher morale has great influence on teachers' job satisfaction, the relevant literature provides sample studies that have been carried out merely on the basis of teacher morale or their job satisfaction. To our knowledge, there is no study that examines the relationship between teachers' morale levels and their job satisfaction levels. Considering the important role of education in terms of the future of a country, it is clear that the morale levels of teachers may contribute to their job satisfaction and also to the process of education and training. In this respect, the present study is important as it aims to investigate the relationship between teacher morale and job satisfaction.

Method

Study Design

The General Survey Model was used in this research aiming the relationship between the morale and job satisfaction levels of teachers in elementary (including primary and middle) schools and secondary (high) schools. Survey models require data collection by means of using questionnaires and interviews (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz and Demirel, 2012). Such models present the current situation and conditions as they appear (Kaptan, 1998; İslamoğlu, 2003). According to Christensen et al. (2015); a survey study aims to reveal the changes that occur over time or the inner face of a particular situation. The General Survey Model seeks to gain information about the population via sampling method and to make generalisations via induction method (Karasar, 2015). The General Survey Model benefits from determining information types such as people's attitudes, beliefs, values, habits, and thoughts (Mcmillan and Schumacher, 2001).

Participants

The population of the research was composed of branch and classroom teachers who worked in primary, second and high schools from Çanakkale city centre and its districts during the 2015-2016 academic year.

The simple random sampling was used as a sampling technique. In the simple random sampling technique, each person in the population has a chance to take place in the sample. Therefore, equal weighting must be assigned to each person in the calculations (Arıkan, 2004; Büyüköztürk et al., 2012). In the simple random sampling technique, the election process is not difficult unless the universe is very large and complex (Cohen, Manion, and Morrison, 2007; Kılıç, 2013). The sample of the research was composed of 288 teachers determined and accessed by the simple sampling technique. The data regarding the teachers who participated in the study were stated in Table 1 below.

Table 1. *Demographic characteristics of the sample*

Variable		<i>f</i>	%
Gender	Male	115	39.9
	Female	173	60.1
Seniority	0-5	70	24.3
	6-10	83	28.8
	11-15	39	13.5
	16-20	51	17.7
	21-25	24	8.3
	26 and over	21	7.4
Age	20-25	19	6.6
	26-30	62	21.5
	31-35	73	25.3
	36-40	47	16.4
	41-45	51	17.7
	46 and over	36	12.5
Branch	Primary Teacher	69	24
	(Natural) Science Teacher	66	22.9
	Social Sciences Teacher	80	27.8
	Vocational Teacher	24	8.3
	Arts Teacher	25	8.7
	Pre-school Teacher	24	8.3
Teaching Level	Primary School	87	30.2
	Middle School	98	34
	High School	103	35.8

Data Collection Tools

The Purdue Teacher Morale Scale that includes 100 items, and the 36 Items-Job Satisfaction Scale developed by Spector (1994) were the data collection tools in the study. The Purdue Teacher Morale Scale was translated in Turkish by Alıç (1985) and used in PhD dissertation titled “The Relationship between Leadership Behaviours of School Principals and Teachers’ Morale”. The Job Satisfaction Scale was adapted to Turkish by Yelboğa (2009).

The Purdue Teacher Morale Scale

The original form of the Purdue Teacher Morale Scale was developed in the United States in 1961 by Bentley and Rempel. The scale was re-evaluated by Bentley and Rempel in 1970. With this new version, the Teacher Morale Scale helps researchers not only to determine the general morale level but also to define the several parts of teachers' morale. These parts are the 10 sub-dimensions: the compatibility between the teacher and his/her school principal (20 items), satisfaction the teacher acquires from his/her profession (17 items), the compatibility between the teacher and other teachers (15 items), the teacher's workload (13 items), the status of the teacher (8 items), satisfaction the teacher acquires from his/her salary (7 items), problems related to educational and teaching programmes (5 items), support the teacher receives from the society (5 items), school facilities and services (5 items), social pressure (5 items). The reliability coefficient was calculated .87 by Bentley and Rempel (1970) using test-retest technique on the data of 3,023 teachers from Indiana and Oregon. The validity of the scale was examined in the same study, and there was no difference between two teachers groups. In other words, the validity of the scale was found high (Jarnagin, 2004).

The Job Satisfaction Scale

The Job Satisfaction Scale (JSS) was developed by Spector (1985) and adapted to Turkish by Yelboğa (2009). The scale is composed of nine sub-dimensions: Salary, Promotion Opportunities, Management, Social Rights, Rewarding, Work Conditions, Workmates, Nature of Work, and Communication. JSS had .78 Cronbach Alpha coefficient as a sing for the reliability of its internal consistency.

Data Analysis

T-test was used to determine the differences in the sub-dimensions of teachers' morale and job satisfaction in terms of their gender and marital status. F test (One-Way ANOVA) was used to examine the differences in the sub-dimensions in terms of seniority, age, branch and teaching level – primary, middle, or high schools. In the cases of differences between groups, Tukey Test was carried out to find the source(s) of differences in homogenous groups while Tamhane's T2 Test was carried out for heterogeneous groups. The correlation test (Pearson Product-Moment Correlation Coefficient) was used to explore the relationship between the morale and job satisfaction levels of teachers. In this study, the significance level was $p \leq .05$. The analysis results were tabulated and interpreted in accordance with the research problems.

Findings

The findings, in line with the purpose of the study, were presented in this section. The findings were categorised into two sub-titles: The Findings Regarding Job Satisfaction and the Findings Regarding School Life Quality.

Examining the Morale Level of Teachers According to Demographic Variables

In this sub-section, the morale level of teachers was examined in terms of independent variables, namely, gender, marital status, seniority, age, branch, and teaching level – primary, middle, or high schools.

The difference in the morale level of teachers in terms of their gender was analysed by Independent-Samples t- Test, and the result was presented in Table 2 below.

Table 2. *The morale level of teachers according to their gender*

	Gender	N	Mean	s.s.	s.d.	t	p
Morale Level	Female	173	2.62	.38	288	.34	.73
	Male	115	2.61	.40			

According to their gender, there was no significant difference in the morale level of teachers. It can be said that gender is not a distinctive factor for teachers' morale.

The differences in the morale level of teachers in terms of their seniority were analysed by F Test (One-Way ANOVA), and the results were presented in Table 3 below.

Table 3. *The morale level of teachers according to their seniority*

		Sum of Squares	s.d.	Mean Square	F	p
Morale Level	Between Groups	.20	5	.04	.27	.93
	Within Groups	42.33	282	.15		
	Total	42.53	287			

According to their seniority, there was no significant difference in the morale level of teachers. It can be concluded that seniority has not caused a difference in teachers' morale.

The differences in the morale level of teachers in terms of their age were analysed by F Test (One-Way ANOVA), and the results were presented in Table 4 below.

Table 4. *The morale level of teachers according to their age*

		Sum of Squares	s.d.	Mean Square	F	p
Morale Level	Between Groups	1.19	5	.24	1.62	.16
	Within Groups	41.35	282	.15		
	Total	42.53	287			

According to their age, there was no significant difference in the morale level of teachers. It can be concluded that age has not caused a difference in teachers' morale.

The differences in the morale level of teachers in terms of their branch were analysed by F Test (One-Way ANOVA), and the results were presented in Table 5 below.

Table 5. *The morale level of teachers according to their branch*

		Sum of Squares	s.d.	Mean Square	F	p	Difference*
Morale Level	Between Groups	2.82	5	.57	4.01	.00*	4<1
	Within Groups	39.71	282	.14			2<6
	Total	42.53	287				3<6 4<6

* $p \leq .05$; 1: Primary Teacher, 2: (Natural) Sciences Teacher, 3: Social Sciences Teacher, 4: Vocational Teacher, 5: Arts Teacher, 6: Pre-School Teacher

According to their branch, there were significant differences in the morale levels of teachers. Tukey Test was used to analysis the groups as the source(s) of differences. The analysis showed that there was a difference between primary teachers and vocational teachers, between natural sciences teachers and pre-school teachers, between social sciences teachers and pre-school teachers, between vocational teachers and pre-school teachers. The morale levels of pre-school and primary teachers were higher than the morale levels of natural sciences teachers, social science teachers, or vocational teachers. It can be said that pre-school and primary teachers have higher morale because their students have greater enthusiasm to learn and they have enjoyable job.

The differences in the morale level of teachers in terms of their teaching level were analysed by F Test (One-Way ANOVA), and the results were presented in Table 6 below.

Table 6. *The morale level of teachers according to their teaching level*

		Sum of Squares	s.d.	Mean Square	F	p	Difference*
Morale Level	Between Groups	2.82	5	.57	4.01	.00*	2<1
	Within Groups	39.71	282	.14			3<1
	Total	42.53	287				

* $p \leq .05$; 1: Primary School, 2: Middle School, 3: High School

According to their teaching level, there were significant differences in the morale levels of teachers. Tukey Test was used to analysis the groups as the source(s) of differences. Herewith, there were differences between primary school teachers and middle and high school teachers. The morale level of teachers working in primary schools was higher than the morale levels of middle and high school teachers. It can be said that the less importance of disciplinary expertise, seeking immediate solutions for problems primary school

teachers experience in their classroom, and various support from parents for success in their classroom are the causes for higher morale of primary school teachers.

Examining the Job Satisfaction Level of Teachers According to Demographic Variables

In this sub-section, the job satisfaction level of teachers was examined in terms of independent variables, namely, gender, marital status, seniority, age, branch, and teaching level – primary, middle, or high schools.

The difference in the job satisfaction level of teachers in terms of their gender was analysed by Independent-Samples t-Test, and the result was presented in Table 7 below.

Table 7. The job satisfaction level of teachers according to their gender

	Gender	N	Mean	s.s.	s.d.	T	p
Job Satisfaction Level	Female	173	2.68	.36	288	1.38	.17
	Male	115	2.61	.40			

According to their gender, there was no significant difference in the job satisfaction level of teachers. It can be said that gender is not a distinctive factor for teachers' job satisfaction.

The differences in the job satisfaction level of teachers in terms of their seniority were analysed by F Test (One-Way ANOVA), and the results were presented in Table 8 below.

Table 8. The job satisfaction level of teachers according to their seniority

		Sum of Squares	s.d.	Mean Square	F	p
Job Satisfaction Level	Between Groups	.48	5	.10	.67	.64
	Within Groups	40.14	282	.14		
	Total	41.42	287			

According to their seniority, there was no significant difference in the job satisfaction level of teachers. It can be concluded that seniority does not cause a difference in teachers' job satisfaction.

The differences in the job satisfaction level of teachers in terms of their age were analysed by F Test (One-Way ANOVA), and the results were presented in Table 9 below.

Table 9. The job satisfaction level of teachers according to their age

		Sum of Squares	s.d.	Mean Square	F	p
Job Satisfaction Level	Between Groups	1.05	5	.21	1.50	.19
	Within Groups	39.56	282	.14		
	Total	40.62	287			

According to their age, there was no significant difference in the job satisfaction level of teachers. It can be concluded that age did/ not caused a difference in teachers' job satisfaction.

The differences in the job satisfaction level of teachers in terms of their branch were analysed by F Test (One-Way ANOVA), and the results were presented in Table 10 below.

Table 10. The job satisfaction level of teachers according to their branch

			Sum of Squares	s.d.	Mean Square	F	P	Difference*
Job Level	Satisfaction	Between Groups	3.15	5	.63	4.74	.00*	2<6
		Within Groups	37.47	282	.13			3<6
		Total	40.62	287				4<6

*p ≤ .05; 1: Primary Teacher, 2: (Natural) Sciences Teacher, 3: Social Sciences Teacher, 4: Vocational Teacher, 5: Arts Teacher, 6: Pre-School Teacher

According to their branch, there were significant differences in the job satisfaction levels of teachers. Tukey Test was used to analysis the groups as the source(s) of differences. The analysis showed that there was a difference between natural sciences teachers and pre-school teachers, between social sciences teachers and pre-school teachers, between vocational teachers and pre-school teachers. Altinkurt and Yılmaz (2014), in their studies, examined the relationship between the vocational professionalism and the job satisfaction of teachers, found that there were statistically significant differences between pre-school teachers and other branch teachers. It can be concluded that pre-school teachers have higher job satisfaction because of several factors such as their specific working conditions, the interest and connexion of parents.

The differences in the job satisfaction level of teachers in terms of their teaching level were analysed by F Test (One-Way ANOVA), and the results were presented in Table 11 below.

Table 11. The job satisfaction level of teachers according to their teaching level

		Sum of Squares	SD	Mean Square	F	p	Difference*
Job Satisfaction Level	Between Groups	1.59	5	.80	5.82	.00*	1-3
	Within Groups	39.02	282	.14			
	Total	40.62	287				

*p ≤ .05; 1: Primary School, 2: Middle School, 3: High School

According to their teaching level, there was a significant difference in the job satisfaction level of teachers. Tukey Test was used to analysis the groups as the source(s) of differences. Herewith, there was a significant difference between primary and high school teachers. The job satisfaction level of teachers who have worked in primary schools was higher than the job satisfaction level of high school teachers. Primary school teachers deal with the limited number of students because they teach same students in their class during four years of primary education. However, high school teachers are interested in the large number of

students because they must teach their branch lesson in different classrooms and in various grades. This situation can be explained as a cause for higher job satisfaction of primary school teachers.

Examining the Relationship between the Morale and Job Satisfaction Levels of Teachers

Table 12. The relationship between the morale and job satisfaction of teachers

	Morale Level
Job Satisfaction Level	.76**

** $p \leq .01$

Table 12 shows the correlation coefficient for the teachers' morale and job satisfaction. There was a significant positive relationship (at the high level – $r = .76$, $p \leq .01$) between the morale and job satisfaction levels of teachers.

It is possible to say that the morale level of teachers is correlated with their job satisfaction. In the same way, the job satisfaction of teachers is correlated with their morale. According to the findings, if the morale level of the teachers increases, the job satisfaction is also increased. There is also a high correlation between the increase in job satisfaction and the level of teacher morale.

Discussion, Conclusion and Suggestions

According to the research results, there was no significant difference in the morale level of teachers in terms of their gender. Similarly, Aliç (1985), Üstüner (1999), Tanrıöğen (2003), Ada (2006), Ermeç (2007), and Memişoğlu and Aydın (2014) did not find a significant difference in teachers' morale according to their gender. On the other hand, in the relevant literature, Aksay (2005) and also Yetim (2007) found a significant difference in the sub-dimension related to workload.

There was also no significant difference in the morale level of teachers according to their age. There are some studies (Aliç, 1985, Ermeç, 2007, Üstüner, 1999, Yetim, 2007) that include the same result. However, Tanrıöğen (2003) reported significant differences between the opinions of teachers from various age groups.

According to the seniority variable, there was no significant difference in the teachers' opinions related to morale level. In the study of Aliç (1985), seniority was not a variable that causes significant differences in the teachers' morale. On the contrary, Ermeç (2007) found that seniority caused significant differences in the morale level of teachers. The study of Ermeç (2007) showed that teachers' morale decreases as their seniority increases. In the study conducted by Yetim (2007), there were significant differences in terms of seniority variable in several sub-dimensions.

In the morale level of teachers, their branches caused significant differences between classroom teachers and vocational teachers, between natural sciences teachers and pre-school teachers, between social sciences teachers and pre-school teachers, and between vocational teachers and pre-school teachers. In parallel with this study, Tanrıöğen (1998), Aksay (2005), and Yetim (2007) reported that pre-school teachers have higher morale than branch teachers.

In terms of their teaching level, there were significant differences in the morale levels of primary and middle school teachers and of primary and high school teachers. This study explored that primary school teachers have higher level of morale than middle and high school teachers. Weil (1997), Shann (1998), and Yetim (2007) also found similar results.

According to the findings, there was no significant difference in the job satisfaction level of teachers. Similarly, Uslu (1999), Ağan (2002), Tellioglu (2004), Demirel (2006), Ekinci (2006), Canbay (2007), Çelik (2010), and Sat (2011) did not find a significant difference in teachers' job satisfaction in terms of their gender. On the other hand, Kumaş (2008), Öcal (2011), Tura (2012), and Yıldız (2013) reported significant differences in terms of teachers' gender. Tura (2012) and Yıldız (2013) reported a significant difference in favour of male teachers while there was a significant difference in favour of female teachers in the studies of Kumaş (2008) and Öcal (2011).

The analysis shows that there was no significant difference in the job satisfaction level of teachers according to their age. In their studies, Günbayı (1999), Tok (2004), Demirel (2006), and Türkoğlu (2008) also revealed no significant difference in job satisfaction in terms of teachers' age. However, Demirkıran (2004), Bilir (2007), and Yıldız (2013) reported how teachers' age and seniority have an impact on job satisfaction specifically dealing with the participants at the age of 41 or older.

In terms of their seniority, there was no significant difference in the job satisfaction level of teachers. Altinkurt and Yılmaz (2014), similarly indicated that, seniority did not cause any significant difference in the job satisfaction of their participants. On the contrary, Güner (2007) and Şen (2008) reported that job satisfaction increases in parallel with seniority years.

According to their branches, there were significant differences between natural sciences teachers and pre-school teachers, social sciences teachers and pre-school teachers, and vocational teachers and pre-service teachers. The job satisfaction level of pre-school teachers was higher than natural sciences teachers, social sciences teachers, and vocational teachers. In their study, Altinkurt and Yılmaz (2014) also reported a significant difference between the job satisfaction levels of pre-school teachers and teachers from other branches.

This study also resulted that, in terms of teaching levels, there was a significant difference between the job satisfaction levels of primary and high school teachers. This difference was in favour of teachers working in primary schools.

Additionally, the findings show that there was a high level, positive correlation between the morale and job satisfaction levels of teachers. Paknadel (1998) examined teachers' morale as a sub-dimension of organisational climate, and found that there was a significant relationship between teachers' morale and job satisfaction. As two concepts affecting each other, job satisfaction and morale have great influence on the performance, efficiency, and climate in organisations. When job satisfaction level is high, morale level will also be high. Similarly, the higher the morale level, the higher the job satisfaction level. It can be said that the increment of teacher performance and the development of teaching quality in schools are related to the increase in teachers' morale or job satisfaction.

To increase educational quality, primary investment should be made to human resources, so then it must be ensured teachers having high levels of morale and job satisfaction. Therefore, a new system should be developed to help students to easily understand natural sciences, and the curriculums for natural sciences as parts of such system might be re-designed taking the opinion of teachers into consideration. It can be thought that such system increases the job satisfaction and morale levels of teachers by increasing students' academic success and their interest to lessons. Completing equipment that teachers need for their lessons, some regulations can be arranged at the beginning of each academic year in schools to prepare the requirement list of lesson materials for each teacher and to supply the necessary educational equipment in their list. Taking schools' physical capacities into account, the classroom system (Turkish class, Mathematics class, Biology class, etc.) can be organised to carry out courses more efficiently.

Due to the possibility of assignments for branch teachers to different schools (in addition to their own institution), these teachers may not establish effective communication with their colleagues and managers and not have a sense of belonging towards schools in which they carry out their secondary assignments. Therefore, to avoid the victimisation of teachers, the determination of permanent positions in schools should be arranged considering regional opportunities, environmental conditions, etc. Moreover, to prevent possible problems between teachers and school managers, various support services in different issues such as communication, human relations, human resources management, etc. can be provided to managers. Considering that we live in the information age, teachers are allowed to keep their documents in electronic platforms under their own responsibility to decrease the number of the official documents requested from teachers. It can be ensured the voluntary participation in extracurricular activities and the remuneration of teachers' voluntary participations with proper payment.

A new career system might also be introduced to increase teacher performance and their work efficiency. School managers can be selected using merit-based examination and interview techniques. Teachers do not trust the policy that authorities follow to determine their salary and are not pleased with the criteria used for the ratio of wage rise. Therefore, to satisfy teachers, salary and wage rises can be arranged more transparently by explaining the reasons. Moreover, it may be considered to develop a new reward system to increase teachers' personal and professional satisfaction. Furthermore, different activities and arrangements can be carried out to promote the social status of teachers in addition to various social projects to ensure the integration of schools and their environment, to empower the relations between schools and their environment, and to inform people who live in close environment to schools.

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Computer-assisted Music Teaching in Music Teacher Education Departments: Marmara University Sample

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Abstract

The fundamental objective of Music teacher education departments in universities is to have qualified and successful while educating their students. For this purpose, it is very important to apply the programs which will result in having well-educated graduates with pedagogical formation lessons. The aimed graduates are mastered by their instruments, able to use their voices individually and collectively, competent in the field of harmony, solfege and music theories and strengthened with music literature based on cultural lessons. In today's computer-assisted music world, current softwares have been used by both the musicians and music educators inside and outside the classroom. Today, there are many softwares not only to make music and but also to provide and improve music education and teaching. Softwares aiming teaching harmony, solfege, ear training and music theories together with the programs supporting music creation such as composition, editing and note writing programs provide great benefits to music educators. For future teachers to be able to successfully use the evolving music technologies in their fields, it is important to emphasize that the courses for computer-assisted music education are effective and should be coordinated with other courses. In this article, studies on computer-assisted music education in Marmara University, Atatürk Faculty of Education, Department of Fine Arts Education, Department of Music Teacher Education were examined.

Keywords: *Computer-assisted music education, music technologies, music teacher training.*

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Introduction

In computer-assisted instruction (CAI), the computer can find an application area with and without the teacher, as the support of other approaches-techniques. CAI is an educational setting. During teaching-learning process in CAI; teachers guide and help students recognize their abilities and personalize them, as well as practicing activities like exercising and reviewing; according to the subject's structure and specified education purposes, teachers are required to use computers in different place, time, and manner. (cited by Ögüt, Altun, Sulak & Koçer, 2004); (transferred by: Güven & Sülün, 2012)

As a consequence of unbelievably numerous creations of electronic devices, it directly and certainly has affected the music education and instruction in schools. Now, in many countries around the world, music education is being conducted with the support of technology in every level as in the other areas of teaching. Recent developments in music technologies have offered new possibilities both to teachers and to trainees of music in the fields of fundamental music theories, music history, music literature, music education and performance. Instructors of music, both for themselves and for their trainees, are carrying internet, television, video, video camera, DVD, CD, CD-ROM, electronic pianos, MIDI, computer, computer software programs etc. technologies to music classes. (Tecimer, 2006)

The introduction of music through computer technology dates back to 1960s. Especially, voice digitization has been done for many years. Now that the sound contains quite little information, if it is programmed, various sounds can be extracted even from the most primitive computers. After the sound is digitized, the computer perceives it as a data. These computers which were used as an auditing tool at first, has successfully replaced an orchestra in which the music was made personally. The computer which was used to audit an orchestra at first, then made a breakthrough in music and sound technology. The factor that facilitates music to be easily transferred to a computer setting is the fact that sound consists of frequencies. An analog signal can be digitized by a quite simple system conveniently. Accordingly, because the quality of voice depends on the number of bits that are used, the more number of bits used during digitization, the closer the sound information is to the truth (Natural Sound). Once a sound or frequency enters the computer environment, it can be easily defined with its specific number value. Furthermore, we can make use of these sounds in the way as we wish. Electronic Organs and Synthesizers have already been digitized for a long time. With these studies, the idea of producing music with technology started to improved (Kul, 1995: 18).

In recent years, these rapid improvements in technology and correspondingly education technologies, have been encapsulating and drifting music education into a radical change as well as in the other education fields. The diversity and the richness of the technologies used in spreading and teaching musical knowledge, and also in the creation of music, are the main reasons for the acceleration this change. Technological system that enables radical changes and the most sensible effect is computers, which are described as “the most

effective communication and individualized teaching tool”. The burden of computers and computer software that can undertake the function of a music teacher in many areas have been on the rise and these technologies are becoming an integral part of contemporary music education in the 21st century (Levendoğlu, 2004).

Today, thanks to various music softwares, the computer has become an efficient tool not only for musicians but also for music teachers who work under an intense curriculum including choral work and giving intensive lessons on musical notes, sounds, and instrument training. When we look at computer-assisted music software, harmony training, music theory, instrument training, orchestration etc. and many other programs based on implementation and theory can be seen (Babacan, 2011).

It is considered as an exceptional creative ability for conductors to both play and analyze vertical and horizontal music cues and simplify it. These qualifications make it possible for a conductor to build a strong and trustworthy relationship with choral society.

The chorus conductor will not only be able to write his/her own arrangements in computer-assisted music applications, but also will be able to improve himself/herself more in terms of the works s/he will conduct by writing all partitions with computer-assisted application.

In Fine Arts High School, informatics aided music course has been given to 11th grade students for one hour a week. As stated in The Basic Law of Turkish Natural Education No. 1739, article 2, in reliance with The General Purposes of Turkish National Educational System and The Fundamental Principles of National Turkish Educational System, a student in a computer-assisted music teaching program are;

- Implementing acquired information to the field music by benefiting from the amenities of technology,
- Using musical applications programmed for tablet computers,
- Using computer applications for the purpose of music education,
- Recording voice and instrument with recording applications,
- Creating notation by using music notation software,
- Being aware of other technological materials (Umuzdaz ve Baş, 2017).

Training music teachers who can implement these lessons successfully is the purpose of the department of music. It is feasible to implement education in accordance with music technologies that is given in two semesters as Computer I and Computer II in the institutions that educate music teachers in Turkey. In Higher Education Council and in the Department of Music Education, the definition of Computer

II course is as follows: “Basic concepts of computer-assisted education, items, organizational foundations, benefits and limitations of computer-assisted education, application methods, common formats used in computer-assisted education, evaluation and selection of course software, distance education applications, database applications, negative effects of computer and prevention for children and youth (YÖK, 1998).

In the studies of Nacakçı and Dalkıran in 2011, it was stated that only at 8 institutions out of 23 institutions in the Department of Music Teacher Education, Computer I and Computer II courses’ instructors are giving lectures of computer education field.

The music teacher candidates who participated in the study conducted in 2011 by Yalçınkaya and Eldemir, received an education from another instructor other than the Department of Music Teacher Education Department, they expressed their level of music programs as follows; I do not use 29.3% at all, I use 16% less, 36% partially, I use 10.7% often, and I use 8% completely. It can be said that only 18.7% of teacher candidates are qualified in these statements. The music teacher candidates who stated that they have taken computer lessons from an instructor at the Department of Music Teacher Training Department stated that they could use music programs at all by 42.9%, 40% partially and 5.7% completely after the mentioned training. Besides, it is seen that the ratio of those who declare usage levels as low and not at all is 11.5% in total. The instruction of computer lessons that is given by an instructor in the Department of Music Teacher Education is giving rise to a positive attitude towards the lesson in the teacher candidates as well as to increase the quality of the lesson (Yalçınkaya ve Eldemir, 2013,s2193).

Marmara University Computer-assisted Music Education in Department of Music Teaching

Physical Infrastructure

20 computer classrooms serving as computer labs until 2008-2009 academic year have been converted into computer-aided music labs with the addition of 20 m-audio MIDI keyboards, 20 m-audio sound cards and headphones as of 2009-2010 academic year. As of fall semester 2017-2018 all computers have been renewed with powerful processors and memory computers. All computers are equipped with note-writing programs (Finale-Sibelius) and editing and recording software (Cubase).

In 2013, an audio recording studio was established where students can perform their recording projects professionally.

Education Program

Degree Program

Third cycle in undergraduate program (required) Computer Assisted Instruction I (Figure 1) is being taught. The main content of the course consists of the following headings:

- Examination of history and structure of computer and peripherals
- Introducing system software
- MS Office programs (Microsoft Word-Microsoft Power Point)
- Notation writing programs (Finale-Sibelius)

3RD SEMESTER (2ND GRADE – FALL TERM)		<u>Theoretic</u>	<u>Application</u>	<u>Credit</u>
<u>BSP2003</u>	<u>Computer-assisted Music Education I-Compulsory</u>	<u>2</u>	<u>2</u>	<u>3</u>

Figure 1. *The hours of Computer-Assisted Music Education course in the third semester*

In the fourth semester (Compulsory) Computer-assisted Education II course (Figure 2) is being done. The main content of the course consists of the following headings:

- Introducing important editing and recording programs
- Creating projects in Cubase program
- Editing with midi files
- To record audio and work with audio files.

<u>4TH SEMESTER (2ND GRADE – SPRING TERM)</u>		<u>Theoretic</u>	<u>Application</u>	<u>Credit</u>
<u>Computer-assisted music education II-Compulsory</u>		<u>2</u>	<u>2</u>	<u>3</u>

Figure 2. *The hours of Computer-Assisted Music Education course taken in the fourth semester*

In the fifth and sixth semesters, students who are interested in music technologies are offered elective courses aiming to learn and use the existing programs in a more advanced level, Introduction to Music Technology I and Introduction to Music Technology II (Figure 3).

<u>5TH SEMESTER (3RD GRADE – FALL TERM)</u>	<u>Theoretic</u>	<u>Application</u>	<u>Credit</u>
<u>Introduction to Music Technology I - Elective</u>	<u>2</u>	<u>0</u>	<u>3</u>
<u>6TH SEMESTER (3RD GRADE – SPRING TERM)</u>	<u>Theoretic</u>	<u>Application</u>	<u>Credit</u>
<u>Introduction to Music Technology II - Elective</u>	<u>2</u>	<u>0</u>	<u>3</u>

Figure 3. *Hours of Introduction to Music Technology in the fifth and sixth semesters*

Master's Program

Marmara University School of Educational Sciences, Fine Arts Education, Music Teacher's Master's program has added elective courses in the fall semester as Music Teaching I (Figure 4) and Music Technology II (Figure 5) in the spring semester. These lessons are done in the studio of the department. The main contents of the course content of Music Technology I are as follows:

<u>FALL TERM</u>	<u>Theoretic</u>	<u>Application</u>	<u>Credit</u>
<u>Music Technology I - Elective</u>	<u>3</u>	<u>0</u>	<u>3</u>

Figure 4. *The hours of Music Technology course taken in the fall semester*

Course Subjects

- The physical structure of the studio
- Speakers
- Microphones
- Microphone techniques
- Signal processors
- Working with midi audio samples, recording-edit
- Working with Wave files, recording-edit

Student Studies

- One recording project
- One article
- Applied lecturing

<u>Spring Term</u>	<u>Theoretic</u>	<u>Application</u>	<u>Credit</u>
<u>Music Technology II - Elective</u>	<u>3</u>	<u>0</u>	<u>3</u>

Figure 5. *The hours of the Music Technology course taken in the spring semester*

Course Subjects

- Vocal recordings
- Guitar records
- Piano recordings
- Stringed recordings
- Brass instrument recordings
- Bass recordings
- Percussion instruments recordings

Student Studies

- One recording project
- One article
- Applied lecturing

As of the implementation of all these course programs, undergraduate program for teacher candidates as of 2nd grade, they were first trained in basic computer skills, followed by training of office programs at which they could prepare and present professional documents, then to field training, and to students interested in computer-assisted music studies, they were offered the opportunity to further develop themselves in this field with elective courses.

Conclusion and recommendations

Department of music teaching education, while training their students, aim to help the future educators become well equipped and successful. In order to achieve the stated goal, it is inevitable to apply the programs which will train students good enough to become well-educated graduates fully equipped with pedagogical formation. Those future educators who are masters of their instruments, will be able to use their voices individually and collectively, competent in the field of harmony, solfege and music theories and strengthened with music literature based on cultural lessons.

In order for future teachers to be able to successfully use the evolving music technologies in their field, it is important to emphasize that the courses for computer-assisted music education are effective and coordinated with other courses.

Okay in his research titled "Trends of Music Teacher Candidates Towards Usage of Notation Writing Programs" in 2016, during their undergraduate education, music teacher candidates regarding the use of the notes writing programs in various courses (hearing education, harmony, instrument education etc.) participated in cases where they are requested by their trainees, teacher candidates showed a cumulation of 41% with "mostly", 26% with "partly", 21% with "little", 14% with "completely" and 3% with "none". When the "completely" and "mostly" options, representing the positive tendency, as evidenced by the accumulation rates, are taken together (%55) half of the teacher candidates, If it is considered that the educators want them to use the notation programs and that the distribution of 26% in the "partially" option is positive, it has been found that all of the music teacher candidates need to be more diverted about using notes writing programs.

The use of technology in vocational education and in the life of a teacher provides various benefits in terms of both teachers and students. According to the research conducted by the Yamaha Company Research Group, the use of technology in music lessons has revealed the following results:

- An increase in students' interest for music courses,
- A noticeable increase in student achievements,
- Easy grasp of musical structures,
- New workspace for teachers,
- Significant increase in student concentration,
- Increase in students interest,

- Receiving effortless feedback in student activities,
- Giving opportunity to active student participation (cited by Arapgirlioğlu, 2003); (transferred by: Pınarbaşı ve Umuzdaş, 2013)

Students are required to be able to write and use their own instruments and accompaniments accompanied by computer. In harmony studies, they should be able to reproduce and edit multi-voice partitions, and they should hear and edit with the sound samples of different instruments. Educational music composing courses should contribute to new productions and students should be able to write and compose existing performances and new performances that they produce.

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¹ *Musiki Muallim Mektebi was used as an old name having the same meaning with Music Teacher Training*

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Social Studies Prospective Teachers' Views on Community Service Practicum Course¹

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Abstract

Purpose of the present study is to determine views of prospective social studies teachers on community service practicum course. Sample of the study included 24 prospective teachers studying in Social Studies Teacher Program at Artvin Coruh University Education Faculty in the spring semester of 2013-2014 academic year. The present study was designed in phenomenological research which is one of the qualitative research designs Data were collected through semi-structured interview. Data were analysed throug content analysis. As a result of the data analysis it was concluded that prospective social studies teachers experienced happiness and difficulties on the process of taking the necessary legal permissions to initiate activities, developed sensivity towards social problems the course allowed them to work.

Keywords: *Social Studies Candidate Teachers, Community Service Practicum, Social Responsibility.*

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Introduction

Today's global developments have influenced all aspect of our living in different ways. Due to globalization, the world has become a huge market in the economic sense and educational institutions have been heavily influenced by those developments as in many areas (Horzum and Yılmaz, 2005). Education is an important process having impact on both individual and social life. In this context, it can be said that characteristics of economic and social life have been determined mostly by education. Education process always must be revised in the light of new developments and innovation. Principles, aims and activities should be always updated. Teacher-centered education approach is not much functional but student-centered learning activities become important (Eryaman & Riedler, 2010). Student's thinking, questioning, research, and practice in learning process refer to this active participation. It is known that Problem-based group work teamwork increases greatly both the intellectual development of students and their motivation of learning. This kind of teamwork allows students to reach optimum academic attainment by developing self-confidence (Şentürk, 2008). (Ada and Ünal, 2004; Şerefoğlu, 2004).

It has been known that classroom environments can be constituted thanks to presence of qualified teachers in schools. It has also ruminated on how qualified teachers can be trained (Arkün Kocadere and Seferoğlu, 2013). As a result of research, Higher Education Council concluded that community service practicum (CSP) course is necessary for training of qualified teachers and it has been taught in all education faculties of Turkey since 2006 (Elma, Kesten, Kıröğlu, Uzun, Dicle and Palavan, 2010; Yılmaz, 2011). It has been known that there is a gap between universities and society (Çuhadar, 2008; Sandy and Holland, 2006; Eryaman & Schneider, 2017) and that this gap can only be removed by well coordinated work. CSP course has allowed both individuals as well as institutions to fulfill their responsibilities in a complete manner by creating a bridge between universities and society (Elma et al., 2010; Saran, Coşkun, İnal Zorel and Aksoy, 2011).

Origin and underlying principles of the CSP depends on the interaction between individual and society, and come from 1870s John Dewey's statements in 1900s (Hatcher and Erasmus, 2008; Titlebaum, Williamson, Daprano, Baer and Brahler, 2004, Eryaman & Bruce, 2015). However, CSP as a concept was firstly used in the USA in 1966. In addition to that, Kolb (1984) stated that CSP was an active learning strategies (Hatcher and Erasmus, 2008). According to the definition in the National Community Service Act issued in the U.S. in 1990, CSP is a process which presents the information required for individuals in real life is necessary for the individual's future career and life (Quezada and Christopherson, 2005). Anderson (1998) defined CSP as both a teaching method and an educational philosophy. Furco (2003) defined the CSP as a process establishing the link between school and real life and turning the theory into practice. CSP is a process in which individuals are not satisfied what they learn in school and they exit from artificial class

environment to enter the real world, they socialize, reveal leadership characteristics and gain social awareness (Elma et al., 2010). Berman (2003) defended that the activities carried out within the course of the CSP should gain various understanding and skills. This understanding and skills are listed in the following way:

- To define the needs of the community
- To plan and perform the applications according to needs of society.
- To organize training program acquisitions through activities
- To develop awareness of civic responsibilities by participating CSP
- To strengthen moral values through CSP

From the academic year of 2006 and 2007 on instructional curriculum of teacher preparation includes both theoretical courses and applied courses. In this context, CSP course was decided to be included into instructional programs of teacher training. CSP aims to allow the prospective teachers to be aware of present problems of society and, design activities and initiations to solve the social problems through panels, conferences, congresses, symposia, to allow them to participate as a volunteer in various projects within the framework of social responsibility, acquire basic knowledge and skills related to community service works in schools (Higher Education Council, 2007). CSP is the course in which theoretical and practical works are carried out together and set of activities coordinated under the supervision of a faculty member. While students have an active role in this course, instructors have different duties such as guiding, orientation. CSP is the course which is carried out in society rather than a class. Consequently it is so important. In this process, the important aspect of the CSP is that prospective teachers develop a solution plan and apply it on a social problem. Failure in planned activities is prevented through optimally constructed objectives. The most important objective is to encounter prospective teachers to social problem and let them to deal with problems of society. Not only the activities help them to be aware of the social problems but also they allow them to develop values and sensitivity in social problems based on assistance, collaboration, cooperation, equality and social justice (Yılmaz, 2011). Additionally, prospective teachers have an opportunity to improve their emotional developments (Dinçer, 2006; Seban, 2013; Speck and Hoppe, 2004). CSP course has a great importance for prospective teachers to be able to do their own research and overcome the social problems (Coşkun, 2009). Even another purpose of the CSP is to sustain their way of life to form sensitivity and positive attitudes among their students (Ataunal, 2003). Therefore, teachers are seen as architects of society and are expected to play crucial roles in social sense (Gündüz, 2007). The academic studies on CSP course in Turkey have indicated that prospective teachers generally have positive attitude towards this course (Akkocaoğlu, Albayrak and Kaptan, 2010; Çoban, Kaşkaya and Ağırbaş, 2010; Dinçer, Ergül, Şen and Çabuk, 2011; Elma et al., 2010; Gürol and Özercan, 2010; Özdemir and Tokcan,

2010; Sönmez, 2010; Tanrıseven and Yelken, 2010; Yılmaz, 2011). Evaluation of CSP is very seminal for prospective teachers, and educators to determine its impact. It has been thought that this study can make contribution in solution of problems related to CSP course. With this context, the aim of this study is to evaluate CSP course based on views of prospective teachers studying social studies program.

Method

Design of the Study

In the present, it was aimed to understand views and experience of propsective teachers during CSP. Therefore, this study was conducted to evaluate CSP course throguh evaluations of the prospective teachers. In this regard, the present study was designed in phenmenological research, one of the qualitative research traditions. Phenomenological research is used to understand participants' experience about a phenomena (Moustakas, 1994).

Sampling

In the present study, criterion sampling strategy, one of the purposeful sampling strategies, was used because of the fact that phenomenological research requires inclusion of the participants who undergo experience related to the phenomena being studied. As a result of the criterion sampling 24 prospective teachers who studied at the department of social studies in education faculty in 2013-2014 academic year were selected.

Data Collection Tools

Data were collected throguh semi-structured interview. In semi-strucutred interview five open-ended questions were asked to the prospective teachers. Open-ended questions enable the researchers to flelxbly collect data in depth and dig up richer data about the phenomenon being studied. (Yıldırım and Şimşek, 2008). The participant prospective teachers took part the semi-structured interview.

The following questions were asked:

- What is your general view about CSP course?
- What are the challenges that you have faced during the CSP course?
- What kind of contributions to your personal development does the CSP course make?
- What kind of contributions to your social development does the CSP course make?
- What kind of benefits to social studies education do you think the CSP course contributes?

Data Analysis

Data were analysed through content analysis. In structured interview, the prospective teachers were requested to write their neagtive and positive experiences during the CSP course which had lasted for 14 weeks. In addition; answers given by the prospective teachers to the open-ended questions were coded according to similarities and repetition. In qualitative studies reliability refers to as credibility rather than consistency between measurements in quantiative research traditions (Miles & Huberman, 2002). In order to improve the reliability of studies, themes that were dug up in the data analysis were examined by an another researcher. As result of examination by another researcher, it was concluded that themes were highly persuasive and credential.

Findings

Findings from the semi-structured interview were reached inductively. Five questions were asked to the prospective teachers their responses to the five open ended questions were analysed.

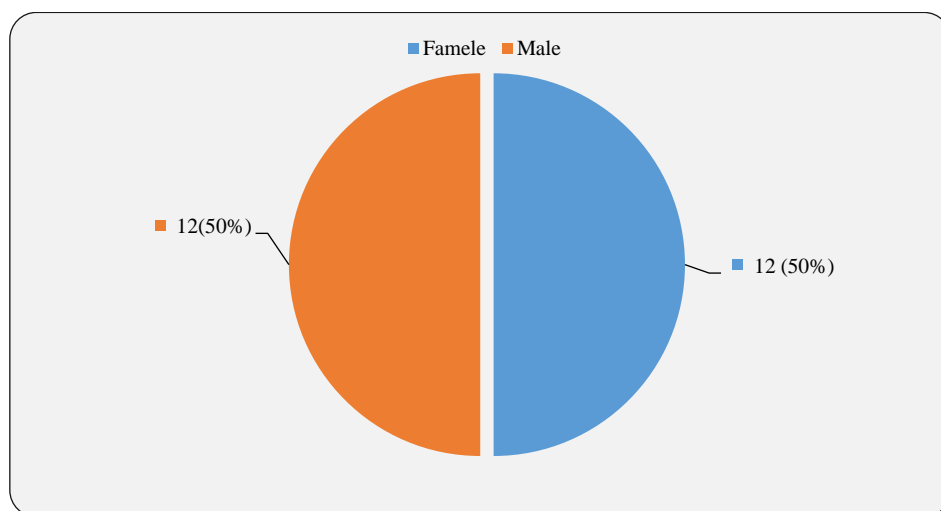


Figure 1. *Demographic Informations Belong To Social Studies Teachers*

As shown in Figure 1, 12 (50%) of the participant prospective teachers were female while 12 (50%) of them were male.

General Findings related to Practises of Community Service According to Views of the Prospective Teachers

Relevant findings related to the first question of the interview reveals that the prospective teachers could obtain information about institutions and organizations in which activities were conducted in the context of the CSP course and that they could have an opportunity to know more closely. Thus; deficiencies and problem experienced in society was correctly identified by group members and solutions ways were

sought out. It can be said that group members generating solution against problems during the activities experienced happiness.

10 prospective teachers stated that *“It allows us to experience happiness feeling through activities”*, 8 prospective teachers reported that *“It enables us to know more about institutions and organizations”*, 4 prospective teachers said that *“It allows us to understand the society more closely”* and 2 prospective teachers stated that *“It enables working in collaboration and taking responsibility”*.

The teacher view about the expressions of *“It allows the individual to experience the happiness feeling through activities”* is as follow: *I saw that activities for children in the city center did not create so much excitement on them. However, I could say that activities conducted by our group members at rural school created so much excitement among children. When I saw this excitement, I was much more excited than the children. Consequently, there are situations such as serving the society and make them happy in the nature of CSP course.”* (Prospective Teacher-18)

Findings about Limitations of Practices of Community Service According to the Views of Prospective Teachers

The participant prospective teachers have stated that they have encountered with many problems during activities. Findings indicate that problems can be divided into five sections as taking official permission from local authorities, financial opportunities, problems related to transportation, indifferent attitudes of instutional managers However, the participant prospective teachers noted that getting official problems and financial strains are more important problems than any other problems. In addition, the frequent expression of deficiency of financial opportunities is confined to many students coming from the low-income families.

8 prospective teahcers said that *“the most challenging issue is getting offical permission from the local authorities”*. 8 of them noted that *“lack of financial resources is the toughest problem”*. 5 of them pointed out that *“problems related to transportation is the most compelling”* and 3 of them said *“indifferent attitudes of menagers are the most stringent problem”*.

Verbatime example about *“the subject of necessary legal permission for activities (bureaucratic obstacles)”* is as follow: *“Nobody knew our difficulty when we got necessary permission together with our university advisor from the institution. Our petition to the was responded three weeks later by the local authority. We felt ouserlves helpless in getting rid of this bureaucratic obstacles”* (Prospective Teacher-9)

Example on “*Insufficiency of financial opportunities*” is as follow: “*We constantly needed money for our activities. The money our family sent met only our food needs so we had a difficulty with procuring necessary amount of Money. We needed for getting material during application.*” (Prospective Teacher-24)

Findings related to Practicse of Community Service About Contrubiting to Personel Progress According to the Views of Prospective Teachers

Prospective teachers stated that the CSP course had contributed to their personal development in term of providing the opportunities to work in cooperation, providing the opportunities to empathize, increasing self-confidence, contributing to the professional experience. The frequent expression of the view that the course provides the opportunity to work in cooperation has been thought to be thanks to decreasing of workload in group working and sense of belonging towards the group.

12 prospective teachers noted that “*Providing the opportunities to work in cooperation*”, 5 prospective teachers said “*Providing the opportunities to empathize*”, 4 prospective teachers underlined “*Increasing self-confidence*” and 3 prospective teachers reported “*Contributing the professional experience.*”

Verbatim example about “*Providing the opportunities to work in cooperation*” is as follow: “*Normally, in my opinion, it is more sensible to do a job alone. However, I have seen that better activities can be managed in cooperation by experiencing fewer problems and spending less effort when jobs are performed jointly. As our Ancestors say: Two hands are better than one hand. I have learned it through experience.*” (Prospective Teacher-13)

Findings related to Pratices of Community Service About Contrubiting to Social Progress According to Views Prospective Teachers

The prospective teachers think that the CSP course has a positive contribution to their social development with respect to being sensitive to social problems, finding solutions to social problems, having knowledge about the overall structure of institutions. The prospective teachers also noted that they could gain a sensitivity to any problem in society thanks to the CSP course. Answers given by the prospective teahcers to the question of “*What kind of contributions to your social development do you think the CSP course contributes?*” were detailed.

Findings displayed that 13 of the prospective teachers emphasized “*Sensitivity to social problems*”, 7 of them underlined “*Finding solutions to social problems*” and 4 of them noted “*Having knowledge about the overall structure of institutions*”.

Verbatim example about “*Sensitivity to social problems*” is as follow: “*Formerly, I did not think about any problem in society. But now I am very sensible to societal problem. For instance; in nursing home we went for activities, elders said that they were in need of love and their children did not come to visit them.*”

I was very impressed by this statement and thought a lot about what we could do to resolve this problem. Therefore, we talked with the children of elders and we told them to deal with their parents more. Consequently, I can say that I'm so relieved in conscience" (Prospective Teacher-8).

Findings related to Practises of Community Service About Contrubiting to Social Studies Education According to Views Prospective Teachers

The prospective teachers reported that the CSP course had a positive contribution to social studies education thanks to providing an information informing in firsthand against the problem in social life, better recognition of the society we lived and a closer recognition of Non-governmental organizations.

Findings showed that 12 prospective teachers stated that *"It allows me to be informed in firsthand against the problems in social life"*. 7 prospective teachers said *"It provides a better understanding of society we live"* and 5 of them pointed out that *"It allows a closer recognition of Non-governmental organizations"*.

Verbatim example about *"It allows to be informed in firsthand against the problems in social life"* is as follow: *We can learn about some problems experienced in social life from the books we read, from T.V or as far as we heard from people. However, I can say that this course gives us important clues to train the children usefully for society. That we face with problems in social life through this course provides us the experience."* (Prospective Teacher-7)

Conclusion

In this study, experience of the prospective teachers during the CPS course was understood. Their experience was evaluated in terms of postive experience and negative experience, positive impact of of the CSP course on them.

It was observed that the prospective teachers studying social studies experienced happiness thanks to beneficial activities in the context of the CSP course. Arkün et al., (2013) found that the CSP course allowed the individuals to feel happy and tranquil. This study supported the findings of the present study. The other result found in the study is that the prospective teachers experienced problems related to getting the official permissions for activities from the local authorities, financial opportunities. In paralel of this result, Uğurlu and Kral (2011) concluded that the toughest problem experienced in the CSP course was the bureaucratic obstacles. Ural, Keleş and Aydın (2011) reported that bureaucratic obstacles for prospective teachers stemmed from institution officials. Yılmaz (2011) reached the counclusion that problems related to the bureaucratic obstacles was highly prevalent. Tanrıseven and Yanpar Yelken (2011) noted that financial problems are another major problems that prospective teachers encountered during the CSP course.

As result of the data analysis it was also concluded there appeared sense of cooperation, personal development, firsthand information about social problems, sensitivity for social problems. course conducted in cooperation has a positive effect on personal developments of teacher candidates of social studies. Similarly, Uğurlu and Kırıl (2012) determined that prospective teachers could join and work in teamwork thanks to this course. Hasırcı Kaf and Sarı (2013), it stated that habit of group working could be gained throguh the CSP course. Gökçe (2011) concluded that activities inte context of the CSP course contributed personal developments among prospective teachers and prospective teachers developed sensitivity against social problmes throguh CSP course. Ural Keleş and Aydın (2011) found that the CSP course plays crucial roles in developing social awareness. Moreover, Hasırcı Kaf and Sarı (2013) stated that the CSP course made prospective teachers aware of social problems. Yılmaz (2011) and Özdemir and Tokcan (2010) concluded that the CSP course helped prospective teachers to develop sensitivity against social problems. Seban (2013) noted that the CSP course was an important course because it developed social sensitivity and awareness of students. Allen (1997) stated that behaviors could change thanks to CSP course. Akkocaoğlu et al., (2010) found that that there was a variation in levels of social awareness among prospective teachers during the CSP course.

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Teachers' Cognitive Constructs on Democratic Education in Schools: A Case Study¹

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Abstract

The purpose of this study is to determine the cognitive constructs of teachers on democratic education in schools. For this purpose, the study was modelled as a case study. The study group was 20 teachers and determined by using maximum variation sampling method. Repertory grid technique was used to collect data. Data were analyzed using descriptive analysis technique. The participants produced 200 valid cognitive constructs related to the democratic education in school. The most frequently mentioned cognitive constructs were respectively: (1) motivation increases, (2) confidence/self-confidence, (3) job satisfaction increases, (4) tolerance, (5) participative management, (6) employees feel precious, (7) organisational commitment, (8) new opinions, (9) human rights, and (10) freedom of ideas/impressions. The cognitive constructs were classified considering functionality and the similarity of them. As a result of classification, 14 main groups were determined according to the 200 valid cognitive constructs. Democratic participation should be encouraged by the school administrators. Besides, school society should display democratic attitudes for democratic education. In addition, the school administrators should appreciate students, teachers and parents in terms of success of school they manage.

Keywords: *democratic education, cognitive construct, teacher, repertory grid.*

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Introduction

Democracy, is a form of governance and mode of coexistence, participation in public decision making process, distributing resources, resolving conflicts, and planning for the future. In other words, democracy is a political system and a way of life that is based on active participation of individual in the decision-making process and the implementation of responsible actions for the well-being of the individual and the community. Therefore, each individual must have some specific knowledge, skills, and values that will allow him/her to take part in to the best of his/her ability. Consequently, democratic education can be expressed as the process that includes the principles such as to educate society by means of the human rights principles, integrate the rules of democracy in educational activities, and thus transfer the explicit and implicit democratic functions and structure into education programmes.

In a democratic society the institutions and practices create the political space in which the citizens' identities form and they experience their rights (Mathé, 2016). Therefore, under true democratic political systems due to the accountability, the government has to protect human rights and the rule of law. After all, an open and conscious discussion is vital for a healthy democracy, because open-minded flow allows people to be fully informed as much as possible (Singh, 2014). Democracy, more than a form of government, is primarily a mode of sharing a conjoint communicated experience (Dewey, 2001). In the same way, democratic education enables the faith in the students and reveals collective capacity of them. In a democratic education atmosphere the students are concerned about the welfare of others and the common good (Apple & Beane, 2007; Eryaman & Schneider, 2017; Eryaman & Bruce, 2015). This collective capacity creates possibilities for resolving problems by using critical reflection and analysis to evaluate ideas, issues, and policies. The students are also concerned about the dignity and rights of other individuals and minorities in this atmosphere (Beane, 1990).

In a democratic country, formal education needs to be democratic for three reasons: democracy is a form of government, democracy is a lifestyle, and citizens have a right to join democratic life (Korkmaz & Erden, 2012). Consequently, the school as a social institution should promote and reinforce the democratic way of life (MacBeath & Moss, 2004, p.163). A heterogeneous student population with different backgrounds and perspectives has a chance to discuss current social issues, and interaction with each other enables them to understand the common values in the school environment. (Doğanay, 2012; Eryaman, 2009). In accordance with age and maturity of a student, teachers should give this student the opportunity to participate in school life including involvement in the creation of student councils, peer-mentoring programs, and the creation of curriculum materials to be both meaningful and relevant to their interests and experiences (Lee, 2013). The students can also bring into significant relationships with adult role-models and so they can have an important citizenship experience that gives them an insight into real social life.

Democratic school should be based on improvement the school climate or enhance students' self-esteem (Apple & Beane, 2007), democratic culture (Işıkgöz, 2016) motivation for democratic participation (Bindewald, Tannebaum & Womac, 2016), democratic attitudes and behaviours teaching (Duman & Koç, 2004), democratic teaching practices and social justice (McDermott, 2012), student centered organization (Şişman, Güleş & Dönmez, 2010), democratic principles and practices in school management (Morhayim, 2008), democratic decision-making and participative management (Levis, 1994), democratic curriculum and teaching methodologies (Riedler & Eryaman, 2016), democratic policies and organizational structures (Alshurman, 2015), democratic awareness, reflection, dialogue (Hyde & LaPrad, 2015).

In a democratic education environment inter-personal relations should be established on democratic values, including the following characteristics: tolerance, cooperation, mutual trust (Arabacı, 2005), interdependence (Noddings, 2011), mutual respect, mutual responsibility, recognition of human dignity (Kubow & Kinney, 2000; Riley, 2011), respect for human rights (Moswela, 2010; Riley, 2011), responsibility, cooperation, concern for others, critical thinking, freedom of expression (Cappa, 1956), sharing, collaboration, active participation (Hotaman, 2010; Print, Ørnstrøm & Nielsen, 2002), equality, cooperative learning (MacMath, 2008), cooperativeness, loyalty (Guerney & Merriam, 1972), respect, mutual peace, and human rights (Korkmaz & Erden, 2014), and democratic participation (Lowry, 2002).

Fundamental democracy values can only be achieved at schools implementing a democratic management model that carries out democratic education practices (Alshurman, 2015). Democratic school needs democratic school administrators who enhance the members' skills to be respectful to the views of others and to help them examine their impact upon each other to understand themselves better (Hayes, 1982). The school should have a positive climate for democratic governance. As a matter of definition, a school with a positive climate is one that promotes norms, values, and expectations that support people feeling socially, emotionally, and physically safe; and that this climate supports a sense of unity and cohesion at school, promotes a culture of respect, and encourages students to consider themselves stakeholders in the school's success (Gould, 2003). A democratic school management is required to carry out the goals and vision of democratic education. Ultimately, it is the management of the school that is responsible for creating an organisational culture of school ethos which encourage democratic participation (Van der Merwe, 2016).

There is an increasing attention among the researchers to understand internal factors leading some schools' education to be more democratic than others (Apple & Beane, 2007; (Bindewald, Tannebaum & Womac, 2016; Hyde & LaPrad, 2015). These researchers benefitted from many theories to understand these factors. This study was conducted based on 'Personal Construction Theory' which developed by Kelly in 1955. In this constructivist theory, Kelly tries to explain the individual's beliefs and views employing 'personal constructs' in cognitive dimensions formed by two opposite poles. The repertory of an individual's constructs and relationships between these constructs provide a basis for predicting his/her beliefs and

judgments (Paszowska-Rogacz & Kabzińska, 2012). Over the years, Kelly's Personal Construction Theory has been thoroughly revised and improved, and it has also been successfully applied to many research fields and practices (Pervin & John, 2002).

The basic starting point of the personal construction theory is cognitive structure. Cognitive structure is a mental state as a consequence of many repeating cognitive processes (Cüceloğlu, 1991, p. 201). The cognitive processes are deeply rooted in an individual's interactions with the milieu because the cognition is a conscious process of individual's mind including different aspects such as awareness, perception, reasoning, and judgment (Wilson, 2002). Cognitive structure system embraces the total network of a person's constructs, and it includes tacit as well as verbal constructs (Bussis, Chittenden, Amarel, & Klausner, 1985). The personal constructs assume that they are created and structured, individually.

In the previous studies, it is focused on democratic education environments, at classroom level, at primary schools (e.g. Büyükkaragöz & Kesici, 1996; Çakmur, 2007; Demir, 2003; Genç, 2006; Karatekin, Merey & Kuş, 2012; Riley, 2001; Toper, 2007), secondary schools (e.g. Kesici, Pesen, & Oral, 2017; Özdaş, Ekinçi & Bindak, 2014; Yalçın, 2007), and at higher education (e.g. Duman & Koç, 2004; Elkatmış & Toptaş, 2015; Gömleksiz, 1988; Samancı & Yıldırım, 2015; Saracaloğlu, Evin & Varol, 2004) through the democratic behaviour, democratic attitudes and beliefs of teachers according to teachers' and students' perception. But the studies on democratic education at school level are limited. Therefore, in this study it is focused on the teachers' cognitive constructs on democratic education in the school environment. For this purpose the following questions were sought:

1. What are the cognitive constructs of the teachers' on democratic education in schools?
2. What are the relative priority levels of teachers' cognitive constructs?

Method

Case study model, which is a type of qualitative research design, was applied in this study. The qualitative research design is used to obtain in-depth and comprehensive information on a topic (Denzin & Lincoln, 2005; Marshall & Rossman, 2006; Patton, 2014; Singh, 2007). The key philosophical assumption upon all types of qualitative research is that the reality is constructed by individuals interacting with their social worlds (Merriam, 1998, p.6). Case is defined as a specific, complex, functioning integrated system which has a boundary and working parts and purpose in social sciences and human services (Stake, 1995, p.2). The case study model allows to investigate and reveal the holistic and meaningful features of real life. The case study also ensures researchers to examine the data closely in a particular context (Fidel, 1984; Yin, 2003; Zainal, 2007). 'A democratic education' promoting the achievements of school was assumed as a 'case' and so this study was designed on that case.

Study Group

The study group were 20 teachers working in Ordu city centre during 2016-2017 academic year. The study group was determined using maximum variable sampling method. A maximum variation sample is constructed by identifying key dimensions of variations and then finding participants with various demographic qualifications as much as possible. Maximum variation sampling can be utilized to construct a holistic understanding of the phenomenon by synthesizing studies that differ in their study designs on several dimensions (Suri, 2011). Heterogeneity for a small sample might be a problem due to variety in perceptions of participants. The maximum variation sampling strategy turns that apparent weakness into a strength by applying the following logic: Any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared aspects or impacts of a program (Patton, 1990, p.172). Therefore, the democratic education as ‘a case’ was investigated as possible as on participants having different demographic qualifications.

In this study, nine participants were male and 11 were female. Five primary school teachers, five secondary school teachers, five academic high school teachers, and five vocational high school teachers were recruited. The average age was 33.5. Five participants were primary education teachers, three were psychological counsellor and guide, two were philosophy teachers, two were social sciences teachers, two were science teachers, two were geography teachers, one was mathematics teacher, one was literature teacher, and two were history teachers. The average professional seniority was 12.7.

Procedure

This study was conducted in four stages: (i) definition of the problem (ii) preparation of data collection tool (iii) data collection, and (iv) data analysis and interpretation (Mayring, 2011; Yıldırım & Şimşek, 2013). Details of these stages are presented below:

(i) Definition of the problem: In this stage, the concepts related to the problem were defined. A conceptual framework was established to define and classify the opinions of teachers on democratic education at school.

(ii) Preparation of data collection tool: A structured grid form was used as the data collection tool in the study, and it was prepared by the researchers based on national and international literature. The grid form is a cognitive mapping technique that attempts to describe how people think about a phenomenon in their life (Fransella, Bell, & Bannister, 2004; Tan & Hunter, 2002). Moreover, it can be used to reveal the democratic education qualifications in school. In this study, data was obtained by using ‘triad repertory grid’ technique (Adams-Webber, 1996; Jankowicz, 2004; Bell, 2005). The structured grid form includes two parts. The first part includes five questions determining the demographic variables of participants such as gender, age, and

professional seniority, teaching field, and the school type they work. In the second part, participants were asked for writing three qualifications on democratic education and then, ten impressions according to these qualifications they assume as the necessities for democratic education at school. The repertory grid form used in the study is shown in Figure 1.

Cognitive Constructs	Democratic Qualifications			Non-Democratic Qualifications			Cognitive Constructs
Positive Impressions							Negative Impressions

1. Write your answer as two words, two parts of sentence or two identifications which separated by dashes (-).
2. Imagine that the two impressions in each trio in a similar manner but third is different.
3. The figure has been named as the similar pole (democratic) that two impressions are similar.
4. The figure has been named as the averseness pole (non-democratic) that two impressions are different from third.

Figure 1. *The triad repertory grid*

(iii) *Data collection:* We obtained the data through face-to-face interviews with the participants. Firstly, we asked the participants to think about democratic education at school. Secondly, we asked the participants to write three qualifications for democratic education in each section of the grid form and then, to write ten impressions considering them. Thirdly, we asked each participants to grade positive impressions from four to six, the two impressions in each trio are in a similar manner but the third is different. Fourthly, we asked each participant to continue the same process for negative impressions. Then, we asked each participant to grade negative impressions from one to three, the two impressions in each trio are in a similar manner but the third is different. Every interview lasted about in 25-30 minutes. As an example of this process a repertory grid form completed by a teacher is shown in Figure 2.

Cognitive Constructs	Democratic Qualifications			Non-Democratic Qualifications			Cognitive Constructs
	Politeness	Communication	Transparency	Mobbing	Favouritism	Domineeringness	
Positive Impressions							Negative Impressions
Tolerance	△5	△5	4	2 △	1	2 △	Tolerance decreases
Employees feel precious	△5	4	△5	2 △	2 △	1	Job-satisfaction reduces
Participative management	4	△6	△6	1 △	3	1 △	Favouritism increases

1. Write your answer as two words, two parts of sentence or two identifications which separated by dashes (-).
2. Imagine that the two impressions in each trio in a similar manner but third is different.
3. The figure has been named as similar pole (democratic) that two impressions are similar.
4. The figure has been named as averseness pole (non-democratic) that two impressions are different from third.

Figure 2. *The repertory grid form completed by a teacher*

(iv) *Data analysis and interpretation:* Data were transferred to computer and analysed by using descriptive analysis method. This method includes four stages namely, characterising constructs, identifying core constructs, assessing relationships, and analysing data (Jankowicz, 2004; Creswell, 2015, p.197). In the first stage, a total of 200 constructs were characterised related to democratic education. In the second stage the constructs were classified into groups considering similar qualifications. In the third stage, the constructs were grouped, no construct was left out. In the fourth stage, the scores were added and the first produced cognitive construct score was multiplied by ‘10’, the last cognitive construct score was multiplied by ‘1’ and thereby the relative importance scores were obtained.

Interpretation of findings was carried out in seven different stages namely, (i) counting step: separation of the data to main groups and determination of frequencies, (ii) sampling step: notation of the constructs occurred as a result of repetitions, (iii) classification of similarities: separation of constructs with similar characteristics, (iv) categorisation: grouping of constructs in accordance with the purpose of research, (v) association of constructs: identification of the relationships between constructs, (vi) establishment of cause-effect relationships: establishment a connection between constructs, and (vii) association of data with the research’s theory: explanation for the reasons of specific data occurrence and general suggestions (Karadağ, 2011).

Validity and Reliability

To ensure the internal validity: (i) In finding presentation process, we interpreted the data considering the position which they are associated with (ii) We supported the internal consistency of sub-theme groups considering internal homogeneity and external heterogeneity measures. Besides, we determined the sub-themes based on the theoretical structure, and presented all findings after the data

analysis, without comment to ensure internal reliability (Creswell, 2015, p. 250-254). Additionally, we asked for expert opinion in order to verify whether the opinions represent sub-themes given under four different main themes. For this purpose, we gave the lists containing teachers' main cognitive construct groups and constructs to a faculty member in educational sciences then, asked the expert to compare the opinions with the sub-themes in lists. Consequently, we compared the expert's matches with our matches. Then, the formula 'Reliability= Consensus / (Consensus + Dissidence) \times 100' was applied to determine the reliability of the coding (Miles & Huberman, 1994, p.64). We calculated the agreement between the coders as $192 / (192 + 8) \times 100 = .96$. In method section, we gave the research model, study group, data collection tool and data analysis processes in detail to ensure the external validity of study. Besides, to ensure the external reliability we specified procedure with details in related sections: (i) the procedures include data collection, data analysis, consolidation and presentation of results, and (ii) topic and the method.

Findings

Teachers' Cognitive Constructs Related to the Democratic Education in School

Teachers produced 200 valid cognitive constructs related to the democratic education in school. The most frequently mentioned cognitive constructs were namely, (1) motivation increases [$\eta=8.4\%$] (2) confidence/self-confidence [$\eta=7, 3.5\%$], (3) job satisfaction increases [$\eta=7, 3.5\%$], (4) tolerance [$\eta=7, 3.5\%$], (5) participative management [$\eta=5, 2.5\%$], (6) employees feel precious [$\eta=5, 2.5\%$], (7) organisational commitment [$\eta=4, 2\%$], (8) new opinions [$\eta=4, 2\%$], (9) human rights [$\eta=4, 2\%$], and (10) freedom of ideas/impressions [$\eta=4, 2\%$]. The constructs were analyzed and then similar cognitive constructs were classified. As a result of classification, 14 main groups were determined according to the 200 valid cognitive constructs. The results are shown in Table 1.

Table 1. *The Opinions Cognitive Constructs and Groups ($\eta=20$)*

(1) ATTITUDE	
• Respect for ideas [9] 240	• Democracy culture [12] 100
• Democracy culture [13] 210	• Respect for ideas [14] 90
• Human's value [8] 210	• Human rights [15] 84
• Freedom of ideas [10] 190	• Freedom of expression [4] 84
• Freedom of ideas [1] 189	• Freedom of ideas [6] 80
• Respect to individual [15] 176	• Human rights [14] 72
• Democratic attitude [14] 170	• Human rights [16] 69
• Democracy culture [19] 144	• Human rights [4] 57
• Respect for differences [20] 140	• Democratic attitude [2] 38
• Free thought develops [2] 138	• Respect for differences [19] 36
• Democratic attitudes [17] 114	• Democracy culture [15] 21
• Respect to views [1] 105	
(2) APPRECIATION	
• Awareness [18] 190	• Awareness increases [14] 119
• Feel precious [17] 189	• Respect for profession [11] 110
• Individuals feel precious [11] 176	• Employees are valued [10] 95

- Employees feel precious [6] 171
- Employees feel precious [3] 168
- Respect for employees [3] 162
- Employees feel precious [2] 152
- Students gain personality [15] 132
- Employees feel precious [12] 126
- Students feel precious [10] 126

(3) PARTICIPATION

- **Co-decision [5] 230**
- Participative management [4] 220
- Participative management [16] 220
- Co-decision [20] 210
- Shared decision making [12] 210
- Participation increases [15] 210
- Cooperation in practice [6] 200
- Participative management [12] 192
- Participative management [5] 176

- Respect for personality [18] 90
- Employees feel precious [18] 76
- Respect for speciality [13] 60
- Students gain personality [16] 40
- Students feel precious [4] 30
- Feel precious [19] 21

- Participation voluntarily [6] 164
- Common goal [9] 162
- Common goal [5] 162
- Co-decision [1] 147
- Common sense [7] 133
- Participative management [19] 102
- Participation increases [3] 76
- Active participation [10] 60
- Shared attitude [9] 38

(4) COLLABORATION

- **Co-operation [7] 171**
- Teamwork [18] 162
- Division of workload [11] 154
- Responsibility [18] 152
- Solidarity [19] 147
- Co-operation [11] 132
- Solidarity [20] 120
- Mutualisation and solidarity [15] 105
- Interdependence [8] 85

- Teamwork [3] 85
- Team spirit [2] 69
- Teamwork [19] 68
- Team spirit [20] 54
- Team spirit [18] 34
- Mutualisation and solidarity [17] 24
- Mutualisation and solidarity [4] 21
- Co-operation [14] 19
- Mutualisation and solidarity [16] 17

(5) TRUST

- **Trust-based work [13] 168**
- Confidence [4] 147
- Trust-based school [16] 126
- Confidence [6] 120
- Feel safe [9] 105
- A peaceful environment [17] 100
- Fear goes off [16] 95
- Fear reduces [4] 85
- Self-confidence [13] 84

- Organisational trust [5] 76
- Confidence [2] 72
- Trust-based school [15] 66
- Confidence [7] 63
- Confidence [3] 42
- Confidence [20] 40
- Resilience [11] 36
- A peaceful environment [6] 34

(6) COMMUNICATION

- **Mutual communication [13] 189**
- Everyone gives feedback [1] 168
- Reconciliation [5] 161
- Positive communication [2] 154
- Constructive criticism [20] 144
- Human relations [13] 126
- Effective listening [3] 126
- Positive communication [1] 126

- Avoid conflicts [9] 92
- Effective communication [19] 90
- Organisational communication [10] 84
- Effective communication [18] 51
- Avoid conflicts [8] 40
- Empathy [2] 19
- Manager-employee interaction [7] 18
- Positive communication [20] 17

(7) TOLERANCE

- **Non-violence [16] 207**
- Tolerance [3] 190
- Tolerance [15] 189
- Non-violence [4] 180
- Non-prejudices [1] 170
- Tolerance [16] 160
- Tolerance [4] 152
- Mutual respect [4] 120

- Mutual respect [16] 120
- Tolerance [18] 108
- Non-discrimination [2] 105
- Tolerance [20] 85
- Mutual respect [17] 84
- Non-violence [12] 72
- Tolerance [5] 22

(8) COMMITMENT	
<ul style="list-style-type: none"> • Strong belongingness [17] 220 • Faithfulness [14] 171 • Organisational commitment [17] 168 • Responsibility [14] 144 • Organisational commitment [5] 126 • Organisational commitment [7] 105 	<ul style="list-style-type: none"> • Organisational commitment [6] 95 • Belongingness [1] 69 • We-feeling [13] 20 • Responsibility [10] 19 • Belongingness [12] 18 • Belongingness [6] 18
(9) CREATIVITY	
<ul style="list-style-type: none"> • New opinions emerge [11] 216 • New opinions [19] 180 • New opinions [10] 171 • Different opinions [20] 153 • Original opinions [15] 147 • Original opinions [12] 126 	<ul style="list-style-type: none"> • Different opinions [13] 110 • Creativity increases [13] 108 • Original opinions [16] 96 • New opinions [1] 92 • New opinions [9] 63 • Creative thinking [11] 21
(10) JUSTICE	
<ul style="list-style-type: none"> • Accountability [7] 240 • Fairly division of labour [18] 140 • Fair management [8] 126 • Impartiality [8] 120 • Fair management [7] 68 • Equality of opportunity [14] 57 	<ul style="list-style-type: none"> • Accountability [3] 54 • Equality strengthens [15] 44 • Empowerment of justice [14] 36 • Organisational justice [3] 18 • Accountability [9] 18
(11) EFFECTIVENESS	
<ul style="list-style-type: none"> • School aims [9] 192 • Student success [2] 189 • Qualified education [7] 168 • Efficiency [8] 160 • Student success [9] 147 • Achievement of purposes [10] 126 	<ul style="list-style-type: none"> • School success [11] 92 • Focus on objectives [11] 72 • School improvement [17] 63 • Achieve to purposes [12] 38 • School success [8] 21
(12) SOLUTION	
<ul style="list-style-type: none"> • Effective problem solving [17] 154 • Reduction of problems [6] 126 • Easy problem solving [7] 120 • Easy problem solving [14] 108 • Problem solving skill [3] 102 	<ul style="list-style-type: none"> • Resolve problems [19] 63 • Problem solving skill [10] 38 • Solution-focused management [5] 34 • Resolve problems [1] 34 • Resolve problems [18] 17
(13) MOTIVATION	
<ul style="list-style-type: none"> • Motivation increases [11] 240 • Motivation increases [12] 180 • Motivation increases [9] 108 • Ensure motivation [8] 76 • Motivation increases [20] 72 	<ul style="list-style-type: none"> • Motivation increases [5] 54 • Motivation increases [17] 44 • Tendency for success [7] 42 • Motivation increases [13] 40
(14) SATISFACTION	
<ul style="list-style-type: none"> • Job satisfaction increases [2] 210 • Happiness of employee [8] 153 • Job satisfaction increases [19] 153 • Stakeholder satisfaction [10] 152 • Job satisfaction increases [5] 85 	<ul style="list-style-type: none"> • Job satisfaction increases [8] 54 • Job satisfaction increases [6] 51 • Job satisfaction increases [12] 51 • Job satisfaction increases [1] 23

In Table 1, 14 main groups are seen. The main groups and dominant cognitive constructs are follows:

Attitude: This group includes 23 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) respect for ideas [9, 240], (2) democracy culture [13, 210], and (3) human's value [8, 210].

Appreciation: This group includes 20 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) awareness [18, 190], (2) feel precious [17, 189], and (3) individuals feel precious [4, 180].

Participation: This group includes 18 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) co-decision [5, 230], (2) participative management [4, 220], and (3) participative management [16, 220].

Collaboration: This group includes 18 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) co-operation [7, 171], (2) teamwork [18, 162], and (3) division of workload [11, 154].

Trust: This group includes 17 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) trust-based work [13, 168], (2) confidence [4, 147], and (3) trust-based school [16, 126].

Communication: This group includes 16 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) mutual communication [13, 189], (2) everyone gives feedback [1, 168], and (3) reconciliation [5, 161].

Tolerance: This group includes 14 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) non-violence [16, 207], (2) tolerance [3, 190], and (3) tolerance [15, 189].

Commitment: This group includes 12 cognitive constructs. According to the relative importance level the three dominant cognitive constructs are, respectively: (1) belongingness [17, 220], (2) faithfulness [14, 171], and (3) organisational commitment [17, 168].

Creativity: This group includes 12 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) new opinions [11, 216], (2) new opinions [19, 180], and (3) new opinions [10, 171].

Justice: This group includes 12 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) accountability [7, 240], (2) fairly division of labour [18, 140], and (3) fair management [8, 126].

Effectiveness: This group includes 11 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) school aims [9, 192], (2) students' success i [2, 189], and (3) qualified education [7, 168].

Solution: This group includes 10 cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) effective problem solving [17, 154], (2) managerial problems diminish [6, 126], and (3) easy problem solving [7, 120].

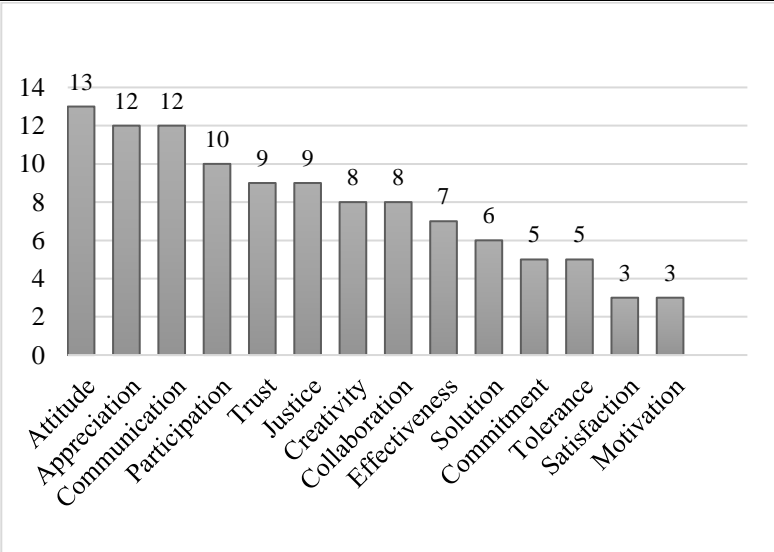
Motivation: This group includes nine cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) motivation increases [11, 240], (2) motivation increases [12, 180], and (3) motivation increases [9, 108].

Satisfaction: This group includes nine cognitive constructs. According to relative importance level the three dominant cognitive constructs are, respectively: (1) job satisfaction increases [2, 210], (2) employee happiness [8, 153], and (3) job satisfaction increases [19, 153].

The cognitive constructs were classified in 14 different groups. Some constructs were produced by different participants more than once in the same group. These repeats were assumed as only one construct. The frequency and percentage grades for participants in each cognitive construct group are presented in Table 2.

Table 2. *The Frequency and Percentages of Participants in Main Groups*

Main Categories	η	%
1. Attitude	13	11.8
2. Appreciation	12	10.9
3. Communication	12	10.9
4. Participation	10	9.1
5. Trust	9	8.2
6. Justice	9	8.2
7. Creativity	8	7.3
8. Collaboration	8	7.3
9. Effectiveness	7	6.4
10. Solution	6	5.5
11. Commitment	5	4.5
12. Tolerance	5	4.5
13. Satisfaction	3	2.7
14. Motivation	3	2.7



In Table 2, the first three construct groups are, respectively, attitude [$\eta=13$, 11.8%], appreciation [$\eta=12$, 10.9%], and communication [$\eta=12$, 10.9%]. Besides, the last three cognitive construct groups are, respectively, tolerance [$\eta=5$, 4.5%], satisfaction [$\eta=3$, 2.7%], and motivation [$\eta=3$, 2.7%].

The Relative Priority Levels of Teachers' Cognitive Constructs

The relative importance level of cognitive constructs was obtained according to the sums. The sums were procured by multiplying each cognitive construct's score with the descending numbers, respectively, 'from 10 to 1'.

The results are presented in Table 3.

Table 3. *Relative Importance Level of Cognitive Construct Groups*

Teachers	1. Attitude	2. Appreciation	3. Participation	4. Collaboration	5. Trust	6. Communication	7. Tolerance	8. Commitment	9. Creativity	10. Justice	11. Effectiveness	12. Solution	13. Motivation	14. Satisfaction
1	294		147			294	170	69	92			34		23
2	176	152		69	72	173	105				189			210
3		330	76	85	42	126	190			72		102		
4	141	210	220	21	232		272							
5			568		76	161	22	126				34	54	85
6	80	171	364		154			113				126		51
7			133	171	63	18		105		308	168	120	42	
8	210			85		40				246	181		76	207
9	240		200		105	92			63	18	339		108	
10	190	221	60			84		19	171		126	38		152
11		286		286	36				237		164		240	
12	100	126	402				72	18	126		38		180	51
13	210	60			252	315		20	218				40	
14	332	119		19				315		93		108		
15	281	132	210	105	66		189		147	44				
16	69	40	220	17	221		487		96					
17	114	189		24	100		84	388			63	154	44	
18		356		348		51	108			140		17		
19	180	21	102	215		90			180			63		153
20	140		210	174	40	161	85		153				72	
Total	2757	2224	2912	1619	1459	1605	1784	1173	1483	921	1268	796	856	932
Average	183.8	158.8	224.0	124.5	112.2	133.7	162.2	130.3	148.3	131.6	158.5	79.6	95.1	116.5

In Table 3, the data were analyzed in two different ways. Firstly, the relative importance scores of cognitive constructs for each participant were calculated and shown on each line. Secondly, the highest scored construct group was shown in grey on each line as the main construct group for each participant.

According to the relative importance level, the first three cognitive construct groups ensued as follows; (1) appreciation [$\eta=4$, 20%], (2) participation [$\eta=4$, 20%], and (3) attitude [$\eta=3$, 15%]. However,

any main construct was created by one of the teacher in some construct groups such as trust, creativity, solution, and motivation. In Table 3, total and average scores in the last two lines represent the relative importance level of each cognitive construct group. According to the total scores the first three cognitive construct groups ensued as follows: (1) participation [$\Sigma=2912$], (2) attitude [$\Sigma=2757$], and (3) appreciation [$\Sigma=2224$]. According to the average scores the first three cognitive construct groups emerged as follows: (1) participation [$\bar{X}=224$], (2) attitude [$\bar{X}=183.8$], and (3) tolerance [$\bar{X}=162.2$].

Discussion and Conclusion

In this study, it is aimed to determine the cognitive constructs of teachers on democratic education at schools. 200 cognitive constructs were produced by teachers related to democratic education at schools. The cognitive constructs were collected in 14 different groups considering functionality and the similarity of them. The participants frequently emphasized some constructs such as motivation, confidence/self-confidence, job satisfaction, tolerance, participative management, preciousness, organisational commitment, new opinions, human rights, and freedom of ideas/impressions. The teachers emphasized that the democratic education ensures democratic attitudes such as respect for ideas, democracy culture, and human's value at schools. The teachers also emphasized on appreciation: including awareness and feeling precious.

Similarly, Alshurman (2015) argues that democratic education system encourages the integration of a person in a democratic society, and ensures to give value to people. Noddings (2011) states that democratic education strengths to respect for different perspectives, encourages respect every form of honest work and cultivates a deep appreciation of interdependence. Hyde & LaPrad (2015) asserts that democratic education promotes teachers and students mindfully to democratic action.

Teachers emphasize participation: including co-decision and participative management, and collaboration: including co-operation, teamwork, and division of workload in democratic education. Participation and collaboration are two key factors in democratic education. Similar determinations are seen in previous studies. Moswela (2010) and Riley (2011) stresses on cooperation and concern for others. Hotaman (2010), Print, Ørnstrøm & Nielsen (2002) highlights sharing, collaboration, and active participation.

Participants prioritize the trust: including trust-based school and confidence; the communication: including mutual communication, giving feedback, and reconciliation for democratic education. It is clear that the schools cannot transform into democratic schools without effective communication and organisational trust. Similarly, Arabacı (2005) emphasizes mutual trust; Cappa (1956) freedom of expression; Alshurman (2015) a sense of confidence for democratic education.

Furthermore, the teachers emphasized tolerance and commitment in democratic education. In this context, tolerance, faithfulness and belongingness are key factors in democratic education environment. In previous studies conducted by Bindewald, Tannebaum & Womac (2016) it is suggested that tolerance and faithfulness are important components of democratic education.

Teachers have produced principal cognitive constructs such as accountability, fair management, school aims, students' success, qualified education, problem solving, motivation and job satisfaction related to the democratic education. Actually, in current educational institutions the accountability, qualified education and fair management are seen essential qualifications for democratic education management. In addition, problem solving, motivation and job satisfaction are accepted as the basic components of democratic work environment. Furthermore, similar expressions were frequently mentioned in previous studies. Indeed, in previous studies it was emphasised accountability (MacMath, 2008), fair management (Işıkgöz, 2016), school aims (Levin, 1994), students' success and qualified education (Jenlink & Jenlink, 2008), problem solving (Beane 1990), motivation (Bindewald, Tannebaum & Womac, 2016), and job satisfaction (Alshurman, 2015).

According to the relative importance scores, the first three cognitive construct groups were participation, attitude, and appreciation. According to the average scores, the first three cognitive construct groups were participation, attitude, and tolerance. These results indicated that teachers give more importance to democratic participation, democratic attitude and appreciation in terms of democratic education. In addition, average scores indicated that the teachers give more priority to democratic participation, democratic attitude and tolerance.

Based on the results, it can be asserted that the school administrators should encourage democratic participation. Besides, school society (teachers, students, parents) should display democratic attitudes towards democratic education. In addition, the school administrators should appreciate students, teachers and parents regarding success of the school they manage. The stakeholders of the school should take initiative to ensure that the school's learning environment is tolerant. School administrators should give priority to ensure effective communication, collaboration, organisational trust, commitment, motivation and job satisfaction. Education activities should promote creativity and problem solving. Top managers should be eager to ensure democratic education foundations in school environment. Further studies can be conducted using different research models. Moreover, further studies can be conducted on different study groups such as students, parents and school administrators.

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Basic Properties of Chorus and Fundamental Approaches to Improve

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Abstract

Through choral education, individuals learn to use their voices both correctly and effectively, as well as acquire certain personal characteristics. The level of applicability of the chorus training is high and it provides the student's convenience to participate in the musical atmosphere. In choral studies, children learn how to use the basic elements and functions of music, the formation of sound, the characteristics of their own voice and how to use it correctly and to breathe properly and regularly. Chorus have various functions as social, individual, cultural and educational. In this study, these functions were examined and the effects of choral education on children's mental and behavioral development were investigated, the importance of choosing repertoire was discussed and the importance of organizing various organizations in terms of increasing the quality of choral education is emphasized.

Keywords: *Education, Choir, Music.*

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Introduction

The term chorus comes from the words *khoreia-Horus* in Greek and *chorea* in Latin. The word *chorus* was first used for the dancing and hand holding community, and later the singing ensemble began to be given this name. At the beginning, the chorus was singing singles. In parallel with the general development of the music, the chorus and choral works also improved (Egüz, 1998).

There are different definitions of choral education; "Choral education is the process of giving musical behaviours to the individuals who are in the chorus, aiming them through their own experiences, in order to use their voices correctly, beautifully and effectively" (Çevik, 1997). Each chorus must be in an intensive and regular working process within a certain order and system in order to reach the best, correct, beautiful and effective way of singing. The way of introducing these musical behaviours requires an intense and uninterrupted work that repeats at regular intervals. According to Ucan (2001), "Choral education is the process of giving certain socio-musical behaviours purposefully and methodically to the individuals (members) that form the chorus through their common experiences; or it is the process of changing, transforming, developing and empowering purposefully and methodically the socio-musical behaviours of the individuals in the chorus through their common experiences. ".

In addition, choral education plays an important role also in the development of some personal traits. These features are the earnings in improving self-confidence and self-discipline, making individuals active, spending qualified time away from harmful habits, being emotional- sensitive-programmable and sharing, gaining sense of responsibility, using physical language in a good way, protecting traditions and customs, keeping up with the era and carrying it forward, developing cultural pleasures, thinking multi-directional and multi-dimensional, organizing and being organized. These achievements of choral education are also reflected in school education and school success in larger scales (Erol, 2013).

As a high level of applicability and ease of providing students with the opportunity to participate in the musical environment, chorus activities that music teachers have enjoyed to a great extent are taking place as a lesson in music teaching education/training programs. The ability of a musical work to be performed with a high level of achievement requires that the commentator(s) individually possess technical and musical accumulation specific to that area. This is especially important in singings where multiple musicians are taking place. For example, all groups of orchestral instruments must have the technical and musical behaviour required by the whole of the party and the musical piece. Because the orchestra is a way of musical expression and environment that requires instrumental control (Köse, 2004).

Importance of Choral Studies

Choral studies in music education have an important place in the development of the child. In these studies, children learn how to construct the sound, the organ producing sound, the properties and capacity of its own voice, protect and use correctly the sound while learning the basic elements and basic functions that make up the music. They provide consciousness in terms of correct and regular breathing and breathing support. By paying attention to these, they earn the ability to sing in desired quality and loving to sing by singing children's songs individually and collectively suited to their age and sound characteristics, and also dynamism, they also take care to speak beautifully (Elmas, 1998: 238).

In this period, as the voice muscles of girls and boys work in the same way, their training does not change so much. Particularly the free edges of the sound curves work. The preliminary phase of the voice change (mutation) starts at the age of 8-9 and continues until the age of 12-13 (Cooksey and Welch, 1997).

As in all training areas, principles of sound training must be established in terms of process effectiveness. The transformation of voice training practices and activities, often referred to as abstract progressions, into concrete processes and practices, that are going to make learning both easy and permanent, must be considered as the main principle (Köse, 2001).

Brown (2000) states these principles as follows:

- Instead of imitating, the student should learn how to produce the correct sound.
- The teacher should be able to act sensitively to the negativity with the awareness that voice is an important factor and to recognize the physiological properties of students in order to help to solve their problems.
- It should be taken into care that voice is entirely dependent on body comfort, and the importance of body language should be known.
- With correct breathing, correct singing, and correct start, the density and continuity in legato and staccato sounds must be ensured.
- The suitability of sound practice to the duration and level must be ensured.
- The psychological properties and conditions of the students should be monitored.
- Information about anatomical and physiological structures and functions should be given to the students in order to prevent the negative use of sound.

In a survey, Yiğit (2006: 777) found that the activities of regularly conducted voice training in the chorus had significant effects on the development and alteration of behaviour in the voice range and correct use of voice in children.

The positive reflection of artistic criterion that the chorus should have, like homogeneity, chorus discipline, stage dominance, diction, articulation, clarity, etc., on the students' success in school education is seen in concrete. The students' success in school is conveyed to the upper levels by the integration of the stage mastery and discipline that the students have in the chorus, and by interpreting the language of the body-word-thought in a meaningful, clear, accentuating and effectively (Erol, 2013: 10).

Functions of the Chorus

In human life, functions of chorus can be grouped into four main groups:

- 1) Social functions,
- 2) Individual functions,
- 3) Cultural functions,
- 4) Educational functions.

It is necessary to look at the function of the chorus in human life. This view is valid for all and each of the functioning groups (Uçan, 2001).

Chorus is a comprehensive and participative language in which voice, lyrics, melody, rhythm, song, movement and body languages are used. The better chorus uses choral language, the more efficient they perform their cultural functions. With this structure;

- 1- From the view of art: In addition to general music culture, chorus directly contributes to the development of cultures related to folk music, entertainment music, art music, religious music, popular music and contemporary music.
- 2- From the view of content: Chorus can also be a direct application area for the formation and development of individual, cohesive, regional, local, national, international, continental, intercontinental, global and universal cultural accumulations.

With the themes and the speaking and writing language in the songs, it is aimed to contribute to basic education, to contribute directly to general music education, to be a field of general music education and to be a field of application to professional music education (Apaydın, 2006). In fact, the artistic items that the

teacher-instructor should pay attention to when he or she runs a chorus also describes the function of the chorus in education. It is very natural that the artistic criteria of chorus is reflected in the education positively.

The elements which are gained in choral education such as choral discipline, diction, articulation, comprehensibility, intonation, homogeneity, stage dominance, musicality, musical dynamics, chorus-chef harmony, appearance, program richness and diversity, rhythmic harmony and unity, sound quality, etc. improve the educational function of the chorus (Erol, 2013).

Singing helps to facilitate social bonding (Dissnayake, 2000) and group cohesion (Freeman, 2000) between individuals, it also enhances pro-social and cooperative behaviours as well as empathy (Kirschner, 2010). Recent studies suggest that singers even without any formal training may experience flow during group singing (Bailey, 2002). Singing has some positive psychological (happiness, energy) and physical benefits (improved posture, breathing) (Clift, 2012). In fact, psychological benefits of group singing have been confirmed in a research (Clift&Nicols, 2010). Chronic illnesses can be seen among amateur choristers (Clift&Morrison, 2010; Clift&Hancox, 2010), singing is often used to manage the psychological side-effects of a range of psychosomatic and physical disorders including arthritis, lung problems, chronic pain, or cancer (Gale, 2012). Psychoneuroendocrine responses to music have been studied in various naturalistic settings including music listening and singing (Kreutz, 2012; Chanda, 2013).

For example, some (Beck, 2000) responses are reported on differential effects of rehearsing and singing in public on immune and stress in semi-professional singers. Salivary Immunoglobulin A (s-IgA) that defenses against bacterial and viral infections increases after two hours of singing (McCraty, 1996), while a stress hormone cortisol increases during a public choral performance (Beck, 2000).

Oxytocin (OT) is a hormone that is associated with intimate relationships and buffering stress in humans (Gordon, 2008). Increases of OT were found in patients after open-heart surgery when they listened to soothing music (Nilsson, 2009). In one study, it is (Grape, 2003) found that OT increased in both amateur and professional singers after 30 minutes of a singing lesson besides increasing joy and attention. Therefore, singing in groups significantly improves individual health and decreases negative effects. Moreover, group singing would increase oxytocin level (Kreutz, 2014).

Voice Training in Chorus

The voice is a delicate instrument that needs good and purposive care. Much research has been done to explore and discover the most healthy and successful way to sing. The earliest roots of voice training date back to the fourth century, singing was foundational to church worship and singers were being ordained into the church to lead the singing of the worship service (Reid, 1950). This early voice training paved the way

for centuries of changing vocal techniques and training strategies. The church was the foundation for vocal music for many centuries, and directly influenced the singing styles that historically followed (Bennett, 2017).

In the earliest music records, the prevailing style of music was monophonic a cappella music, unison singing that was somewhat simple and easy to follow based on the text more than on a beautiful melody (Hoch, 2017). The focus was on the words instead of the sound. Afterwards, polyphony became the new style of singing, meaning “many-voiced”, that is sung in harmony by a choir or multiple voices. Choral polyphony created all voices equally, and was primarily melodic. These melodies were stacked on top of one another, but there was no emphasis on any part; because it was about the whole, and did not lend itself to soloistic singing (Bennett, 2017).

Voice training is named differently as singing, vocal, chorus and speech trainings according to the purposes of the educational institution given, to the types of music to be related and to the types and period characteristics of the songs to be performed. Voice training includes teaching songs and teaching individuals proper, beautiful and effective singing-related behaviours in accordance with the needs of voice education, and particularly general and specific music education.

In order that the correctness of any training procedure may be accurately estimated, and its value determined, it is essential for every teacher and student of singing to have an exact knowledge of the mechanical capacities and limitations of the human voice (Bennett, 2017). He believed that one must know the physiological functioning of the voice in order to be successful in both the teaching and the studying of singing. Knowing the science of the voice is important for vocalists because it changes the way that they view their voice.

At every age level, chorus carries a purpose for individuals to sing every kind of song effectively and beautifully by creating the right sound. It is the basic voice education at the beginning level. The basic behaviours of sound education, which are correctness in using breath (in accordance with breath), accuracy in making sound (in accordance with the anatomical and physiological structure), accuracy in articulation (in accordance with language characteristics and rules used in the song) and accuracy in music making (in accordance with music rules) constitute the purpose and content of the teaching of singing (Töreyin, 2001).

Choral voice training is a classroom environment. In terms of each chorus member, it should be considered as a training process that can increase the individual's ability to use the voice more efficiently in forming the common tune of the chorus. However, this is largely based on the individual voice education experiences prior to the choral voice training. This is because the choral voice education is being applied to

gain more attitudes towards the sound and narrative, technical and musical harmony rather than the basic behaviours of individual voice usage (Köse, 2004).

In the chorus, sound has a very important place. The general purposes of voice education in chorus must be applied correctly and intentionally to be successful and improved. The sound education in the chorus enables the individual to establish a healthy music environment with correct and clear voices while contributing and listening to music and enhancing the cultural richness in this area. The most productive implementation of choral education in all its contexts is also contributing to the success of the school. (Erol, 2013: 18).

Importance of Chorus in Child Education

Modern approaches to the training of future music teachers determine the consideration of its universality. The music teachers become the child's first leader in the world of music and art. Professional training of the future teacher of musical art includes both general art and purely musical factors: artistic knowledge of the world, influence on the needs-motivational sphere of the person, development of the general culture, etc. The professional competence of young teachers acquires completeness, integrity, filled with personal attitude to the profession (Lu, 2015). Society expects the teacher not only to broadcast knowledge but also to maintain a fruitful cultural-value and creative interaction with students in order to successfully educate the younger generation.

In urban areas besides low academic achievement, teachers encounter some problems at schools like poverty and violence. There are some assumptions and negative aspects for the students living in the urban areas in big cities, it is thought that they are at risk especially by the help of media (Benedict, 2006). Teachers in urban areas can and are able to make positive social changes on these students. The funding resources of public schools in some cities are not distributed equally between neighbourhoods, and this increases the gap between social boundaries (Erickson, 2008).

According to some policies at federal departments funding and instructional time for arts education may be reduced in many schools at some decades (Hazelette, 2006), therefore there arises huge emphasis on teachers to follow the based old-fashioned curricula, which reduces the creativity and causes unprofessional teaching (Achinstein & Ogawa, 2012; Delpit, 2003).

When all these complex situations are considered, it is important to recruit and retain effective teachers for urban areas (Achinstein, Ogawa, Sexton, & Freitas, 2010; Ingersoll, 2004). There are documents about the preservice teachers and their feelings of being unprepared in their teacher education programs, which are positioned in culturally urban areas for their first jobs (Cannella & Reiff, 1994; Fiese & DeCarbo, 1995; Parker & Hood, 1995). They do not have the necessary experience, and so they feel uncomfortable and

anxiety for working at urban schools (Kindall-Smith, 2004). Teachers need to navigate the dynamic cultures of their classroom environments for effective teaching in order to have success in urban teaching (Fitzpatrick, 2008).

According to a study (Shaw, 2015) which is done to explore how successful urban choral music educators use contextual knowledge to inform pedagogical practice, it was understood that field experiences in urban settings were among the best opportunities for preservice teachers to deepen their personal understanding of the urban context. It was also mentioned that experiences with genres such as popular music, world music, and gospel were essential preparation for choral teaching in urban schools.

Choral educators should use knowledge of learners (Shulman, 1987), context (Grossman, 1990), and personal practical knowledge (Clandinin, 1985, 1989) so that they can successfully navigate the urban context. According to Clandinin (1985), a person-centred language and perspective for accounting for school practices can lead the teachers to succeed. Appropriately, the teachers can use this knowledge through culturally responsive teaching, that is a child-centred approach placing students' strengths and needs, rather than musical products and processes, at the centre of the curriculum (Shaw, 2015).

Having the knowledge of one's particular learners, community, and educational context can be helpful for selecting repertoire, programming concerts, designing instruction, engaging the audience during performances, and recruiting and retaining students. This student-centred orientation serves not only urban teachers but all teachers well (Shaw, 2015).

Yavuzer (2007) suggests that music education will improve children's ability to express themselves, creativity and aesthetic sensibility, and also it will contribute to children's motor and rhythmic, voice and language, cognitive and abstract thinking developments and winning social and group skills.

In music education, choral education is also important in ensuring these developments of the individual and always plays an effective and decisive role. Choral education is an important way to gain positive personality traits and behaviours, to deliver general music education, to transfer social culture, and thus it contributes enormously to the socialization process of individuals (Sökezoğlu and Örddekçi, 2015).

Özata (2010; 13) points out that the study of child chorus made with 7-13 age groups is extremely important for the musical development of children who are capable of music. "Child choruses are the foundation of youth choruses and youth choruses are the foundation of adult choruses, they are prefixes and preliminary building blocks. In general, this situation increases the importance of choral education and necessitates the dissemination of it in a qualified way "(Apaydın and Türkmen, 2013: 449).

Class choruses are communities of all children's voices, starting with the pre-school children until the adolescence which is the end of the child's voice. The main purpose here is to reach the sound integrity of each class to a choir quality (Egüz, 1991). School chorus and class chorus are the main choruses in our country to increase the number of choruses numerically, and class choruses are considered to be a criterion in the development of music culture of a country (Sökezoğlu and Ördetçi, 2015).

Yiğit (2006), as a result of his research, found that chorus studies have benefited children in terms of healthy sound production, improve adolescents' voice problems more easily and develop positive behaviours; and emphasized the necessity of choir education in order to raise healthy and beautiful voices and good social relations in the future.

Results and Discussion

In a study, Erol (2013) found that chorus education was effective in improving children's mental development, working disciplines in their lessons by improving self-discipline (planned-programmed), using their ability gained in choral education to define themselves in lessons, improving their sense of responsibility, eliminating behavioural disorders, to the reduction of extreme dependence on non-habits. As a result of the choral work, the children stated that they liked going to the chorus and they were happier individuals.

Saklıca (2010) observed in his research that technical methods, problems, and solutions to these problems of individual voice education were similar to those of collective voice education. The selection of the repertoire used at the beginning of the individual voice education is a preliminary to the selection of the repertoire used in the initial phase of the collective voice education. According to the results of the questionnaire, while the first choice in the selection of the individual voice training repertoire is in Italian, the first order in choir education is in Turkish. It is seen that instructors who give individual voice education also know chorus education to a considerable extent. Because, in the majority, they have already given or are currently giving lectures on collective voice education. In the same way, the lecturers who give collective voice training believes that the lecturers of collective voice education should also know the details of individual voice education.

In addition, in order to be successful in both individual voice education and collective voice/chorus education, it is suggested that repertoire selection should be given importance, educators should do researches on repertoire and determine works that are new and suitable for student development instead of constant works. To be able to obtain information about the periods and the styles in the selection of repertoire, it is suggested that these courses should be given and specified especially in their programs in the higher education institutions providing vocational music education.

Alpuğan (2010) notes that in recent years there has been an increase in good-right-good-quality choruses by the effect of the increase in the communication between chorus managers and the spread of chorus festivals and various competitions in Turkey. The quality of the recorded works has also triggered compositionists, it is stated that the efforts of integrating the music culture on both new and decoded structures or arrangements by considering poetry and so words are increasing. With the increase in the number of chorus and chorists in Turkey, quality managerial selectivity has been introduced. Thus, the chorus and chorus manager portfolio has also changed. Parallel to this, the level of appreciation has increased as the quality of the sensation in the audience has differentiated.

Suggestions

The age and voice characteristics of children should be taken into consideration in choosing the songs to be used in choir training since the voice muscles of the same age girls and boys have the same working style. Since the moods of the children in the group can vary according to their age, a repertoire should be created by selecting the children's songs that are suitable for the group's dynamism and interests so that the children can gain correct and beautiful vocalization as well as singing skills and love.

It should be taken into consideration that the moods of the children may vary according to age groups or their current problems. Using voice correctly and in quality depends on the body and brain comfort, so it is possible to organize group activities that will enable children to relax before choral studies. These activities can be a funny and entertaining game, such as mimicking a known person or choosing a recent song that is not in the repertoire of the chorus and attracts children's attention, so that they can work together to free their heads and relax.

The duration of choral work is important for children's productivity and should be determined in accordance with the age group of children in the chorus. For example, children between the ages of 7-9 and children between the ages of 11-13 do not have the same attention period. In addition, short breaks can be given during the choral work, so that attention periods can be increased by ensuring that children are rested.

It is known that choral studies have positive effects on school success in children. In this respect, the regular participation in choral work is very important. From time to time, children can be encouraged by regularly changing their workplace in order to ensure that children are willing to participate in choral studies. According to weather conditions, choral studies can be done sometimes in the classroom and sometimes in the school garden or park.

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Not my responsibility: The Impact of separate special education systems on educators' attitudes toward inclusion

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Abstract

Framed in terms of global policy pressures, this study explored differences in educator attitudes towards the inclusion of children with mild to moderate disabilities in the general education setting in Australia, Barbados, Romania, Turkey, and the United States. The purpose of this study was to investigate how educator attitudes towards the inclusion vary between nations that have disparate forms of special education systems. A sample of 1679 educators was analysed using the Attitudes Towards Teaching All Students (ATTAS-mm) and a triadic model of attitudes. Significant differences were found between nations. In addition to a statistically significant difference in the overall attitude scale, the three subscales: cognitive, affective and behavioural also demonstrated statistically significant differences with moderate effect sizes. These results support the differentiation of professional development for educators dependent on the setting and admonish against policy makers exporting educational policies as best practices regardless of context.

Keywords: *inclusive education; special education; education policy; national capital; international comparative education; educator attitudes; educational leadership*

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Introduction

Education as a basic human right is increasingly being recognized globally and it is supported by international organizations and much of the developed world (Waddington & Toepeke, 2014). With this global support, educators are still unclear as to what inclusion of students with disabilities means, offering varying definitions and interpretations around the world (see Ainscow, Dyson, & Weiner, 2013/14). For this piece, inclusive education is defined as educators and schools ensuring that children can access the curriculum by not only being physically included into the educational setting, but also, ensuring that the curricular materials are being appropriately modified and used by educators to allow all children to access them.

Within the external push for increased inclusion, the educators' attitudes are often taken for granted by school leaders. Legal expectations that inclusive services be offered to students with disabilities is not a guarantee that such services will be provided nor is it a guarantee that the services provided are successful (Waddington & Toepeke, 2014). The attitudes of the general education teacher toward the inclusion of children with disabilities are a critical part of inclusive education; how educators perceive their ability to teach children with disabilities and educators' overarching attitudes toward inclusion will largely determine the success of the children with disabilities (Hunter-Johnson, & Newton, 2014; Unianu, 2012; Wilczenski, 1992). Educators need to have an accepting and willing attitude toward the instruction of all learners (Mintz, 2007) and removing any attitudinal barriers is crucial to the success of inclusion (Waddington & Toepeke, 2014). Even when children are accepted into the physical space of general education classrooms and the expected instruction of the curriculum, children with disabilities may still be excluded (Gregory & Noto, 2011).

There are several factors that contribute to educators' positive attitudes toward inclusion of children with disabilities (Silverman, 2007; Unianu, 2012). Educators must think that children with disabilities can achieve their very best and that they can learn. Second, educators need to have a strong sense of self-efficacy for teaching children with disabilities. Educators with high self-efficacy are more effective at differentiating instruction, making curriculum accessible to all children. Educators must feel that children with disabilities belong in their classroom and that they can contribute to the overall learning process. Finally, educators must possess a desire to use the skills and techniques that will ensure the curriculum is accessible to all children.

Global Desire for Social Reform

Nelson and Stephens (2009) cite investments in human capital as a way to address risk to individual and national well-being. Inclusion is a social justice principle (Crouch, Keys, & McMahon, 2014). Counter to market-driven rhetoric, social investment policies, such as inclusion, have also been described as a means

to foster civic and economic cohesion (Nikolai, 2009). The phenomenon of national decline may be an opportunity to refocus the way inclusion is approached. It is possible to frame improvements in educational systems and inclusive education specifically, not just about honing a competitive edge, but rather acknowledging the flattening of the globe through technological advances that have reduced isolation of nations, and embracing the social justice aims of inclusive education that have been previously subverted by the economic concerns tied to assessment practices.

Internal and external pressures

Societal pressures both internal and external to nations direct the level of attention that inclusion receives. The variations in the nature and origin of pressures, influenced by national capital, influence the implementation of inclusive education and therefore the pressures educators feel; partially shaping their attitudes. Education has been defined in the international community as a cultural right. In 1990, during the United Nations' Convention on the Rights of the Child (CRC), 195 countries drafted an international binding human rights treaty, which was signed by 140 countries and ratified by countries including Australia, Turkey, Romania, and Barbados. The United States signed the treaty in 1995, however it has not been ratified (CRC, 1990). This binding treaty incorporated declarations, and reservations as well as closing remarks, which focused on sensitizing school personnel in order to reduce discrimination (CRC, 1990; Waddington & Toepeke, 2014).

The United Nations' Convention on the Rights of Persons with Disabilities (CRPD) binding international human rights treaty extended the work done by the CRC explicitly mentioning that the attitudinal barriers must be removed to reduce the gap between policy goals and implementation (Waddington & Toepeke, 2014). In the concluding observations to the CRPD, some nations, specifically the United Kingdom and Mauritius, made specific reservations statements declaring that they sought to maintain a separate special education system in addition to the general education system (Waddington & Toepeke, 2014). This is similar to the system in the United States.

Even before the United States Civil Rights movement that outlawed a separate but equal system of education based on race, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) developed the Universal Declaration of Human Rights (1948). The United Nations, through UNESCO, sought to advance the rights of all children, establishing articles and policies designed to prevent or eliminate educational discrimination throughout the decades following the Declaration of Human Rights to today (Hunt, 2011). Three UNESCO conferences are widely acknowledged as markers in progress towards inclusive education: Jomtien, Salamanca, and Dakar. Jomtien is recognized as the starting point of focusing on basic learning needs, Salamanca marked the beginning of an emphasis on inclusion and Dakar a focus on

measuring progress towards achieving earlier goals and as an international affirmation of commitment to achieving these goals (Kiuppis, 2014).

Internationally, a landmark in inclusion is the Salamanca Statement of 1994. Within the Salamanca Statement, inclusive schools are a fundamental principle (Hunt, 2011; Kiuppis, 2014). The Salamanca Statement highlights inclusive education with specific reference to disability (Ainscow, 2006; Vislie 2003). The Salamanca Statement does not reference a bifurcated model of general education and special education (Hunt, 2011; Kiuppis, 2014). The Salamanca Statement presents a vision of inclusive education that requires nations to meet the educational needs of all children. As a treaty, it binds nations to move towards this human rights goal.

Kiuppis (2014) reports that immediately following the Salamanca conference there was disagreement as to how inclusive education would be realized. The responses and commentary highlighted that the nations involved realized that they may not be ready to act on the agreement. Competing priorities complicate actualizing the vision described in the Salamanca Statement. The nations involved recognized the importance of inclusive education, but the national commitment to implementation, or the value placed on inclusive education by the constituents is not sufficient to fully enact the treaty. Vislie (2003) studied classroom practices and found no change in the western European Union before and after the Salamanca Statement. A mere six years later, the UNESCO Education for All Declaration in Dakar used more inclusive language, referencing all groups that were not getting equal access to education. This essentially demoted the special emphasis that had been granted to students with disabilities earlier in the Salamanca Statement (Ainscow, 2006). Many children are excluded from education even with governmental commitments like those made at Salamanca and Dakar (LeBeer et al, 2011). At the 2015 World Education Forum in Incheon, Korea more than 100 nations welcomed the Declaration on the Future of Education.

A quality education is a fundamental right that is essential to end extreme poverty and boost shared prosperity. To realize that right, the World Bank Group - as the leading provider of official development assistance for education - is helping countries mobilize all available resources and link financing to measurable outcomes to advance learning for all. (Keith Hansen, World Bank Group as cited in UNESCO, 2015)

The 2015 declaration explicitly reaffirms the Jomtien and Dakar declarations and includes a direct reference to 'making the necessary changes in education policies and focusing our efforts on the most disadvantaged, especially those with disabilities' (Incheon Declaration, 2015, p.2). The reemphasis on children with disabilities better aligns with the language of the Salamanca Statement and includes a direct reference to the financial requirements to implement the espoused educational vision. Ultimately, Armstrong, Armstrong and Spandagou (2011) conclude that inclusive policies, even when connected to

resources, are unlikely to succeed if they do not consider the broader social context, and that the ‘international rhetoric of inclusion is experiences, ironically, as reinforcing the exclusion of entire peoples from economic and social opportunities’ (p.38).

Inclusive education challenges deeply established assumptions about education and the professional responsibilities of educators (Ainscow, Dyson, & Weiner, 2013/14; Hunter-Johnson, & Newton, 2014). Inclusive education forces educators to acknowledge that, as professionals, they are responsible for educating every child, and that this responsibility removes any deficit model excuses. Jacobsen (2009) reports that in some countries there is little domestic pressure for social and educational reform. Low internal pressure for inclusive education affects the daily support educators experience as they work in an inclusive setting, impacting their attitudes. Jacobsen (2009) found that regardless of domestic desire for inclusion, some countries will do whatever is required to earn the funding needed to grow; an example of a nation with very low national capital. As one civil servant stated, ‘that they will meet whatever regulations they have to ‘because we desperately need the money’’ (Jacobsen, 2009, p126).

Settings

This study compares the educator attitudes towards inclusion in five countries, Australia, Barbados, Romania, Turkey and the United States. In Barbados, Romania, and Turkey data were collected from urban, suburban and rural sites. The data from these countries are compared to data from one site in Australia and nine sites in the United States that also represent urban, suburban and rural settings. Both Australia and the United States have deeply rooted traditions of a separate system of special education and relatively parallel histories of inclusion efforts, but the history of inclusion research in Barbados, Romania, and Turkey are less consistent.

Romania and Turkey are most clearly influenced by the presence of the European Union (EU). The EU was originally more removed from education policy, but over time has become a more intentional driver of policy (Walkenhorst, 2008). When the EU was conceived, nations wanted to preserve national oversight over education, but over time the member nations developed common legal, institutional, and procedural mechanisms that, in effect, created a common EU educational policy (Walkenhorst, 2008). Barbados’ national capital is also reduced by the influence of the European Union (Richardson & Ngwenya, 2013). These nations have less bifurcated systems than do Australia and the United States.

Australia and the United States

While inclusion is being framed in market-driven rhetoric internationally and within the United States, an increase in inclusive opportunities over the past decade in the United States can be credited to No Child Left Behind (2001) and amendments to the Individuals with Disabilities Education Improvement Act

(2004). Hunt (2011) dissects these laws and policies finding that they are imbued with the medical/deficit mindset and the idea of a bifurcated system that were notably absent in the Salamanca Statement. Armstrong, Armstrong and Spandagou (2011) argue that if a nation values social justice and equal participation, then a dual system, one that includes a separate special education system in addition to a general education system, cannot be justified. Policy initiatives are top down and can only be implemented with educators sharing the beliefs and goals of said initiatives (Waddington & Toepeke, 2014). Thus, inclusion is only marginally accomplished in the United States even while the United States enjoys a high degree of national capital (Hunt, 2011; Waddington & Toepeke, 2014). While children have entered the physical buildings of schools, not all children have access to the curriculum.

Australia followed quickly on the heels of US and UK movements (US's *Education for all Handicapped Children* Act 1975, UK's Warnock Report 1978) to establish policies that all children should attend their neighbourhood school (1982; Graham & Jahnukainen, 2011). This was followed by reductions in special school enrolments in Australia, intimating that inclusion was working, and children were physically included. However, Graham and Jahnukainen (2011) found that other forms of segregated placements were growing within the neighbourhood schools, creating a dual system where children were segregated in separate classrooms within the same school or not provided with instruction that allowed access to the curriculum, just as there is in the United States. The split approach to education that exists in the United States and Australia with special education existing as a separate but parallel form of education was also how UNESCO described education from 1965 until roughly the mid 1990's (Kiuppis, 2014).

In Australia, Cologon (2013) found that educator attitudes were critical to inclusive practices, and that the attitudes of the educators and the climate of the school were reciprocal; that is, the context of the setting influenced the educators attitudes and vice versa. Unfortunately, she also found attitudes in Australia were consistent with the lack of confidence, or willingness to teach all children. These attitudes stem from a traditional method of teacher preparation where pre-service teachers are taught about disabilities, perpetuating the 'myth of the normal child' (Cologon, 2013, p33). As in the United States, Australian funding for special education is connected to the labelling or categorization of children as disabled.

Barbados

Barbados is defined by the UN as a developing island nation. Barbados gained its independence in 1966 (Verret, 2013) and has a colonial past that has left a tradition of elitism based on meritocracy (Greenhalgh-Spencer et al., 2015; Lavia, 2007). Financially, Barbados is focused on self-transformation and progress (Greenhalgh-Spencer et al., 2015) and relies on international aid from the World Bank, InterAmerican Development Bank and the Caribbean Development Bank (Verret, 2013). There is a low-

income gap between the highest and lowest paid citizens, even with the presence of wealth and excess from the tourism trade (Greenhalgh-Spencer et al., 2015).

Educationally, the system in Barbados has been described as having three phases in its development beginning at the end of World War II and before Barbados' independence it was an expanding system, curricula were being established and, in general, the system was being created and defined (Verret, 2013). During the second phase, the 1960's through 1980, the educational system in Barbados turned its focus to fairness and equity. The third phase, starting in 1981, began compulsory schooling (Verret, 2013). Throughout the evolution of the educational system, the Ministry of Education developed a bifurcated system where special education was offered in special institutions or regular facilities as needed by the pupil (Verret, 2013). It is important to note that not all educators, whether they are special education or general education have been trained or completed any degrees in education (Verret, 2013).

While this may resemble the systems in the United States and Australia as far as how special education is implemented, it differs due to the Barbadian dependence on international financial organizations, low national capital, there are added external pressures to embrace a more inclusive system of education. The educational system in Barbados is vulnerable to these pressures as a UN designated developing island nation and the educators in the Barbadian system are especially vulnerable because of the variability in the level of formal training they have received.

Romania

Romania became a member of the European Union (EU) in 2007. The educational system in Romania is legally controlled by orders of the Minister of Education, acts of parliament, common specialized laws, the organic laws of education and the Constitution of Romania established in 1991 (Romania Ministry of Education and Research, 2001). Ghergut (2010) cites Romania's primary goal after the reform in the 1990's as a reduction in marginalization by improving educational access through support, special education and inclusion. In 2001, the Romanian Ministry of Education and Research describes a separate system of special education that is focused on integration rather than inclusion, but also sets a goal of becoming a part of the European Higher Education Area and making the Romanian education system compatible with European standards.

Overall, the EU goal for education appears to be a tool for employment and global economic competitiveness (Walkenhorst, 2008). LeBeer et al. (2011) report that special education needs across Europe are on the rise, with high variability in the number of children identified and the proportion of those children who are in special education, rather than inclusive settings. It is unclear how institutionalized inclusion is by design or by default within the Romanian system. Some rural areas in Romania use an inclusive model of education because they do not possess the resources to have a separate setting for children with different

learning needs. When permitted to attend school, these children are integrated into the physical classroom, but it is uncertain how well their learning needs are being met. There appears to be a growing desire for inclusion rather than integration in the Romanian Ministry of Education, but the transition from the earlier goal of integration to the current goal of inclusion has not yet been fully realized.

Turkey

Turkey, established as a country in 1923, is described as the bridge between Europe and Asia (Melekoglu, Cakiroglu, & Malmgren, 2009). Turkey's commitment to educating all children did not grow out of a civil rights movement as it did in the US, but rather it stems from a constitutional commitment to democracy and modernization and therefore to universal education (Meral & Turnbull, 2014). Even with this commitment to universal education, Meral (2014) found that there is an increase in the number of classrooms that serve children with special education needs. She concludes that the increase in special education classes, a 500% increase between 2011 and 2014, is contradictory to Turkey's espoused commitment to the European Disability Strategy that emphasizes inclusive education. Meral and Turnbull (2014) cite, the commitment to inclusive education is a means for Turkey to demonstrate that it is a 'liberal, democratic country' and to bolster its application for entry into the EU. To become a member of the EU, Turkey must demonstrate that it has a stable democracy that respects human rights, and educational inclusion has become a part of that definition.

Cakiroglu and Melekoglu (2014) report that while education, and specifically special education, have garnered more attention in Turkey in recent years, Turkey has not yet achieved the goal of inclusive education. Turkey has the same proportion of inclusion as does the US, which is higher than some nations with greater levels of capital (Germany or France; Cakiroglu and Melekoglu, 2014). The US system is presented as a high standard, even though the US has not achieved an inclusive system of education. While the number of children in an inclusive environment in Turkey has doubled in recent years, there are still many children with special needs not enrolled in any formal educational setting (Cakiroglu & Melekoglu, 2014).

Purpose of the Study

Together, the study sites in Australia, Barbados, Romania, Turkey and the United States provide a glimpse into how educator attitudes towards inclusion vary. This deliberate attention to context responds to the call of Crossley (2000), D'Alessio and Cowan (2013), and others to consider the setting when conducting comparative analyses. Using a common instrument, Attitudes Towards Teaching All Students (ATTAS-mm) scale (Gregory & Noto, 2012), the three dimensions of attitude (cognitive, affective, and behavioural) were measured and conclusions drawn based on the contextual differences of the settings.

The purpose of this study was to investigate whether educator attitudes towards the inclusion of children with mild to moderate disabilities vary between nations with differing systems of special education. Specifically, this study seeks to answer the following research questions:

(RQ1) Is there a significant difference in the overall educator attitudes towards teaching children with mild to moderate disabilities between nations with more national capital and traditionally separate formal special education systems and those without?

(RQ2) Are there any significant differences in the subscales that measure the three dimensions of educator attitude towards teaching children with mild to moderate disabilities between nations with more national capital and traditionally separate formal special education systems and those without?

Methods

To answer these questions, data collected from 3 sites in nations without formal special education systems and 10 sites in nations with formal special education systems were compared. While the number of research sites appears unbalanced, the proportion of data from the two groups was 46%(without) to 54%(with), which is fairly balanced in terms of comparative sample sizes. To evaluate the research questions, independent samples t-tests and one-way ANOVAs were conducted with Tukey post-hoc analyses. Additionally, effect sizes were calculated using Cohen's d and eta-squared as appropriate.

Instrumentation

Data were collected by independent researchers at the various sites, using the same instrument, the Attitudes Towards Teaching All Students (ATTAS-mm) scale (Gregory & Noto, 2012). The ATTAS-mm is a valid and reliable instrument that measures the attitudes of educators towards the inclusion of students with mild to moderate disabilities. As the instrument was translated in some instances (Romania and Turkey), before data were included in the data set, confirmatory factor analyses were preformed to ensure that the instrument was still reliable in translation. The reliability for the full ATTAS-mm scale is good according to generally accepted values and the three subscales also demonstrate good to excellent reliability (Table 1; Cronbach, 1951). Subscale scores range from 3 to 21 and the full scale scores span from 9 to a maximum of 63.

Table 1. *Domains and reliability analysis for ATTAS-mm full scale and subscales (Adapted from Gregory & Noto, 2012).*

Component	Title	Cronbach Alpha
Full scale	Attitudes towards teaching all students	0.833
Subscale 1: Cognitive	Knowing all students can succeed in general education classrooms	0.720
Subscale 2: Affective	Feeling professional responsibilities, developing personal and professional relationships	0.928
Subscale 3: Behavioral	Creating an accepting environment for all students to learn	0.837

It is interesting to note that the subscale that measures the affective portion of attitude has the highest reliability. This is inconsistent with the earlier TATIS instruments (Gregory & Noto, 2011) and with literature on measuring attitudes (Fishbein & Ajzen, 1972). It is unclear whether this is a result of instrumentation; the influence of social pressures impacting the self-reported data, or another factor.

Data Collection

Across the thirteen sites, 1679 responses were collected. Roughly half (54%) of the sample was collected from educators in ten sites in the United States and Australia, and the rest (46%) from educators working in nations without entrenched separate systems of special education and high levels of national capital: Turkey (13.2%), Romania (25.1%), and Barbados (7.7%).

Data analysis

The data were analysed in two stages. First the demographic data were analysed to determine whether the groups of educators, those in each setting, were different in characteristics beyond the measured dimensions of attitudes. Second, the data were analysed to evaluate the proposed research questions and effect sized for any statistically significant results.

Results

Description of the sample

Respondents, as grouped by level of national capital, varied on every demographic factor except their primary role, that of certified teacher. The nations with higher levels of national capital, and more distinct special education systems included more male respondents (27% vs. 18%), reported more experience with children with mild to moderate disabilities, and indicated higher levels of formal education and number of courses specifically on special education (Table 2). Researchers have conflicting views on how educator attitudes towards inclusion are impacted by these demographic characteristics (Avramidis, Bayliss, & Burden, 2000; Beacham & Rouse, 2012; Gal, Schreur, & Engel-Yeger, 2010; Parasuram, 2006; Subban & Sharma, 2006) and these differences, while interesting, are not the focus of the current study. The description of the sample is presented here to provide additional context for the subsequent comparisons, and caution is warranted in over estimating the power of the comparisons made.

Table 2. *Demographic characteristics of the sample.*

Criterion	Higher Levels of Formal Special Education		Lower Levels of Formal Special Education	
	N	%	n	%
Highest Degree				
Associates	30	4.3	56	16.0
Bachelors	288	41.6	261	74.6
Masters	192	27.8	28	8.0
Masters +30	169	24.4	2	0.5
Doctorate	13	1.9	3	0.9
Experience with children with mild to moderate disabilities				
Minimal (1hour or fewer/month)	185	25.2	156	48.8
Some (2-10hrs/month)	123	16.8	122	38.0
Considerable (11-80hrs/month)	244	33.3	24	7.6
Extensive (more than 80hrs/month)	181	24.7	18	5.6

Comparison of the full ATTAS-mm scale

The full scale of attitudes demonstrated a statistically significant difference between the groups with the mean score of the nations with lower levels of formal special education ($M_{\text{(lower)}} = 34.46$, $SD = 8.35$) exceeding that of the nations with higher levels of traditionally separate special education ($M_{\text{(higher)}} = 32.11$, $SD = 9.71$; $t(1256) = -4.27$, $p < .001$, $d_{\text{(Cohen)}} = .24$). These scores are consistent with the fiftieth percentile for the nations with more separate systems and the thirtieth for the nations with lesser distinct systems (Gregory & Noto, 2012), meaning that seventy percent of educators responding to this scale overall have more positive attitudes than the educators in the portion of the current sample consisting of educators from nations with lower levels of traditionally separate special education. The full scale shows that educators in these nations indicated more positive overall attitudes towards inclusion, but the aggregate scale hides interesting differences within the data.

Comparison of the subscales

Within the ATTAS-mm the three dimensions of attitude, cognitive, affective and behavioural, are measured separately. The means for each of the subsections of the ATTAS-mm are significantly different within each respondent group (Table 3).

Table 3. Comparison of ATTAS-mm mean subscale results for nations having differing levels of formal special education.

Domain		Higher Levels of Formal Special Education		Lower Levels of Formal Special Education	
		Mean Score	Percentile	Mean Score	Percentile
Subscale Cognitive	1:	12.16***	93	10.37***	75
Subscale Affective	2:	10.14**	9	12.27*	34
Subscale Behavioral	3:	9.79**	8	11.82*	35

* differs from other means in the column at the .05 level of significance

** differs from other means in the column at the .01 level of significance

*** differs from other means in the column at the .001 level of significance

When the three dimensions are evaluated separately, the data show that educators in the nations with higher levels of national capital report higher scores on the cognitive domain with the mean score for these nations in the 93rd percentile ($M_{(\text{higher})} = 12.16$, $SD = 3.88$; $M_{(\text{lower})} = 10.38$, $SD = 4.83$; $t_{(1256)} = 6.22$, $p < .001$), but lower scores than educators from nations with less capital on both the affective ($M_{(\text{higher})} = 10.14$, $SD = 4.14$; $M_{(\text{lower})} = 12.27$, $SD = 4.24$; $t_{(1256)} = -8.03$, $p < .001$) and behavioural ($M_{(\text{higher})} = 9.79$, $SD = 4.59$; $M_{(\text{lower})} = 11.82$, $SD = 3.86$; $t_{(1256)} = -7.92$, $p < .001$) domains. This is most clear when comparing the percentile ranks of the scores, where the educators from nations with more traditionally disparate systems of regular and special education scored in the top ten percent with the cognitive domain, but the lowest ten percent when measuring the affective and behavioural domains.

The differences in the scores from Barbados, Romania, and Turkey were more interesting. While significant differences exist between the nations having differing levels of formal special education, there were also significant differences within the group of nations described as having historically a less divided system (Table 4).

Table 4. Comparison of ATTAS-mm subscale and full scale scores with nations having differing levels of formal special education, disaggregated.

Domain		High Levels of Formal Special Education	Barbados	Romania	Turkey
Subscale Cognitive	1:	12.16	14.25***	11.38***	8.11***
Subscale Affective	2:	10.14	8.97***	7.06***	14.20***
Subscale Behavioral	3:	9.79	9.83***	7.78***	12.99***
Full Scale		32.11	33.05*	26.22***	35.29*

* differs from other means in the column at the .05 level of significance

** differs from other means in the column at the .01 level of significance

*** differs from other means in the column at the .001 level of significance

An analysis of variance demonstrated significant differences between Barbados, Romania, and Turkey (Cognitive, $F(2, 770) = 120.064, p = .000$; Affective, $F(2, 770) = 358.963, p = .000$; Behavioural, $F(2, 770) = 176.793, p = .000$; Full Scale, $F(2, 770) = 100.105, p = .000$). Tukey post-hoc analyses revealed that there were significant differences ($p = .000$) for all pairings save the full scale comparison between Barbados and Turkey; the difference in the full scale scores of educators in Barbados and Turkey demonstrated significance at the $p = .05$ level.

Practical significance of the results

Effect sizes were calculated for the comparisons between higher and lower national capital groupings to provide information of the practical significance in addition to the statistical significance previously reported. For the full scale the effect size ($d = .31$) suggests a low to moderate effect according to Cohen's (1988) conventions. In contrast to the modest effect suggested by Cohen's values of .2 indicating low effect and .5 denoting a moderate effect, the What Works Clearinghouse (WWC, 2014) asserted that, in educational research, an effect size of greater than .25 is 'substantively important.' Balancing these interpretations of effect size, practical significance, and the statistically significant difference in the full scale, the educators that were included in this study from nations with less distinct programs of special education had more positive attitudes towards the inclusion of children with mild to moderate disabilities overall than the included educators from nations with greater distinction between regular education and special education.

"Again, more striking than the results of the overall scale were the results from the subscales. For the cognitive subscale, Cohen's effect size value ($d = .54$) suggested a moderate effect and exceeds the WWC threshold for importance, and both the affective and behavioural domains also demonstrate moderate effect sizes ($d_{\text{(affective)}} = .46$; $d_{\text{(behavioural)}} = .58$). The moderate or substantive practical significance of these subscales affirms the statistical significance of the differences and the differences noted in the percentile ranks of the scores. These effect sizes are impressive even when interpretation is tempered by possible differences in the characteristics of the sample.

Discussion

The data suggest that there are significant differences between nations having highly separate systems of special educations and those that do not. The results also indicate that within the subset of nations with less bifurcated systems there are also significant differences. Specifically, there were significant differences in both the overall educator attitudes as well as the three dimensions of educator attitude (cognitive, affective, and behavioural) towards teaching children with mild to moderate disabilities between these nations.

One unanticipated finding was that there were differences in the educator attitudes within the nations with less established separate systems of special education. The educators from Turkey indicated significantly different attitudes from the educators who are from Romania and Barbados. This challenges the hypothesis that the nations with higher and lower levels of national capital are consistent in their attitudes toward inclusion of students with mild to moderate disabilities. This fortuitous result prompts further questions into the national characteristics that may impact educator attitudes.

Romania's embracing of inclusion does not stem from a long history of positive attitudes towards minority groups, like the Romani minority or children with disabilities (Allan, 2012), but from a more recent pressure to include these groups exerted by the EU (Ghergut, 2010; Kushen, Buzetzky, Usein, & Bojadjeva, 2015). The focus presented by the Romanian Ministry of Education and Research (2001) was integration. The approach of integration appears more appropriate for embracing the Romani minority than providing for children with special education needs. The low overall attitudinal scores may result from the very recent shift in policy from integration to inclusion. More recently, the Ministry of Education and Research has aligned itself with the EU vision of inclusion (Ghergut, 2010), and this corroborates the results of this study with higher cognitive scores than affective or behavioural scores. While the educators surveyed are aware of the benefits of inclusion (resulting in higher cognitive scores) the affective and behavioural aspects of attitude have not been impacted; policy vs. practice.

Barbados, unlike Turkey and Romania, includes in its history a period of British colonization (like Australia and the United States). Additionally, Barbados experienced a period of emphasis on equality and fairness roughly coinciding with the Civil Rights era in the United States (Verret, 2013). Similar to Australia and the United States, the Barbadian education system is bifurcated with special education existing as a separate entity from the regular education system (Verret, 2013). This split, while not as entrenched as it is in Australia and the United States along with the Barbadian emphasis on self-transformation, may well explain why the scores of educators surveyed in Barbados were more similar to those of Australia and the United States than to the scores of educators from Romania and Turkey. Thus, the level of national capital appears less important than does the existence of a bifurcated educational system.

Educators in Australia and the United States indicated higher levels of formal education and more classes specifically on special education, which would bias the group towards having information about the benefits of inclusive practices that are measured on the cognitive scale. While the magnitude of the polarization of the difference in percentile ranks is a surprising finding; that the cognitive domain is the highest of the three is not. Educator preparation programs in the United States and Australia require that candidates pass classes where the value of inclusion is espoused, and within the educational profession, legally and socially, inclusion is acknowledged as the mode that benefits children. In short, it is predictable that educators that have been a part of these systems would know the socially acceptable answers to the

cognitive items on the instrument, but this does not appear to impact the other domains. Additionally, many educator preparation programs require coursework in special education as a separate, distinct requirement. This further reinforces the separateness of special education, as something different from the regular, educator preparation curriculum. Gehrke and Cocchiarella (2013) lament that pre-service educators experience a disconnect between coursework and practice; they assert that student teachers can produce a definition of inclusion but are not able to recognize aspects of inclusion when observing others, nor practice it. Educators know what is best practice, but are underprepared to act on the cognition.

Policy makers and other educational leaders can use these results to drive greater practical application requirements in educator preparation. There is a caveat here, additional requirements of this ilk focus on the behavioural competency of the educator but not necessarily the affective domain. The affective domain may be addressed through experiential learning by building feelings of efficacy, but while a distinct system of special education exists, the educator in the nation with greater capital, and a more established, formal system of special education, can afford to be less emotionally invested and feel less accountable for modifying their own behaviours to meet the needs of all children in their care, not because they don't want what is best for the child but because there is someone more qualified to provide for that child.

Educators in Barbados, Romania, and Turkey face different issues in providing for children. Inclusion is not only a best practice for children; it is pragmatic. Where there are few teachers and even fewer certified teachers, insufficient resources exist to support a separate system of special education. Ghergut (2010) concluded that, 'inclusive education in rural areas is more readily accepted and supported by teachers' (p. 713). He and attributed the greater openness to inclusion to a lack of hierarchy among rural schools. Perhaps because Turkey is over three times the square area of Romania and over a thousand times the area of Barbados, there is a greater proportion of rural area in Turkey that may be contributing to the differences in attitude. The higher affective and behavioural dimensions of attitude may be ascribed to these demographic factors or to internal or external pressures on the nation's educational systems. The current study did not seek to disaggregate these causal links, nor was the focus on these characteristics, as the research on the impact of characteristics is far from conclusive (Avramidis et al., 2000; Gal et al., 2010; Parasuram, 2006; Subban & Sharma, 2006).

External pressures connected to funding or membership in the EU have driven top down requirements regarding inclusion in the nations with lower levels of national capital included in this study (Dunne, 2014; Mosley, 2003; Murphy, 1997; Richardson & Ngwenya, 2013). Mandates do not always engender a shared vision of the spirit behind the directive, and to be fair, not even the chief "architect" of inclusion in the United Kingdom remains a staunch advocate of it; she is quoted as calling inclusion "disastrous" (Allan, 2012). The data in this study suggest that the educators have embraced the essence of inclusion with responses that indicate positive affective and behavioural facets of attitude. Local pressures

and traits of the individual settings certainly contribute to these educator attitudes, but the quantitative nature of this research did not permit analysis of the varying impacts of local characteristics.

Inclusion is cost-effective and benefits children by giving them access to the curriculum (Ainscow, Dyson, & Weiner, 2013/14), but it is important that all players recognize that the teacher attitudes are crucial for inclusion to be a success. Hunter-Johnson and Newton (2014) found that administrative support partially operationalized as consistent professional development is a powerful predictor of favourable attitudes. Recognizing the varying needs of educators is pivotal to effective professional development, and using the results of the ATTAS-mm to narrow the focus of professional development can save financial and human resources.

Limitations

The greatest limitation of this study is the attempt to make generalized recommendations contingent on data collected at different sites. While there are general trends, each educational site would benefit from deeper, qualitative individual consideration. The educators in each country studied, and even each school within each country will have different attitudes, and to prescribe a one-size-fits-all plan to improve educator attitudes is a part of the problem rather than the solution. Additional, qualitative research would aid in understanding each setting, and in developing differentiated plans of professional development to best operationalize the findings from the quantitative results.

Another confounding issue is that the ATTAS-mm is a self-reported measure; making it unclear whether the responses were accurate reflections of the cognitive domain of attitude or the perception of the 'right' answer on a scale. An additional limitation of this study is, that for some of the educators, the ATTAS-mm was translated. To address this limitation, confirmatory factor analyses were conducted to ensure that the instrument was performing as well in translation as it did in English.

As the demographic section of the ATTAS-mm is also self-reported, some participants chose not to share this information. Every effort was made to collect these data, but participants had the right to not include it. This limited the ability to match demographic characteristics of the samples.

Conclusion

Every child in the world deserves to have a teacher that has a positive attitude towards his or her success regardless of any exceptionality. Educational leaders and policy makers can use the results of attitude measures of their specific population of educators to provide tailored professional development and relevant policy recommendations that respect varying contexts. It is inappropriate to export models of education from one setting to another without careful considerations of the historical, internal, and external pressures of that location, but lenders and policy makers persist in this practice. In a global economy where

financial and human assets are limited, strategic use of education and mandates can work together to improve the educational outcomes of children.

There are differences in teacher attitudes between nations, and between nations with differing levels of separate special education systems. Educators in nations with less established special education systems demonstrated lower scores on the cognitive domain of attitude, but there were significant differences within the three nations with lower levels of national capital that underscore the need for contextualization when discussing inclusionary reform. The percentile rank scores of the nations with long histories of separate special education systems indicate that the cognitive domain of attitude is not coupled with the affective and behavioural domains. The lower scores associated with the affective and behavioural domains for educators in the nations with greater national capital and formal special education are also consistent with the structures of education in those settings; both Australia and the United States have separate and well-entrenched special education systems that parallel the general education system.

If the goal of a system of education is to be inclusive, then this research suggests that deconstructing the parallel system of special education will improve the affective and behavioural domains of educator's attitudes, the behavioural intentions. This, in turn, will positively impact the educational experience of students with mild to moderate disabilities, as the promises of inclusive education can be realized.

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Miscellany

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