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## Diversity, Neoliberalism and Teacher Education

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### Abstract

In this essay, we conduct a brief analytical review of teacher preparation programs, which claim to prepare lifelong culturally responsive teachers. Initial evaluation revealed factors limiting program success, they include: deeply embedded dominant ideological assumptions, use of traditional methods to train teachers, inability to understand or work toward non-hegemonic social relations and a pervasive and closed neoliberal epistemology limiting diversity in the preparation programs and profession. Finally, we critique existing understandings of teacher education, consider alternatives in philosophy, structure and function for preparation programs and critical humanism as a framework for working with teachers, to transform indoctrinating and dehumanizing educational practices.

**Keywords:** Culturally responsive, pedagogy, social justice, neoliberalism, labor

### Introduction

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Hierarchical structures originate in dominant ideologies creating barriers for supporting critically minded teachers. Conditions governing these ideologies are prevalent in even the most successful teacher education programs (Darling-Hammond, 2004; Delpit, 2006; Eryaman, 2006, 2007; Gay, 2010; Valenzuela, 1999). Carrying the flag of liberality, compassion and progressiveness new teachers typically begin their careers with good intentions. Despite culturally responsive and relevant training and what are considered righteous personal goals, teachers often reproduce inequitable and uncritical classrooms found in modern schools (Milner & Laughter, 2014). Cycles of reproduction ensure teachers rely on inherited social understandings of good teaching.

Lack of diversity in teacher training programs likewise perpetuates inequitable practices in the larger context of U.S. public schooling as creativity and divergent thinking are pushed aside to “alienate humans from their own decision making” (Freire, 2000, p.85). Similarly, teachers of color continue to be underrepresented in schools as they have been historically. According to the National Center for Educational Statistics, approximately 83.5% of teachers in the U.S. were categorized as White non-Hispanic in 2008 (National Center for Educational Statistics, 2008). Students interpreted as other: people of color, students with lower socioeconomic status, and students identified as non-heteronormative, rarely see individuals from their community reflected in positions of power: administrators, counselors or teachers (Ball & Tyson, 2011; Darling-Hammond, 2004; Delpit, 2006; Freire, 1998; Gay, 2010; Valenzuela, 1999). As academically successful, would-be minority teachers are persuaded away from education as a profession, encouraged instead to enter fields like business, law, or medicine, the overrepresented trend of a population of largely, ideologically, culturally and physically *white* teachers continues (Vilson, 2016). The assumption prospective minority teachers make: “Why waste your time as a teacher?”

Similarly, the education of privileged, culturally responsive teachers for work in pluralistic schools generally requires a personal transformation in the underpinnings of informed curriculum and pedagogy (Foss, 2002). Limited experience and understanding for practical success with children outside one’s experience reinforces deeply rooted, culturally biased assumptions concerning the abilities of minority population children or children for who school is not designed. This is not to say one cannot or will not cultivate these understandings, however, performative schooling ensures education becomes culturally subtractive (Valenzuela, 1999), as teachers may not envision student beyond this paradigm. Many young teachers enter the profession understanding that assimilationist practices are in the best interests of students (Delpit, 2006; Eryaman & Riedler, 2009; Gay, 2010). For these teachers, educational success means teaching students about the value of education for students’ bettering or facilitating the adoption of white middle class cultural norms, standards of conduct or values. Examples in film such as Erin Gruwell of *Freedom Writers* (LaGravenese, 2007) perpetuate the notion of the semi-affluent savior teacher who commutes to the ghetto to work with children understood as other.

The triumphant narrative concludes as students adopt the cultural norms accepted by their teachers and pull themselves up by their bootstraps via a newly cultivated work ethic. Some teachers like Gruwell may achieve success with their students but teacher success is not attributable to students becoming more culturally white instead it is a consequence of a teacher’s ethical posture, critical and culturally responsive pedagogy, a curriculum reflective of the ethnic and cultural backgrounds of the students and a caring and supportive school community (Darling-Hammond, 2004; Delpit, 2006; Gay, 2010; Gonzalez, Moll & Amanti, 2006; Valenzuela, 1999).

### **The Color Barrier**

Teachers tend to identify with the homogenized epistemological norms that also govern their peers (Prinstein & Dodge, 2008). In this relationship persons are categorized via in/out groups (Tajfel, 1970), interacting as their membership fits the external social other. This categorization enacts the system, class-consciousness, and employs an embedded ideology as the “shared ideas or beliefs which serve to justify the interests of dominant groups” (Giddens & Sutton, 2009 p.1021) via social relations, division, to perpetuate existing hierarchical structures. In doing so, students become

alienated while those who see or understand the purpose of alienation, school power brokers, favor market mechanisms rather than supporting student success. Students themselves are left to understand and, “clarify this struggle against” (Foucault 1980, p. 24) alienation, in an effort to seek justice their consciousness becomes fractured. Classification in the form of labeling and or tracking ensures students begin to perform the socially constructed categories of smart, poor, special, brown, black, female, aggressive, deficient and so on, into which they are placed reconstituting a micro ecology of social relations within the larger social context (Hudak & Kihn, 2001). Students then become things to be acted upon for the teacher subscribing to this ideology. Labeling offers student teachers (and teachers) a way to conceptualize minority population students; they begin to understand othering using organizational symbols, such as at risk, low socioeconomic status, and Title I, among others (Cuban, 1989, Valencia, 2010). In this manner, teacher occurs as antipode of student, this is, similar to Derrida’s notion of the binary opposite creating a violent hierarchy where “one of the two ... governs the other” (Derrida, 1982, p.41). The relationship is based on power offered by the system for ascribing normalization and acceptance of inequitable relationships. Teachers then see students merely as object to be dealt with in the schooling and classroom hierarchy, and the relationships that occur are consigned the value of ritual or the above mentioned performative nature of human experience (McLaren, 1999). Students who are othered beyond the teacher/student binary are further categorized and subjugated as the label precedes them through the grade levels.

In socialization and ultimately indoctrination, teachers fill the benevolent colonial missionary narrative in their work with students, hoping to civilize or save their students. These teachers work from a deficit perspective (Valencia, 2010), believing lack of success is the result of a cultural (Payne, 1998/2005), community or familial shortcoming rather than a pedagogical or schooling issue that must be addressed. This transfer of responsibility frames a student as both victim and the cause of their victimization while absolving schools of their responsibility to care for and educate them.

A dangerous hegemonic narrative persists in the preparation of teachers despite the best efforts of socially minded teacher education programs (Blackledge, 1998). In choosing students for programs, education professors may look for students who are able to embody the values of critically responsive (Gay, 2010; Freire, 2000; Ladson-Billings, 2013) or constructive teachers (Erdal & Ongel, 2003), though sometimes decisions are made based on needed numbers to keep a program economically viable (Sleeter, 2012). Often these programs focus on Vygotskian, Deweyan or Freirean philosophical frameworks (Dewey, 1933; Piaget, 1957; Vygotsky, 1978). Professors and instructors in these programs hope that wherever student teachers begin ideologically, their efforts will help children reach new cognitive understandings, instilling the notion that education must be experiential, democratic and/or critically conscious. Student teachers who adopt these frameworks often demonstrate an inclination toward inclusion, social justice, and a desire to become transformative educators (Bruce & Eryaman, 2015; Picower, 2011). Supported by an impressive admission packet, correspondence and interviews with faculty and other metrics, preservice teachers begin their journey away from the pattern of a traditional teacher (Darling-Hammond, 2006).

Many teachers then, apply the lessons of their programs in one of several ways (Smagorinsky, Lakly, & Johnson, 2002). First, teachers may adopt a more traditional classroom approach (eg. Picower, 2009); the ideology of the program is un-reflected in their teaching or the program itself did not reflect its espoused values. Another option, teaching may reflect the mission of the credential program and teachers realize disconnects between their teaching and the potentially problematic approaches caused through alienation. Lastly teachers may reflect the socially just focus of their program but find they need to re-negotiate their philosophy and what they may understand by the realities of schooling (Sleeter, 2001). In the last option re-indoctrination into the dominate ideology occurs as teachers navigate the distance between their undergraduate education and their vocation as classroom teacher: rigorous testing requirements, challenging placements and a culture hostile to the transformative epistemologies [critical race theory/pedagogy, multicultural education, education for social justice] to which teachers were possibly, though not necessarily introduced (Sleeter & McLaren, 1995). Similarly, teachers lacking the initial characteristics for acceptance to the university/college program often pursue an alternative credential without significant theoretical or

practical preparation (Ingersoll, 1999; Salyer, 2003; Shen, 2000; Walsh & Jacobs, 2007). Their previous background becomes a default *modus operandi* for their teaching, informed by positivist or individualistic professional experiences understanding teaching as a practice similar to a career in business, the military or other field (Giroux, 2015). These involvements, while enriching, may not provide the necessary experience to succeed as a culturally or critical responsive teacher, or to work with children of non-culturally dominant backgrounds (Cochran-Smith, 2004). Since many programs of this type do not require an extensive student teaching experience, integrated student teaching and coursework or much needed ongoing personal and professional development that support these values, critical or constructivist practices go unconsidered (Bartolomé, 2007).

Able to navigate systems in ways students of color cannot, newly minted culturally assimilated teachers often do not realize the full implications of a didactic or traditional pedagogy (Ladson-Billings, 2009). They rarely engage students beyond the prescribed, aforementioned student teacher binary, as their understood role is to teach students to learn according to prescriptive definitions; rote memorization and maximization of time on task (Carr & Skinner, 2009; McLaren, 1999). To contemplate the fullness of their student's potential is therefore unnecessary. Traditional power relations lead to further reinforcement of uncritical practices even when a teacher's training, philosophy and intentions have been critical.

Teachers who were successful navigating schooling as a system, that is, secondary education to a major undergraduate teacher preparation university, have done so from within the traditional framework and thus at least partially understand the perceived inherent logic of its value (Bourdieu, 1999). Since the system worked for them, they imagine it must work in kind for their students; a problematic notion for students with needs beyond the traditional classroom (Magill & Rodriguez, 2015; Willis, 1981). Student teachers and new teachers become inundated with paperwork, school meetings, coaching appointments, hours of lesson planning and a variety of other every day school related conditions. Many young teachers then lose the coping skills, energy and ability required for creating critically and culturally responsive classrooms, focusing instead on instructional practices like simple lectures and on psychological survival (Kardos & Johnson, 2007). Society's perception of the teacher workday is 8-3:30, though a 50 hours workweek on average would suggest otherwise (Darling-Hammond, 2011; NEA, 2009). Critically and culturally responsive teachers may work longer hours, an apparent prerequisite for addressing needs of students beyond her (his) immediate and traditional classroom contact (Bartolomé, 1994; Gonzalez, Moll & Amanti, 2006; Kohn, 2000). When done well, teaching can be one of the most strenuous and demanding careers. Teachers often burn out from the tireless requirements. New teachers are more susceptible to this burn out, isolated by lack of community support (Ingersoll, 2003; Salyer, 2003; Shen, 2000); they often create an island classroom in which they exist apart from the school community (Kardos & Johnson, 2007). Without time, support or energy, students become first to suffer as new teachers struggle to survive (Peske & Haycock, 2006).

### **Neoliberalism and Developing Teachers**

In the societal turn toward neoliberalism, and to some degree as jobs declined in sectors of the economy, teacher education programs have been admitting students less selectively because of drops in enrolment (Giroux, 2002; Legislation Higher Education Policy, 2013; Sleeter, 2008). Students might choose programs by location, convenience or prestige, rather than focus of the program. Ideologically rigid students that profess best intentions are accepted to teacher education programs, as a means of financially supporting the program (Sleeter, 2008). The goals of some critically focused teacher education programs, perhaps conveyed in some form to students pre-enrolment, are possibly realized by analyzing and exploring ways students have understood and perceived personal classroom experiences, helping students acquire a *criticity*, (Rodriguez, 2008) in considering the existing society and the attendant social relations of power and production. Practices likely include discussing and deconstructing race, gender, ability and sexuality within the larger societal context (Case, 2013). Students may not fully realize what this means and the introspection it may require (Darling-Hammond, 2006). Coursework with focus on multicultural education, diversity in the classroom and classroom methods challenge teachers in the hope that they adopt transformative curricular and

pedagogical epistemologies though they may not fully explore deeply held ideologies. A common, but not universal application of social justice is a teacher focused on social stratification rather than criticality, as part of the coercive measure adopted by the school administration (Hill, 2007). Instead of a teacher that works to uncover the social relations of production or exploitation taking a position with students and work against existing power structures, the teacher often sees his or her responsibility as developing neoliberal social capital (Hinchey & Cadiero-Kaplan, 2005; Zeichner, 2010).

The doctrine of an equitable educational system rests on the philosophical acceptance of several foundational elements, potential for social stratification or moving above ones social class. The experience ensures the focus of teacher education programs include notions based on American democracy, pluralism, capitalism and citizenship (Barber, 1997). Important critiques of neoliberal and neoconservative practice and how they safeguard the social relations of production are all but silenced (Zeichner, 2010 & 2011). In adopting a posture promoting neoliberal social capital, educational stakeholders adopt policies in a perceived move towards educational equity (Evetts, 2011). Taken as the progressive political ideal, teachers slowly embrace the less than equitable superstructure (Apple, 2000). The theory: society as a functioning system whose ameliorative value lies in individual ability to affect, modify or transform the selfsame system. The preceding is a *proto* Hegelian hallucination; the system can be equitable while exploiting the most vulnerable of its citizens. Reinforcing neoliberalism in this way nurtures the acceptance of exploitation in the pursuit of the “best” things life can offer, a new car, home, yearly vacation and all consumer goods required to appear successful (Apple, 2000). These ideals allow teacher *qua man* -the elite- to drive to poor schools from their middle class suburban community without considering the messianic nature of their appearance; it is as if Christ descends from and then re-ascends to the heavens at days end.

### **Neoliberalism, Globalization and Teacher Preparation**

As blue-collar jobs leave the United States, skilled jobs become high demand. The shift ensures the educational apparatus produces the labor skills the social machine requires (Kozol, 2005). Students are taught to think according to narrowly held beliefs about criticality and technicism, to be of value in the global neoliberal workforce. This neoliberal mothering of workers ensures they produce labor power wealthy corporate owners collect. Globalization then ensnares education by promising jobs and livelihoods for the new servants [service and technically skilled workers] the strategically limited dynamic thinkers. Education becomes a microcosm of this strategic invasion (Kincheloe, 2009). Common Core and other specifically designed programs create, as with past initiatives, workers who are cultivated for a specific purpose- in this case to fill skill-based jobs of the 21<sup>st</sup> century (Sterling, 2002). Programs like these require certain teaching methods, student requirements and universalized objective knowledge all of which limit dynamic critical thinking. Just as No Child Left Behind (NCLB), Race to the Top and other programs have prepared students for bureaucratic forms of automation, the new curricula, similarly, produces students for the neoliberal workforce (Torres, 2008).

Clearly we have arrived at a moment of crisis of teacher preparation; the US National Council of Governors (the body responsible for Common Core) requires ensuring student teachers accept their limited role in the classroom (De Lissovoy, 2014). A decade of NCLB taught experienced teachers that to struggle against the way things are is futile. Literacy and numeracy programs as well as other subjects that have survived NCLB are curricula handed down, nay mandated by state, district and school building administrators (Baltodano, 2012). A teacher’s role is merely to ensure delivery of the daily script, the school community is the programmed populace Marshall McLuhan and George Orwell predicted; the schooling curriculum is the program input, the output is the think-speak from the mouths, daily interactions and other ways of being of the labor force. Teachers must not stray beyond our limited roles (Katz, 2008) as any fracture or divergence from the system ensures we are assigned a jail cell, psychotherapist or relegated to the margins of society as a crackpot.

Furthermore, globalization continues to reshape and transform the world’s ecology. All social relations are tied to production under the guise of democracy (Rodriguez, 2009) developing a

globalized epistemology in the world is a neoliberal game of hopscotch in which Western countries vie for power as they traverse the globe raping the earth for her natural resources and acquiring new and ever expanding markets (Hudis, 2005). Developing countries adopt policies created by Western power brokers compliant to the exploitation of their natural resources and labor force, neoliberalism becomes the narcotic developing nations crave. As mentioned above neoliberal education policies ensure schools produce the limited skill worker and the functionally illiterate citizen (Kozol, 2011). The global zeitgeist then is the labor force accepting their lot and cheering, as drone strikes are unleashed, rivers are dammed and forests are cut down. Countries accepting neoliberal thinking as the new religion invest in its success. Advancing the scope of neoliberalism to include countries like China and India ensures its perpetuation in Western countries. Further compliance, transformation or development of world markets secured as the tether of neoliberal capital ties major world economies (Hill & Kumar, 2012). The result is the obliteration of cultural diversity; the new world cultures are the global elite and its antipode, the global neoliberal labor force.

### **From Method and Design to Essay**

This paper began as a one-year critical study by Arturo and Kevin of what we considered very limited practices in the preparation of teachers. As Kevin began doctoral coursework in which he was assigned student teachers as part of his scholarship obligation, we began to examine comments made by his and my student teachers about their relationship to the teacher preparation program and how the students identified required methods courses in curriculum and pedagogy and their further understanding of its relationship to student teaching. As our study developed we considered, auto-ethnography and direct pedagogical observation (Angrosino & Rosenberg, 2011) or critical observation for social justice as means by which to understand the dissimilar experiences of our students. As a tool for research, auto ethnography helped us, “investigate how we articulate our own selfhood as educators of teachers through narrative and how this informs and develops our professional identities which we construct and re-construct in response to the continuing uncertainties and ambivalences within the initial education of teachers” (Hayler, 2011, p. 1-2). Understanding student teachers through our direct observations and reflections auto ethnographically allowed us to relate our own experiences in the classroom to students we know well as they struggle to become teachers (Freire, 2000). We used anecdotal examples from a first person perspective, informed and analyzed data based on the experiences we shared with our teachers in classrooms and through our relationship with them. Auto-ethnography offered us a way to recall our daily interactions with student teachers while minimizing the limitations of taking field notes. Field notes, as understood by the research community offer the researcher a means by which to collect code and then analyze data. As we interact with our student (subjects) we are not dispassionate, the interactions we record are laced with our personal and moral commitment to a critically responsive ethical posture.

The claim of objectivity would support an idea of sameness, meaning what happens in a given field is reproducible in another. Any attempt at validity, given the singularity of experience or generalizability, appears as a rupture to the existing paradigm of field research. What we mean is this study, which became a critical essay, would be useful to others insofar as it provides an opportunity to continue developing a criticality/criticism in which we further apprehend the nature of being (Hegel, 1977) within our material realities. In this case, the diverse experiences of our student teachers in their preparation programs and in their own classrooms, and our understanding of the significance of our work with our students, is derived or limited by our ability to approach and then discuss the many meanings of our experience in the field. Analysis of our data then would be a mutually agreed upon narrative given the original assumption mentioned above: student teachers may or may not experience critical and/or culturally responsive education in teacher preparation programs, ideologies may or may not be adequately considered in programs, the assumption, teachers may or may not reassume or later become re-indoctrinated into the existing hegemonic hierarchical power structures (Bartolomé, 2007). In other words, the rituals and traditions of schooling and the curriculum often consume teachers, their response, to forgo a critical posture.

We understand the problem in this case to be a neoliberal ideology and a relational emphasis on schooling that reverses or insures critical work is limited in classrooms. The purpose of this inquiry

then, is to examine examples of this tension in our work with student teachers and to highlight anecdotal examples that demonstrate the tensions between critical teacher education, relationships and practice. That said, we considered: what if any are limiting factors for the nurturing of critically and culturally responsive student teachers? How might we work with our student teachers to ensure their personal commitment to and the further development of a critically and culturally responsive educational point of view?

### Narrative Analysis

#### Arturo

In the years since I began teaching in the undergraduate program at a western regional comprehensive university I have come to an understanding of human nature. In the classroom the eyes of the students made me nervous, initially shy I began to accept the gaze that was there for many years. Our experience was the only time they had been taught by a person of color. As mentioned in other papers, I always ask the students what they would like to do and what they expect from our experiences. In the classroom every idea posited by the students or myself is open to further consideration, development or negation. As I understand it, classroom epistemology is dependent on my experience with the subject, how much I know and what material I can provide my students to add to their previous experiences in other classrooms. It is then we can negotiate meaning as we derive a new or transformative epistemology.

How do I know they get it? I engage the classroom everyday as I see many of my experiences in society. I register the smile, apprehension, acceptance, boredom and dislike. Most of the time, like many teachers I am on, what I mean is, I am sufficiently prepared and I genuinely love what I do as to communicate my joy for the experience with my students. I know if they have read because we develop several orders of schema, concepts related to the subjects we discuss but more importantly relevant to their future careers in education. And, I know if they are acquiring not merely approaching the subject to get through class because in all my classes I expect students to prepare a teaching demonstration consistent with the ideas we have been considering. As the days, weeks, months and years ensue I get to know students who are excited to learn, students who are gaming the system and students so ideologically conditioned they either negate anything I or the other students say or write their revulsion into the end of semester evaluation. These are the students I see in the field, as I have been a university-school liaison in area school districts. They are the students that give us the most concern as we write this paper. I can see them discussing social justice, transformative pedagogies and multicultural education in the classroom and then act in opposition to these ideas in the field.

Winter, it was hard to start my car; I drove carefully to the student teaching field placement site. As I entered the classroom of what is considered one of the best students in our program, that is, the student excelled on the *Praxis* exams for certification, received excellent marks in all coursework and can debate curriculum and pedagogy with the best of them, I noticed how the student arranged the classroom. All the students of color sat in the back. The light skin or white students sat together in front of the room. A heavyset student was isolated from the group. As the student-teacher delivered the lesson, the student-teacher catered to the small group in front of the room while almost ignoring the children in the back rows and the isolated student. As the lesson ended the student teacher circled the room providing help where needed, in each case the student-teacher reached out to the well dressed and middle class kids placing her hand on their shoulders while not repeating the same with students of color, the isolated student was all but forgotten.

The above scenario is repeated in many of the classrooms I visit with student teachers or teachers who have graduated from our program. When I ask individual teachers about the way they situate the children, how they conduct activities or how they relate to the children as they give a lesson, they seem confused, they understand I see something in the lesson and will ask about its consistency with our coursework and classroom discussions and how they in turn see the needs of the students. After the above lesson I ask the teacher, have a look at the classroom, can you tell me what you see? A look of horror overcomes the teacher as the teacher realizes what has occurred. We then

discuss how even the most progressive/critically minded teachers fall into the trap of existing relations of power.

### **Kevin**

I present myself as approachable to student teachers early in the semester. Recognizing this, several student teachers developed a group where they would speak with me about aspects of teaching and relationships after class. Some were frightened at the prospect of being teachers in ways discussed in class and I hoped our conversations would help them understand the profession was far more complex, personal and demanding than they may have imagined. We would discuss their hopes, fears, and experiences for several hours after class. For some this was therapeutic, alleviating fears of not meeting what they understood to be traditional schooling expectations, expectations based on what was discussed in class or social awkwardness. For others it was a space to trouble what they understood to be a disconnection between the theory of class and the reality of the classroom.

The following story is an experience of one of my student teachers, her relationship with her student and our work together to understand the complex intersection of critical student teacher and traditional classroom relationships. Mandy (pseudonym) was a particularly strong student teacher that developed a bond with one of her students. This was a child many of the other teachers had deemed too *challenging* and *defiant*. She asked me if I had any ideas for supporting this student, who had been willing to talk with her but was somewhat reluctant to share anything meaningful. I asked that my student teacher tell me about her student. Mandy responded by suggesting the student would shout out at inappropriate times and would, all of a sudden, be very moody in class. I framed the question differently. What did she really know about the student? Taking my meaning, Mandy understood that she did not really know about the student beyond their classroom and hallway interactions. She was asking the student to share without first sharing of herself.

Mandy began speaking informally with her student outside of class. To her shock, what she had understood as strange behavior in the classroom continued in these discussions. After one of our discussions, I suggested she ask if she could join her student at church the next weekend. Her student agreed and she joined the family at church. The student's mother was so impressed and grateful for Mandy's interest in her daughter that she invited her to dinner. At dinner, Mandy finally understood the reason for the strange behavior. Her student's father was in prison, an inmate on death row.

After visiting with the family, many other students began to demonstrate their gratitude that Mandy had become a greater part of their community. A largely Chicano and low socioeconomic high school population, the students were shocked that a teacher cared about them so much. The students told Mandy that they had many teachers that said they cared, but those teachers lived in different communities and the students felt they were not interested in their lives beyond the classroom. I observed Mandy as a teacher thorough the semester and was able to see this genuine connection as I continued to mentor her through the student teaching experience.

A few weeks later, the family Mandy had visited experienced an unthinkable tragedy. The student's father was executed by the state. Naturally the family, her student and Mandy were all devastated. Though she had not met him, Mandy was almost inconsolable with grief at our next meeting. She shared with me that she felt like she needed to hug her students but felt she could not, questioning the appropriateness of what she knew to be the only human way to comfort her student. Mandy second-guessed the way she wanted to respond to her student in the face of this trauma. Hamstrung by unknown legal concerns, her behavior was altered based on what she knew to be the human response. As if frozen by neoliberal cultural norms she knew what could and should be done but hesitated to do it. She was appreciative of my friendship and support having spent several hours discussing what had happened.

Relationships are an often-overlooked part of learning to teach. Mandy's teacher had no idea that anything was happening with their student. Of the eight cooperating teachers working with my student teachers that semester, two were phenomenal and demonstrated the care and support that was

needed in and beyond the classroom. Five were good or fine teachers, and mentored by demonstrating instructional practices that they thought the teachers could utilize in the future. These teachers the school valued because they did not experience discipline problems and their students did well with standardized testing. One teacher however, was deficit minded. She blamed the students for all her classroom problems, mentioning they were not smart and that my student teacher could do nothing in their support. This particular student teacher was not very strong and the teacher said that this was the reason she struggled. The problem worsened as the student teacher began to enjoy having the built in excuses that her cooperating teacher mentor offered.

There were many changes in the lives of the Cooperating Teachers that semester. Two of the strong host teachers considered leaving the classroom. One planned to return to graduate school and the other was offered a position as an administrator. The challenge of supporting students, as she knew she needed to was too much for this teacher and she needed a change. The deficit minded teacher was also changing jobs. She had been offered a position as a vice-principal because of the work she did with the so-called *challenging* students. Her classroom was based on passing tests and included an un-rigorous curriculum. I was perplexed. Did the school recognize her lack of suitability for the classroom and think this would be a more appropriate position or did they genuinely view her as a quality educator?

## Discussion

### Neoliberalism, Globalization and the Teaching Profession

Culturally and critically responsive teachers value culture, understanding teaching is not a relationship of binary opposites. Critical teachers appreciate what each brings to the classroom, student and teacher, and work to further develop an understanding of the funds of knowledge (Gonzalez, Moll & Amanti, 2006) of their students and the needs of co-creating the classroom epistemology (Magill & Rodriguez, 2015). The ways teachers and students understand the unique living expressions of teaching and learning as they approach the curriculum is the difference between ensuring the further creation of a servant class or an emancipated, critical and democratically functioning public who possess the agency to transform the world for generations to come.

It is not enough for teachers to call for the liberalization of society, espouse tolerance, while continuing to mindlessly teach racist, classist, and passive lessons with a reproductive view toward deficit pedagogy. Teacher education must include a vision of our globalized world. Furthermore, the teacher must experience life in the ways understood by her (his) students as they apply their own criticality (Rodriguez, 2008), to the creation of localized, asymmetrical power relations. The teacher as active social agent is a societal imperative. The need for teachers to comprehend diversity is paramount to the uncovering of an obscure humanity: the nurturing of critically responsive teachers to surmount challenges in embracing difference, recognize their own and their students value and transcend oppressive ideologies, ideas of class distinction, and immerse themselves in the development of their community and world.

Consider the student teachers in the above narrative analysis. The first teacher did not fully realize alienation she inadvertently caused in her classroom. She fell into the basic ideological formation governing society and schooling. Though she was well read in critical and social justice literature, classroom structure took priority over the students' learning. In the second example, the teacher felt uncomfortable offering love and support she knew was needed because she was worried about policy. This is the commodification of human emotion, which occurs when neoliberalism rather than humanity is sacrosanct.

Historical notions of humanity change as societies frame social reflection and interaction as ancillary to self-interest. In a fetishism of commodities value becomes exalted as schools of education pursue enrollments, neglecting the under-considered costs of training people to be less human. The ideological transformation of what it means to be human becomes an afterthought in the culture of identity's (Horkheimer & Adorno, 2002) societal discourse. Resulting comprehensions of the

reciprocal [educational/societal] relationship become limited to correct answers to multiple choice test questions. As culture reinforces appropriate understandings of humanity, the hard work of the individual becomes dignified as gatekeepers benefit from the isolating nature of the culture program that is reward and punishment. Power brokers, politicians, administrators and teachers, receivers of both the cultural and monetary benefits of society have been trained to dissuade communal conceptions of difference. Communication that lacks action (Habermas, 1990), hierarchy, determines who will receive credit in a neoliberal society while driving effort toward individualism and away from collective reasoning, a transformative praxis.

As hegemonic linguistic structures create normative discourse, the chosen [students] are funneled toward increasingly narrow understandings of humanity. Discourse becomes study (Marcuse, 1991) and the consequences for philosophical meta-analyses are seen as antagonistic or revolutionary to the above-mentioned powerbrokers, rather than democratic, as in the case of the Ferguson riots, as people give voice to their opinions. These considerations are enforced via the social structure; disobedience to the normal exists only beyond the closed analytical structure. Insubordination becomes propaganda (Marcuse, 1991) for the hegemonic order in the war against critical reflection. [Transgression of the discourse beyond the closed analytical structure is incorrect, although the means of enforcing the truth and the degree of punishment are very different]. As long as 'rules were followed' communal complacency keeps those with systemic understandings classed above those who constantly work to assimilate or fight unjust practices. Consider the entirety of the educational experience as a socio-historical "ecosystem" (Sexton, 2008) that reaches far beyond the classroom, as the marginalized fight towards equilibrium in the face of injustice. Humanity, given global neoliberal capitalist notions, becomes the jar at Starbucks, blue recycling bins and checking the organ donor box in a forced but welcome separation of justice in practice and justice in reality.

The above perception of humanity is gladly accepted and happily passed to students, as educators become besieged by frivolous practices, forced to make sacrifices to humanity in service of time. Young teachers survive by discarding social justice in favor of test score improvement. Students who understand the system or proper ways to act receive needed support while the misunderstood other are left wanting. In spite of best intentions, teachers develop and learn compassion in its failed social form, which as Raya Dunayevskaya and Peter Hudis posit, divide, oppress and commodify society. In the shift towards a value added teacher, "individuals become dominated by social relations, products of their own making" (Hudis, 2013, p. 207). Teachers then, are the arbiters of these relations and the carrot of their student's and their own dependency.

How then can educators, support students without relying on what Peter Hudis (2005) calls the, "value form of mediation" (para. 13) in a system bordering apathy and greed? Human as commodity exacerbates issues of economic inequality, social instability and environmental destruction, which underscore the need to reimagine the human relationships, how they are understood and how they are explained in relation to capital (Hudis, 2011). Teacher educators must understand humanity as the opportunity to create the conditions for a communal praxis. We begin with the classroom and continue toward the global community in support of teacher acknowledgement of ideological and humanitarian shortcomings in education and the curriculum. It is in the society where students, teachers and the disenfranchised are not faceless and nameless that humanity will accept new forms of understanding. New cognition (Dunayevskaya, 2000), results from dynamic understandings embedded in human liberation when the actions of the disenfranchised are understood.

The expression of critical teacher humanism is not limited to neoliberal pressures on teacher formation. Rather, pivotal to genuine care in the way it may affect educational practice; learning to teach with candid acts of care in culturally relevant pedagogy, diversity of practice, and anti-othering. Consider the historical normativity white society has institutionalized in identifying reasons for an achievement gap between those of different cultures. Understanding the gap (Delpit, 2006) highlights the importance of culture and the further development of one's primary language. Without them, students from ethnically and linguistically diverse backgrounds often feel lost. Descriptions of how students experience school situations include feeling, invisible and unheard. The counter extreme is

also problematic. Often students are hypervisible particularly as small communities of othered students begin to form (Delpit, 2012). Students subsequently become unresponsive to normalized strategies as culture is neglected further. Identification or lack thereof is not limited to students of color, but to all students who feel unrepresented. Confusions across areas of educational difference create many challenges for teachers as they find difficulty, “communicating across social differences, race or class lines or any situation of unequal power” (Delpit, 2006, p.135). Misunderstandings therefore lead to fear or cultural rejection as teacher or students are othered.

Multicultural and culturally relevant teacher education, on the other hand, is essential for the development of critically conscious teachers. Because teachers may develop narrow epistemological understanding of society, they do not realize the bias and limited practices an unobservant reading of the world (Freire, 2000) can have on one’s students. Culturally relevant practices address student needs, which are limited by standardization. Teachers must be educated to meet the unique needs of their students, and not to simply mete out the whims of the state, as Gay (2010) notes, the unconscious understanding of the world is framed by culture. It regulates the ways we think, believe, and behave, thus the teacher becomes the facilitator of culture, but only in so much as she or he can understand student culture. When this does not occur, teachers often employ subtractive schooling (Valenzuela, 1999) in an attempt to develop understanding, or common ground. It assumes that a student can restart an educational experience rejecting what they already know. Rejection of their own culture then becomes a rejection of the student in normalized classroom experiences.

Finally, the idea that teacher education programs are fully effective in their practice operates under the assumption that teachers can acquire the “tools” needed for a knowledge-based society. Neoliberal notions of what it means to educate are limited to quasi-structuralist or quantitative measures of student performance. Resultant, predictable student outcomes and anticipated answers to standardized questions are valued. In many of the ways classroom instruction has failed students, teacher education programs fail new teachers. The status quo is re-inscribed via limits to teacher “training”. Darling-Hammond (2006) identifies several learning principals to be considered as students enter class: they have prior knowledge, they need to organize that knowledge conceptually, and they will learn more effectively if they can manage their own learning. A perfectly scripted curriculum in which all students do the same things and learn in the same ways is not possible, yet standardization prevails. Consider a critical perspective in the ways education is perceived and for the expectations we have of it. Bureaucratic standardization practices cannot be the only measure by which we consider success if indeed we attempt to cultivate the critically minded citizen. In the current educational climate, those choosing to teach will experience far different outcomes and emotional reactions than they did as they attended school. This is both because the profession lacks a diversity of “other” perspectives, values and bodies, but also because it lacks a diversity of understanding.

### **Conclusion**

We do not offer quick solutions, the challenges encountered in teaching and learning and required attention to self often limit the ability for a student teacher to see the full implications of their practice and analyze experience beyond the superficial. In social justice education, it is our task to help students understand this experience as they develop more complete understandings of teacher and school culture. Major considerations for helping student teachers developed in this way include: building strong and supportive relationships, the eradication of self-doubt, asking carefully worded thought provoking questions, offering space for critical thinking and creativity, supporting and encouraging socially just pedagogy and facilitating personalized reflexive praxis.

Teachers are able to maintain their racist and classist views, if even subconsciously, as they leave preparation programs and enter the school community. Often the school supports this behavior, in that the school, as principal actor in the education of children, upholds traditional assumptions about culture, social capital and skills necessary to succeed in the global neoliberal labor market. This comes at the expense of a community’s cultural heritage. Languages, for example, are lost at a faster

rate than ever in human history because of their perceived lack of value in a global neoliberal labor community. Our Disneylandified empire is killing culture as it kills the world's people: culture's death is not violent, but slow and principally unnoticed. Students' will and do require skill sets never before seen or experienced in history. As teachers prepare students for work in the globalized neoliberal labor market it becomes necessary to foster criticality, a concrete consciousness for a self and social examination. What are the effects of my personal ecological footprint (Sterling, 2002)? What are the effects of my personally held beliefs in my interactions with others? Complacency, the idea that my footprint does not matter or I refuse to change, ensures a linear march toward an ecological Armageddon (Bellamy-Foster, 2002; Kovel, 2002).

Student teachers enter university/college programs in the hope they will acquire the job skills necessary to secure a suitable teaching position and future. Yet those who lack a commitment to social justice or are sufficiently ideologized to the logic of state power and the global neoliberal labor market continue to make their way into these programs. Often, upon completion of their programs these student teachers lack experience with poverty or diversity and, baptized in neoliberal thinking do not understand the implications their lack of a full grasp of their students social or cultural experience has for teaching. Student teachers consciously espouse personal release of power and cultural inclusion but lived experiences with asymmetrical power relations continue to frame their education and teaching, ensuring traditional conformity to methods and understandings. This serves, perhaps despite the student teacher's best intentions, to reinforce the existing social hierarchy, while reproducing inequitable pedagogical experiences for their students. Does the student teacher realize this same structure has helped him or her achieve schooling success? The system must work, how else has he or she gained acceptance to an institution of higher education and been admitted to the ranks of the newly minted teacher?

Teachers in the field often revert to prior culturally biased assumptions of the other when faced with stress, testing, norming of traditional practice and curriculum requirements. The development of teacher as professional and teacher as cultural worker in contrast to teacher as value manufacture mechanism requires preparation programs to frame the profession as such. Teachers too often are prepared for the bureaucracy and limited nature of the profession rather than for facilitating educational praxis. Change must come in the form of self-critique and institutional flexibility that allow for reflections about culturally biased assumptions and facilitation of community relationships, rather than cultural tourism. Teachers are keepers of culture; at stake is the further loss of ethnic, group and ecological identity beyond neoliberal Americana, ultimately the ability to solve the inevitable future crises of a neoliberally globalized world: environmental degradation, mass availability of weapons, water, food, energy shortages, pandemic disease, global warming, etc. The solution will not come from a culture wrapped bottom line but from a society valuing humanity and its relationship to the natural environment.

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## **Integrating Diversity Education and Service Learning: A 15+ Year Journey Continues**

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### **Abstract**

This paper reports the 15+ year journey undertaken by university faculty to integrate service learning with diversity education. It has taken the faculty from its initial integration of academic community learning and diversity education in 1999 to its current course offering in 2015. The purpose of this integration has remained the same, to engage graduate students in exploring varied aspects of diversity while learning to work and live in a diverse world and serving the needs of the community. Over the years, graduate students enrolled in the diversity course have been participants in service learning experiences of their choice in diverse, non-profit community-based organizations. With few exceptions, based on student reflective journals, the instructor's service learning pedagogy, and the students' organization choices, service learning in diverse environments has contributed to positive change in students' views about diversity.

**Keywords:** Graduate students, Diversity, Service learning

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## Introduction

The National and Community Service Act of 1990 defines service learning as a method: (a) in which students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs, (b) that is integrated into students' academic curriculum or provides structured time for students to think, talk, or write about what that student did and saw during the service activity; (c) that provides students chances to use newly acquired skills and knowledge in real-life situations in their own communities; and (d) that enhances teaching in school by extending student learning into the community and helps foster a sense of caring for others. The Student Service Alliance, Maryland Department of Education provides a model of service learning used throughout the United States. The Alliance advocates a planning cycle that includes: preparation, action, and reflection. According to Kraft (1996), although some agreement on the definition of service learning has been achieved in recent years, its practice in schools and colleges varies widely.

At the university where this journey has taken place, service learning is described as the application of academic skills and knowledge to address a community need, issue, or problem and to enhance student learning at the university where this study took place. The university also uses a view of service learning set forth by Bringle and Hatcher (1996) which states that service learning is "a credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility" (1996, p. 2). Regardless of how service learning is defined, the basic components found in any university program are (a) meaningful service and academic rigor, (b) active service engagement with a community, (c) significant impact on everyone involved (students, instructors, community service providers, and people in the community), and (d) an expectation that students will meet the instructor's stated objectives.

## Review of Literature

The following section provides a summary of existing literature related to service learning in higher education and how various programs have evolved as has the program at our institution.

### Service Learning in Higher Education Evolves

Service learning has grown considerably at the postsecondary level since we began our first effort over 16 years ago. Surprisingly, the integration of diversity education with service learning has also grown. Although the idea of service learning as a strategy to enhance instruction about diversity was largely untested at the time we began, findings from King, Perez, and Shim (2013) suggest service learning to be an appropriate strategy to teach about diversity at the postsecondary level. They examined how students experience intercultural learning using data from the Wabash National Study. The Wabash National Study of Liberal Arts Education was a large longitudinal study to examine critical factors that affect the outcomes of liberal arts education. The aim was to help colleges and universities improve student learning and enhance the educational impact of their programs (Center of Inquiry). Using data from this study, King, Perez, and Shim found that "intercultural learning occurred when students directly encountered others' experiences; feeling safe enough to explore cultural differences was a key dimension of intercultural learning; and students used a variety of approaches that led to intercultural learning and that these varied in degree of complexity and agency" (2013, p. 69). Their finding that intercultural learning occurred when students directly encountered others' experiences, coupled with a major component of any service learning program—providing opportunities for students to engage in community service through a hands-on approach, supports use of service learning as a strategy to teach about diversity issues.

Holsapple (2012) conducted a critical review of 55 studies of the impact of service-learning participation on students' diversity outcomes, identifying six diversity-related outcomes that emerged from the studies. These outcomes included tolerance of difference, stereotype confrontation, recognition of universality, interactions across difference, knowledge about the served population, and

belief in the value of diversity. Although Holsapple offered some criticisms and suggestions for improvement, he concluded that “diversity researchers and higher education leaders should give serious consideration to service-learning when they are considering ways to help prepare students to work and live in a diverse world” (p. 15), thus also supporting this integration between diversity education and service learning.

Celio, Durlack, and Dymnicki’s (2011) developed a meta-analysis focused on the impact of service learning on students, perhaps motivated by the growth of service learning as a teaching strategy, even though student outcomes associated with service learning are still unclear to some. Their work included 62 studies involving 11,837 students and resulted in findings that “students participating in SL programs demonstrated significant gains in five outcome areas: attitudes toward self, attitudes toward school and learning, civic engagement, social skills, and academic performance” (2011, p. 74). They also stated that there was empirical support for the belief held by many educators that if certain practices are followed, such as linking to curriculum, community involvement, and reflection, better outcomes are likely.

Over the years, many colleges and universities have become embroiled in the service learning phenomena, moving from individual faculty providing service learning opportunities to a few classes, to full-scale service learning programs and offices. Practically every program we reviewed had at least these three service activities as identified by Ohio State University’s Office of Service Learning: is connected to specific learning outcomes, meets identified community needs, and provides structured time for student reflection and connection of the service experience to learning (Ohio State University). The university level service learning programs or offices consistently state similar definitions of service learning as well as similar goals and objectives. This consequence suggests that there is consensus among educators about service learning’s place as a teaching tool, again even though some say the merits of service learning are still not fully known. However, evidence of the positive outcomes from service learning is becoming more and more apparent. For example, The University of Missouri has an Office of Service Learning that was founded in 1995. This office grew from a need to understand why students were not participating in the community. Focus groups revealed two problems, time and connections. Initially, Missouri’s Honors College Community Involvement Program grew from the focus group findings in 1990, but five years later, that course became the Office of Service Learning. In 2001, a study of “students ages 18 to 22 was conducted and showed that greater numbers of students were engaged in community service. Students now entered college with an expectation of community involvement and opportunities to provide service in the community within which they lived” (Office of Service Learning).

The University of Richmond launched The Bonner Center for Civic Engagement in 2004, a fully operational center that grew out of existing programs; the Bonner Scholars Program, the Center for Faith and Service, service learning and other community-based learning courses, and the School of Professional and Continuing Studies (University of Richmond). The Bonner Center for Civic Engagement states that it seeks to connect students with opportunities to enhance their education outside the classroom, address community-identified needs, and build students’ understanding of the larger social contexts that shape their off-campus experiences through community-based learning (CBL), another term often used to describe service learning. Regardless of the term used, service learning courses at universities attempt to connect classroom and community. Service learning projects at universities are designed to meet community needs and must partner with community organizations to provide experiential learning opportunities. If all goes well, community partners become fully engaged and supportive of service learning on a recurring basis (University of Richmond).

According to Miami Dade College’s Institute for Civic Engagement and Democracy (iCED), service-learning is “a teaching and learning tool that combines course content with organized community service experiences at local nonprofit organizations” (Miami Dade College). This office was established in 1994, but as the Service-Learning Center with a Learn and Serve grant from the Corporation for National and Community Service for the purpose of developing a service-learning

program at the college. Due to growth and after joining the Democracy Commitment and participating in the development of the Association of American Colleges and Universities' national call to action, a new mission statement was developed and the department's efforts evolved to include civic learning and democratic engagement. Although the iCED now has many programs serving all of its campuses, its flagship program is academic service learning. It is said to be the largest of any community college in the US with 300 faculty, 1000 course sections, and 8000 students involved in course-related service each year (Miami Date College).

The Alliance for Service-Learning in Education Reform (ASLER) (1993) states that:

service learning is a method by which young people learn and develop through active participation in thoughtfully-organized service experiences... that meet actual community needs, that are coordinated in collaboration with the school and community, that are integrated into each young person's academic curriculum, that provide structured time for young people to think, talk, and write about what they did and said during the service project, that provide young people with opportunities to use newly acquired academic skills and knowledge in real life, situations in their own communities, that enhance what is taught in the school by extending student learning beyond the classroom, and that help to foster the development of a sense of caring for others. (p.2)

The Kentucky Learn and Service Project planning model includes preparation, meaningful service, structured reflection, and recognition/celebration. The National Association of Secondary School Principals, Department of Student Activities, and Quest International Foundation advocate a four-step model: preparation, action, reflection, and demonstration. Indiana University-Purdue University Indianapolis developed a model, Comprehensive Action Plan for Service Learning (CAPSL) that identifies four constituencies on which a program for service learning needs to focus its principle activities: institution, faculty, students, and community. Delve, Mintz, and Stewart (1990) provide an example of a student development model that identifies the following five phases of involvement in service learning: exploration (naïve excitement), clarification (values clarification), realization (insight into the meaning of service), activation (participation and advocacy), and internalization (the service experience influences career and life choices).

### **Evolving Models and Strategies**

According to Burns (1998), the four components common to the models presented here are a solid foundation to plan and execute instructional service learning activities or projects through: preparation, action, reflection, and demonstration/recognition. These are the four components used in our initial integration of diversity and service learning although they are identified as those used in K-12 education. In the *preparation* phase, needs of the community are assessed, a viable need and learner outcomes are identified, the core content (knowledge and skills) of the adopted curriculum (school, agency, program) to be learned through the service learning unit are identified, interested community leaders and organizations to become involved are identified, orientation and professional development activities with community leaders and organizations about service learning and the instructional strategies to be implemented, assessed, and evaluated are conducted, the instructional unit or project is planned, the roles and responsibilities of the school (students, teachers) community leaders and organizations, and other involved human services, agencies, program directors and resources are identified, and students are oriented and prepared for assuming their role(s), understanding the learning outcomes, and demonstrating the expected social behaviors (p. 40).

Burns (1998) continues to describe the *action* phase where you would facilitate development of the knowledge and skills needed by students to initiate and complete the academic community learning project. You would also facilitate student planning, research, problem solving, and evaluation relative to the identified community need. Another part of the *action* phase would involve implementation of the academic community learning activity or strategy, continuously assessing and involving students in assessing achievement and progress, as well as correcting and adjusting activities and strategies (p. 40).

In the *reflection* phase, Burns (1998) states that this involves requiring students to engage in continuous reflection processes during the planning and implementation phases through writing, speaking, and demonstration activities. During this phase, you would facilitate continuous student investigation and research, engage students in assessment and evaluation of the project or unit, connect and link activities so students have the opportunity to understand the meaning and impact of their efforts, and facilitate the reflection, assessment, and evaluation by community leaders and organizations (p. 40).

Finally, in the *demonstration/recognition* phase, Burns (1998) states that students are involved in reporting to peers, faculty, and/or community members. Students are engaged in tasks such as writing for publications (newspapers, magazines, and newsletters), videotaping or live television programs, producing an audiotape or radio program, creating Internet information, or publishing a brochure or book. In this phase you would recognize students, teachers, and community members for learning/achievement and accepting social responsibility. Examples of how stakeholders would be recognized include complimentary oral and written communications, awarding T-shirts with the community need identified, organizing a project that includes a trip, lapel pins, awarding certificates of appreciation, and other types of rewards appropriate to the stakeholders involved (p. 41).

The following list, prepared by the National Youth Leadership Council (Cairns & Kielsmeier, 1991), is exemplary of the types of projects carried out by many college and secondary students in the early 90s: bicycle shop, Big Buddies, blood drive, board membership, building projects, clothes collection, community education classes, community history, cooking meals, crisis center, day care, emergency services, environmental research, environmental cleanup, fund-raising for charities, gardens, helping the homebound, home chores, hot lines, Meals on Wheels, overseas volunteers, paint-a-thons, peer helpers and tutors, performing arts, planting trees, public awareness, public media, reading for the blind, recreation programs, recycling, research, special equipment, Special Olympics, tax preparation, tutoring, victim aid, visiting institutionalized people, visual art, voter education, youth agencies, youth leadership, and youth sports. Most, if not all of these strategies, are still being used today.

In an 11-week political science class called "Public Policy: the Homeless," at the University of San Francisco, students spend a minimum of four hours a week working in specialized areas. Several, for example, help homeless people fill out the numberless forms required to apply for relocation to apartments or better shelter facilities a complicated process that not only aids the clients but introduces students to the Byzantine workings of bureaucracy.

One project at Miami-Dade Community College's Medical Center Campus involves a partnership with a financially strapped YMCA. Nursing students are involved with the Y's daycare program; dental hygiene students develop and introduce programs to teach sound dental habits to children at the Y; and psychology students work with youngsters exhibiting behavioral problems. A pre-law student pores through court documents to develop a legal history of the homeless, determining when and why they were first identified as a specific class and how that affects their treatment in court proceedings today. Others work with city officials in developing a simplified, coordinated system to enable the homeless to get health care, food stamps and welfare payments without having to apply to four or five different agencies. Through street research, another studies the impact of crack cocaine addiction on homelessness.

### **Background of Our Journey**

In 1999, a colleague and I received an institutional grant to support activities necessary to redesign at least one of our courses to include what was then referred to as Academic Community Learning (ACL). The proposal stipulated that we would each redesign a core professional course to include academic community learning. The first course chosen for redesign was a diversity course, a core professional course in our department. This course was selected because its emphasis on

diversity, economically and culturally diverse learners, and educational and societal responsibilities seemed well suited to inclusion as an ACL component. As a core professional course, it was, and still is, a required course for teacher education students and all students in our program. It was first offered in the summer of 1999 and has been offered each spring and summer since. The next sections of this paper summarize activities involved in developing, implementing and assessing the course. Where appropriate, a brief discussion of changes made over time is also provided.

### **Rationale, Purpose, and Objectives**

To encourage and promote excellence in scholarship is one of seven goal statements identified by the department in which we work. Of the seven objectives identified to aid in achieving this goal, one specifically addresses a commitment to service learning as pedagogy; stating ‘to establish academic community learning activities in appropriate departmental courses.’ Similarly, one of the department’s core principles is to provide opportunities for collaborative ventures of outreach, service, and academic community learning and expand the possibilities for improving education and lifelong learning. Partnerships with people, schools, community organizations, clinics, agencies, businesses and governments at state, national, and international levels are integral to our research, teaching, and service.

### **Redesign of a Professional Core Course**

The framework for student academic community learning (ACL) experiences in this course is similar to that adopted by many institutions on a national level: *preparation, action, reflection, demonstration, and recognition*. The first step was to attend workshops designed by leaders of the College of Education’s ACL Initiative. As a side note, ACL is now referred to as service learning and the institution now has a full-service Office of Service Learning. Two additional professional development workshops were attended where the framework for incorporating ACL experiences into our courses, in consideration of each phase, was emphasized in each workshop and subsequent professional development activities.

After materials provided at the workshop were reviewed thoroughly, an extensive review of literature pertinent to ACL was conducted, information related to diversity and service learning was noted, and service learning models identified were studied. Information taken from the workshops and discerned during the review of literature was used to aid in development of the course. Materials designed or redesigned included (a) a reference list of ACL web-based and printed materials, (b) a syllabus including the COE definition of ACL and a description of ACL as a “serve and learn” experience, (c) a PowerPoint presentation for use in introducing the ACL framework for the course (preparation, action, reflection, demonstration, and recognition), (d) a schedule of weekly activities, (e) a weekly agenda, (f) a weekly feedback form, (g) four rubrics (critique, report, presentation, and portfolio), (h) a format for student ACL proposals, (i) a critique format, (j) an activity record format, (k) a reflective journal format, (l) a course packet that included literature about service learning, (m) a Student Information Form (SIF), and (n) a Consent from Participants in Class Projects form. When completed, these materials were uploaded to the existing course web site to facilitate teaching and student access.

### **Students Plan Service Learning Experience**

Students planned and executed a paired-group academic community learning (ACL) experience that took place within a school, agency, or program where the focus was on an issue of relevance to diversity in education and work (e.g., individuals with disabilities, disadvantaged students, multicultural and diversity issues, youth at risk and senior centers). The ACL experiences, now referred to as service learning, took place for a semester through on-site visits and participation, while maintaining reflective notes. Outlines of planned ACL experiences and the eventual proposals were approved by the instructors. Unlike today, our initial journey into academic community learning (service learning) required students to locate and receive approval to participate and provide service to an organization in their communities. Answering the 10 questions presented in the following list proved helpful to students as they developed proposals and plans for their ACL experiences. These questions were reviewed in class using a PowerPoint presentation and question/answer session.

1. Will the experience meet all of the criteria identified in the definition of ACL adopted by the College of Education?
2. Will the experience be distinctively different from “community service” as defined here: “Community service is generally a service function performed by individuals for the benefit of others, for an organization, and/or for a community? Individuals and/or organizations usually commit their time and energy to a worthy cause without engaging in a structured learning process” (Burns, 1998).
3. Will you be able to establish a clear purpose and goals for this experience?
4. Will you be able to spend enough time involved in this experience to lead to learning in academic and affective areas (Shumer, 1997)?
5. Will this experience be conducive to you engaging in reflective activities that require you to process your service experiences and connect them with the learning goals of the course (Shumer, 1997)?
6. Will this experience allow you to demonstrate that the level of responsibility and the importance of the tasks performed influence the quality of learning and the ability to apply the knowledge in current and future settings?
7. Will this experience be of value to the people you will serve or the organization you will assist?
8. Will this experience provide you with an opportunity to be responsible for things that have real consequences?
9. Will your ACL site be willing to communicate with your instructor to ensure that adequate learning takes place?
10. Will your site be willing to work with your instructor to identify the kind of learning expected, and to help ensure that the quality of your learning is explicit and understood by all parties involved?

The students, 31 in 1999, completed their proposals and after some discussion with contact persons at the sites they had selected and revision, their proposals were approved. This first effort to integrate diversity with service learning was successful, but not without some difficulties and unexpected situations that had to be addressed. For example, one student provided service to a community church and while there became involved in developing a church directory; his area of study and expertise was desktop publishing and design. The directory was not finished when the semester ended due to church members not showing up for photos when scheduled. However, the “happy ending” was that the student wanted to finish it and did, even after the semester ended.

A written record of all activities undertaken in redesign of the diversity course to include an ACL component, including a personal portfolio detailing the activities undertaken and materials developed or redesigned, was maintained. The portfolio included copies of all materials identified under the section “Redesign of a Professional Course.” Other materials included in the portfolio were copies of ACL certificates, literature on designing rubrics, feedback forms from students regarding the required ACL experience with a summary, a student mailing list, student completed information forms, a table listing ACL sites and contact persons, service learning definitions, resources obtained from the ACL Professional Development Workshops, copies of literature reviewed in preparation for redesign of the course, signed consent forms, copies of cover letters and certificates sent to ACL site contacts, class photographs, diskettes (back then we weren’t using USB drives) with all materials designed or redesigned, and copies of web site materials. My colleague and I developed a proposal to present at a national convention. The proposal, “Integrating Academic Community Learning in Education for the Workforce,” was accepted and the paper was presented in fall, 1999. Much of what was learned about providing an academic community learning experience through diversity instruction has been presented at state and regional conferences thereafter. The remaining sections of this paper focus on the most recent teaching of the diversity course; fast forward to 2015.

### **Continuation of Our 15+ Year Journey**

Over the years, some changes have been made in the diversity course that was initially redesigned to include academic community learning, now referred to as service learning. Now, in preparation for the first course session, an enrollment roster was obtained and the following was sent to each student registered for the course (a) copies of the reading materials for the first class session, (b) an agenda, and (c) a cover letter welcoming each student to the course and providing an initial description and expectations for the service learning component. Total enrollment in the class was 22, mostly non-traditional students who also worked full-time. Students were subjected to four assessments (a) service learning to include participation in a “serve and learn” experience with a written report of the experience, (b) oral presentation about the experience, (c) critique of literature relevant to the service learning experience site, and (d) development of a portfolio that emphasized teaching about diversity and service learning. However, the service learning experience served as the primary assessment.

Back in 1999, due to the size of the initial class (1999,  $n = 31$ ), students were encouraged to work in “paired-groups” and were allowed to select the sites for their service learning experiences. Although service learning sites are now available as a result of developing relationships over the last 15+ years, students are still allowed to suggest a site for approval. They are also still allowed to work in paired-groups of two, depending on the rationale they present in their proposals and the results of communication with the site contact person. The continuation of these strategies, site selection and paired service, is due to the success of these experiences students have had over the years. Actually, based upon examination of the students’ reflection notes, those who have worked in pairs and who have been able to select a site have been more successful and much more engaged. However, students are not allowed to begin their service learning experiences until we have approved their proposals.

For this most recent teaching of the diversity class ( $n = 22$ ), approved service learning proposals resulted in six paired groups and 10 students who served and learned independently. The service learning sites included a domestic violence center, two homeless shelters, a hospitality house for women, a community job training program, a church with a community outreach program, DFCS/TANF, a community women’s centers, a local Y.E.S. program, a local program that works with individuals with disabilities, a regional evening school for non-English speaking citizens, a respite care center, the Salvation Army, a family connections center for the homeless, a local help center, a JTPA training center, and a New Connections to Work center.

Students were required to maintain activity records and reflective journals that they later included in their portfolio along with their service learning experience reports and critiques of relevant literature. Students informally shared their critiques, made a formal oral presentation of their service learning experience, and gave weekly briefings about the materials they were including in their portfolios. Students were given a “Consent from Participants in Class Projects” form designed to seek permission for the instructors to use materials they developed and/or to report findings from their experience. This form was also required for IRB approval. Twenty-one of the 22 students signed this form.

The service learning sites previously mentioned were contacted at least once a week to receive reports of the students’ involvement at the site. A service learning experience certificate, signed by the instructor, the department head, and the service learning site contact person was prepared for each student. The service learning site contact persons were invited to attend the last class session to hear the students’ ACL experience oral presentations. Also, on the last night of class, the students were presented with their signed service learning certificates and five service learning site contact persons attended the class on that night. Similar certificates were sent to the site contact persons by mail.

### **Summary of Outcomes**

Based on our examination of students’ reflective journals and portfolios, these graduate students experienced an improvement in their ability to recognize and solve problems. They also were

able to expand their professional networks. Some reported moving from a position of awareness to one of acceptance of diversity. Of interest is that many reported seeing value in all forms of diversity, not simply the diversity they experienced at their assigned or selected service learning organization site. These graduate students also reported an increased understanding of diverse cultures, a major focus in the course, and attributed it to the hands-on service learning experience. Almost 100% (86.4%) of the students encouraged us to continue to provide service learning as an opportunity through our classes. Outcomes such as these were reported each year the course was taught, support our continuation of the project in our courses and, for us, confirmed one way to move beyond basic classroom instruction when teaching graduate students about diversity. Outcomes also suggested that organizations are receptive to service learning and prompted us to make note of those organizations and agencies that were supportive of service learning, thus building a data base of “friendly” contacts.

### **Recommendations**

Based upon our experiences, we believe the following statements deserve consideration by university faculty who plan to begin their own journey to integrate service learning with a professional core course. If your institution has a service learning office, your first step would be to contact that office for advice and support. It is likely that with such a large infusion of service learning on university campuses today, much of what you will need to know to begin is available through that office. However, for faculty at institutions where there is no official office of service learning, and there are still some, begin by examining best practice programs and courses at other institutions. Examine the literature, including the positive and negative reports about service learning, to determine where successes and failures can be found; try to avoid the failures. Once you have done an exhaustive review of the literature and examined best practice programs and courses, determine how you characterize the service learning experience, making sure that you include the basic elements of service learning. At this point, you should be ready to ask yourself these questions about the service learning you are considering:

1. Will what I have in mind provide students with an opportunity for active participation in an extended, thoughtfully organized learning experience that meets actual community and student needs?

This question suggests a need to answer key questions by adoption of a service learning framework or model for the course. For example, will the instructor provide and select a student’s service learning site or will selection of a service learning site be a student choice or responsibility? The answer to this question would be particularly important for faculty working with non-traditional students because traditional placement strategies may not be feasible. However, adoption of a framework should be a joint effort between the instructor and the students if possible. This question also suggests need for a formal service learning proposal developed by students, refined, and then approved by the instructor of the course. A format for such a proposal should be provided and should include examples of what the instructor considers to be “extended, thoughtfully organized, as well as what meets actual community and student needs.” Examples of sites that meet the instructor’s specifications should also be provided. This formal proposal, when approved by the instructor, would include a contract signed by the student and the service learning site contact.

2. What will be the conditions for collaboration among student, school, and community? This question suggests need for a professionally developed brochure that introduces service learning to the community and anticipates answers to questions posed by potential site contacts. It also suggests need for a formal contract, with its initial framework, developed by the instructor, and that students can use to secure cooperation of a service learning site. The contract should include information to students and potential service learning sites about “human subjects” issues, long and short-term service and academic goals, and a section to specify expectations of each party involved in the contract (e.g., student, instructor, service learning site). Instructors should maintain periodic contact with the service learning site throughout the experience.

3. How will I integrate service learning experiences into the student's academic curriculum? This question suggests a need to spend considerable time helping students develop long and short-term service and academic goals. Students should be encouraged to develop these goals jointly with the instructor and the intended service learning site contact person. The intent should be to have these goals become a part of the service learning contract. Joint development of goals may help students clarify the relationship between their service and academic goals—an extremely important consideration. It is also your opportunity to determine if the course you are teaching is appropriate for a service learning approach and to envision what that approach might look like from start to finish.
4. How will I provide structured time for reflection and evaluation? This question should alert you to the time factor; how much time will you have to teach content, how much time will your students have to devote to service learning (especially if they are non-traditional students as our students were), and how much time do you have to manage the effort. The first effort is likely to take more time than you expect. This characteristic also suggests a need to encourage students to keep a record of activities, a reflective journal, and to engage in self-evaluation. Students should be encouraged to share reflections and engage in self-evaluation continually as the course progresses. A website or learning management system is a good place for keeping communication going between you, the students, and the service learning site contact person.
5. How will I enhance what is taught by extending student learning beyond the classroom and into the community. This characteristic suggests a need to provide clear examples of previous service learning experiences through exhibits, guest speakers (former service learning site contacts, faculty who have previously incorporated service learning into their courses or taught a service learning course, students who have developed and implemented a service learning experience), and previous proposals and contracts developed.

### **Summary**

The definitions for service learning differ depending on the goals and objectives of the educational institution providing the service as well as the needs of the local communities. Regardless of the term used, the ultimate goal is to provide opportunities for students to serve and learn. This experience redesigning, implementing, evaluating, and adding a service learning component to an existing course focused on classroom and workplace diversity provided benefits to us as instructors. For example, the relevance of the experience to our students' lives validated our teaching and enhanced learning, the overall experience helped build a classroom "community of learners," and students established relationships with people in the community that continue today. The students, however, also benefitted in that they were given an opportunity to make the curriculum relevant to their lives, clarify their values, develop community and civic responsibility, increase their multicultural awareness, develop critical thinking and problem solving skills, and enhance their social and personal development. Similarly, resulting benefits to the community included meaningful services to local communities, opportunities for community agencies and organizations to participate in student learning, and community awareness of the university's programs and services was built.

Now more than ever before, with limited funds and a continued wave of education reforms, our society is at a crossroad. Educators are not only being held accountable for their work, but also seeking ways to reach both students and the larger community. Although the degree to which service learning can play a role in education and social reform is yet undetermined, based upon our experience implementing service learning described herein, we believe service learning is a viable instructional strategy to move toward achieving diversity education and community engagement goals.

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## **Social-Cognitive Career Model for Social Studies Teacher Candidates' Leadership in Educational Technology**

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### **Abstract**

In today's knowledge society, constant changes and developments in the information and communication technologies has affected all areas as well as educational systems. In order to comply with these changes and developments, teachers need to develop a proficiency in using the technology in a sufficient manner. Although the number of research studies were done on this proficiency of the social studies' teacher candidates is not sufficient, but the results of these studies are quite satisfactory. In the study, it was aimed to contribute to the literature, the attitudes of the social studies' teacher candidates have been studied according to the model of "Social-Cognitive Career Theory" (SCCT); the candidates have also been evaluated in terms of self-sufficiency, interests, intentions, and result expectations—the four important attributes of SCCT. A five-point Likert scale, adapted from a Turkish study by Sahin (2009), used in this research. Among the results, significant relationships were observed between the self-sufficiency, interests, intentions, and result expectations of the social studies' teacher candidates with regard to technology.

**Keywords:** Social studies, Social-cognitive career theory, Education technologies, Technology education

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## Introduction

In the present era, also entitled as the knowledge era, the advances made in the science and technology are related to the education as well as all areas of human life (Akturk et al. 2015). The technological developments related to the education have proved to be efficient in the career development of the individuals (Eryaman, 2007). Hence, “Social-Cognitive Career Theory” (SCCT) has recently become the center of attention for the researchers. According to Lent et al. (1994), who are accepted as the leaders of this subject, the two aspects of SCCT are “competence expectation” and “result expectation.” The competence expectation is associated with the perceptions related with the performances of a person (e.g., “Can I do this?”), whereas the result expectation is associated with the expectations (e.g., “If I do this, what shall I obtain as the result?”) related with the results, which may be obtained at the end of a performed work. These two aspects are quite efficient in determining the performance targets or selections of the individuals (Awofala et al. 2015; Kiray et al. 2015; Lent 2005). Besides, the result expectation levels related with the activities of the individuals are quite efficient in starting and continuing an activity (Bandura 1997).

The social-cognitive concept was developed by Bandura (1997). Hackett and Betz (1981) further examined Bandura’s model and were the first to relate this concept to the career development of the women, focusing on occupational behavior. A relatively new concept known as social-cognitive career theory (SCCT) was developed by Lent et al. (1996), as a derivative of the general social-cognitive concept of Bandura. According to Lent et al. (1996), a scale is developed as to make this concept convenient for these four informative resources in terms of mathematical competence expectation. Ozyürek (2002) implied these findings on high school students and Aybay-Koroğlu (2005) used them on the students of eighth grade and obtained the similar results. The purpose of this study was to determine the usage of the technology by the social studies teacher candidates in the context of SSCT. The attributes of SSCT (Lent et al.1994) used in this research are—self-sufficiency, interests, intentions, and result expectations. The relation between these four attributes is depicted in Figure 1.

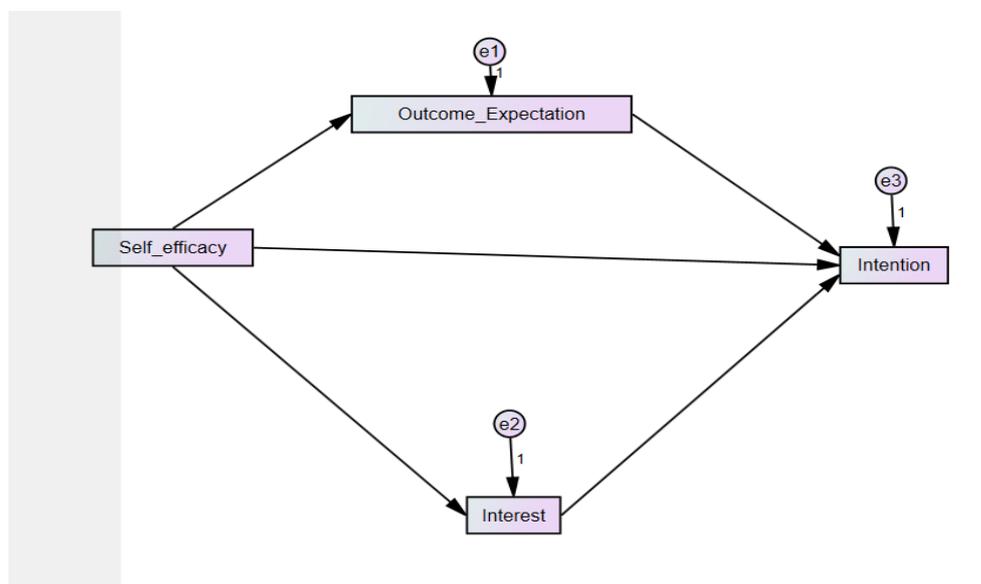


Figure 1. SCCT Choice Goals Model

## Review of the SCCT literature

To select a profession that is a turning point in the life of an individual is one of the most important decisions people make throughout the lifespan. While making these decisions, an individual is, indeed, influenced by many internal and external factors and forms his decision according to the results of various cases. The self-sufficiency of an individual plays a very important role in choosing

his profession. The physiological dimensions of vocational choice have been analyzed by the researchers for many years. Some aspects of the study focus on vocational choice process as an important element, whereas others conceptualize personality dimensions for job satisfaction as significant (Sarı & Sahin 2013). Findings of the similar studies are described in the following paragraph.

The social-cognitive career theory was first applied in the field of engineering. The research studies investigated the continuity of the academic interests in the field of engineering, science, mathematics, and so on (Navarro et al. 2014). Byars et al. (2010) examined the relations between the intentions, academic interests, campus climate perceptions, racial specifications, and social-cognitive values of the students of different races in the field of science and mathematics. However, it has been observed that there is an important relation among the values between the intentions, continuity, interests, and result expectations. A similar study was conducted by Inda et al. (2013) on 579 engineering students, including both males and females. Furthermore, in a study examining the self-sufficiency perceptions, future expectations, interests, purposes, social support, and challenges of the engineering students, it was concluded that the self-sufficiency perceptions of the women are less than the men; however, their interests are much more than those of the men. It was also mentioned that there were no significant differences between their future expectations and purposes. Hui et al. (2013) conducted a research on 122 Asian students pursuing education in America, applying “social-cognitive theory” of Hentand Brown. Environmental supports, self-sufficiencies, purposes and satisfactions, and behavioral acculturation and enculturation were analyzed considering global precautions. However, it was also mentioned that the environmental factors have an indirect effect on both acculturation and enculturation.

In a study conducted on total 257 students, Tokar et al. (2007) mentioned that the two important factors of social-cognitive career theory, self-sufficiency and future expectations, contribute less to learning experiences in experimental approaches, whereas the major three contributors are the personality, gender, and conformity to norms of gender role.

In a study on the welfare level during the education and the business environment after education with a social-cognitive perspective, Shu and Lent (2008) mentioned that the level of welfare and happiness increases when the complete integration of cognitive, behavioral, social, and personality variables is achieved with respect to social-cognitive theory.

Using the social-cognitive career theory framework, developed by Lent et al. (2012), Rogers and Creed (2011) conducted a study on 631 high school students. The students were randomly divided into two groups, namely T1 and T2. A planning was made to the T1 group incorporating SCCT, whereas the other group remained untouched. Students were examined in terms of self-sufficiency, future expectations, given supports, and personality variables. The findings of the study indicated that the students in the T1 group who were served by the support programs and those who had high self-sufficiency gained success in their career.

Lent et al. (2010) performed a study on 116 students of the first two semesters from the engineering department. According to the path analysis results, they have mentioned that there should be a prior condition on the result expectation of the self-sufficiency, purpose, interest, and supports. Besides, they found that there was no significant relation between the challenges, expectations, and self-sufficiency, whereas a bidirectional relation exists between the interest and self-sufficiency.

In a comparative study, Lent et al. (2013) examined a social-cognitive career model designed for estimating the relation between the satisfactions and interests on a sample of 1377 students enrolled in engineering departments of two white and two black universities. They found that the dimension of the relation between the intention and interest is rather high.

Lent et al. (2012) conducted two transverse and longitudinal studies on the Portuguese university students. In the first study, academic self-sufficiencies, environmental supports, purpose,

academic satisfaction, positive contributions, and factors affecting the life were examined in 366 students. In the second study performed on 158 students, the same factors were accepted. In both the studies, academic stress and life satisfaction were the main attributes of academic satisfaction in students.

Scheuermann et al. (2014) made a research using an SCCT model to examine the interest and targets of Afro-American women. The backgrounds of these women are analyzed by using the SCCT framework. The study was conducted on a total of 198 women, and a direct significant relation was found between the professional competence, future expectations, and self-sufficiency. To attain prestige in the future has always been an important focus for Afro-American women. Hence, the self-sufficiency among them is associated with the professional competence in terms of prestige. However, the authors also found that there is a lack of significant relation between the future expectations and self-competence.

Kurtaslan et al. (2012) investigated the attitudes of the music teachers toward the use of educational technology incorporating SCCT as a framework. They determined that the service period, education status, and type of school graduated by the music teachers affect their self-sufficiencies, result expectations, interests, and intentions to use the educational technology.

Isik (2013) conducted a research on 263 university students, via using SCCT as a basis. According to the results, there are negative significant relations in supervision focus and a positive relation between the perceived social support points from a special person, family, and friend and professional result expectations. When the professional result expectation points are examined in terms of social support, the only significant precursor is the family support and it is observed that the supervision focus is the significant precursor of the professional result expectation.

Ozyurek (2010) has mentioned that when the environments convenient to the career are considered, the informative resources have a major role in changing the competence expectation. When it is considered from this cognitive frame, it becomes easier to measure the result expectations of university students related with the profession and to determine the other variables that may be associated with the professional result expectation. However, when the relevant literature in Turkey and other countries is examined, no sufficient studies are obtained in terms of other variables that may be associated with professional result expectations (Ozyurek, 2010).

### ***Aim of the study***

As demonstrated in the studies discussed above, integrating the instructional technology in education, social studies being an important sub-dimension of education, it creates a powerful learning environment in many ways. The aim of this research is to determine self-efficacy, result expectations, interests, and intentions of social studies teacher candidates based on the SCCT concept.

### ***Method***

The study was conducted by using the descriptive scanning technique from quantitative research methods for the research model. Scanning models are research approaches aiming to describe a situation in the past and present. Event, individual, and object are defined in their own conditions (Karasar, 2000).

### ***Participants***

In this study, the participants were fourth-grade teacher candidates studying in Necmettin Erbakan University, Social Studies Teaching in the 2014–2015 spring term. Fourth-grade teacher candidates were chosen since they were closer to graduate and about to being a teacher. The total number of the participants were 160, 55% of which were women and 45% were men.

### ***Instruments***

The instruments of this research are established on the basis of educational technologies, self-sufficiency perceptions, future expectations, intentions, and interests of the social studies teacher candidates. These instruments have been divided into five sub-groups.

#### 1. Technological self-sufficiencies of social sciences teacher candidates

This section focuses on questions that arise while determining the self-sufficiencies of the social sciences teacher candidates toward the use of educational technology. It consists of eight articles, including some questions measuring the self-sufficiency of the social sciences teacher candidates, such as, “*I trust myself for showing the information and skill required for using the education technology in class,*” “*I trust myself for solving the problems of the students related with the education technologies,*” and “*I trust myself that I shall teach a subject by using the appropriate education technologies.*” For determining the self-sufficiencies of social sciences teacher candidates in using the educational technologies, the five-point Likert scale, which is graded from 1 to 5 (1= not trusting, 5= completely trusting), was used. The higher points show that their self-sufficiency belief in using the educational technologies are more positive.

#### 2. The future expectations of social studies teacher candidates

In this section the result expectations are measured, throwing light on the possible result expectations of social sciences teacher candidates for their careers about educational technologies which were used in the class. It consists of eight articles, including questions that measure the result expectations of social sciences teacher candidates, such as “*I have more satisfaction in my profession by using the education technology in my profession.*” “*I can make my courses more efficient by using education technology in my profession.*” and “*I am seen in higher position in my profession by using education technology in my profession.*” The five-point Likert scale was used. The higher points show that their result expectations in using the educational technologies are more positive.

#### 3. The interests of social studies teacher candidates

In this section, the interest level of the social sciences teacher candidates for educational technologies was measured. It consists of six articles, including questions, such as “*How much interest do you have for participating to social study group for education technology; for reading a book or article related with education technology.*” The five-point Likert scale, which is graded from 1 to 5 (1 = not interested, 5 = interested), is used. The higher points show that the interest for using the educational technologies is more positive.

#### 4. The intentions of social studies teacher candidates

In this section, the intentions of social sciences teacher candidates for developing themselves in educational technologies were measured. It consists of four articles. There are questions such as “*I plan to increase my knowledge and skills in education technologies.*” “*I plan to develop the class activities and projects including education technologies.*” and “*I plan to participate to the courses which are organized for education technologies.*” The five-point Likert scale, which is graded from 1 to 5 (1 = not sharing, 5 = completely sharing), is used. The higher points show that their intentions in using the education technologies are more positive.

#### 5. The demographical specifications of social studies teacher candidates

In this section, only the gender specifications of the participants were measured.

### Data collection tools

A five-point Likert scale consisting of 27 articles, modified by Sahin (2008), was used as a data collection tool within this study. The scale is formed of four sub-dimensions: first sub-dimension was adapted by Sahin (2008) from a Turkish study “Self-sufficiency Scale of Education Technology” (Wang et al. 2004 ); second sub-dimension was adapted from the previous studies by Perkmen et al. (2006), where SCCT was used for measuring the results expected by the elementary school teachers using the educational technologies in their future classes (Sahin 2008); third and fourth sub-dimensions were also adapted by Sahin (2008) from the Turkish studies.

### Analysis of the data

In this study, a factor analysis is carried out for each part of the scale variables. The factor load for each article of the questionnaire is over 0.66. The factor analyses show not only the factor loads of the scales but also the reliability results of the attributes (intentions, interests, self-sufficiency, and result expectations) (see Appendix A for the results of factor analyses and reliability tests). In addition, the results of Kaiser–Meyer–Olkin (KMO) and Bartlett's tests show that the scale has a good fit. According to the results of the study, the reliability coefficient of *Cronbach Alpha* was found to be 0.904. According to Buyukozturk (2002), the coefficients ranged between 0.80 and 1.00, showing the excellent harmony of the articles. In addition, the structural equation model was used for explaining the complex relation between the variables.

The harmony index values which we presented much are— $\chi^2/df$ , CFI, RMSEA, GFI, AGFI, NFI, NNFI, and SRMR indexes (Celik, Sahin, & Aydin, 2014; Karademir, 2013; Karademir & Erten, 2013). Chi-square is evaluated as the rate between chi-square and the freedom degree. It is expected that this rate should be maximum (<3) for a good harmony, whereas for an acceptable harmony, it should be <5 (Marsh and However 1988). However, the chi-square value can easily be affected from the sample number, and other goodness-for-fit values are also obtained.

*Goodness-for-fit index (GFI)*: It is developed for evaluation of the harmony as independent from the sample width. Their values range between 0 and 1. As much as the value is closer to 1, it is much convenient (Eroğlu 2003).

*Corrected goodness-for-fit Index (AGFI)*: AGFI is the GFI value which is corrected by considering the sample width. It ranges between 0 and 1. As much as AGFI values are closer to 1, naturally it is much convenient (Tabachnick and Fidel 2001).

*Comparative fit index (CFI)*: The comparative fit index compare the covariance matrix which is produced by a structural equation model suggested with the covariance matrix produced by the latent variables and it gives a value between 0 and 1. The closeness of the value to 1 shows its conformity. The 0.90 value is considered as the most convenient value (Eroğlu 2003; Akman et al. 2015).

*Square root of the average of estimation error squares (RMSEA)*: In contrast to GIF and AGFI, the RMSEA values are expected to be close to 0. The values  $\leq 0.05$  are accepted as the convenient values (Karademir 2013; Akman and Güven 2015).

The fit index values are found by calculating the structural equation path analysis, in accordance with the obtained data. The data were classified by SPSS (Statistical Package for Social Sciences) 13.0 program and were solved with AMOS (Analyses of Moment Structures) 5 software.

### Findings

As illustrated in Table 1, the significant correlation relation level among SCCT variables is between 0.242 and 0.532. For example, the social studies teacher candidates are more interested in using these technologies. In addition, it has been observed that the future expectations related with the

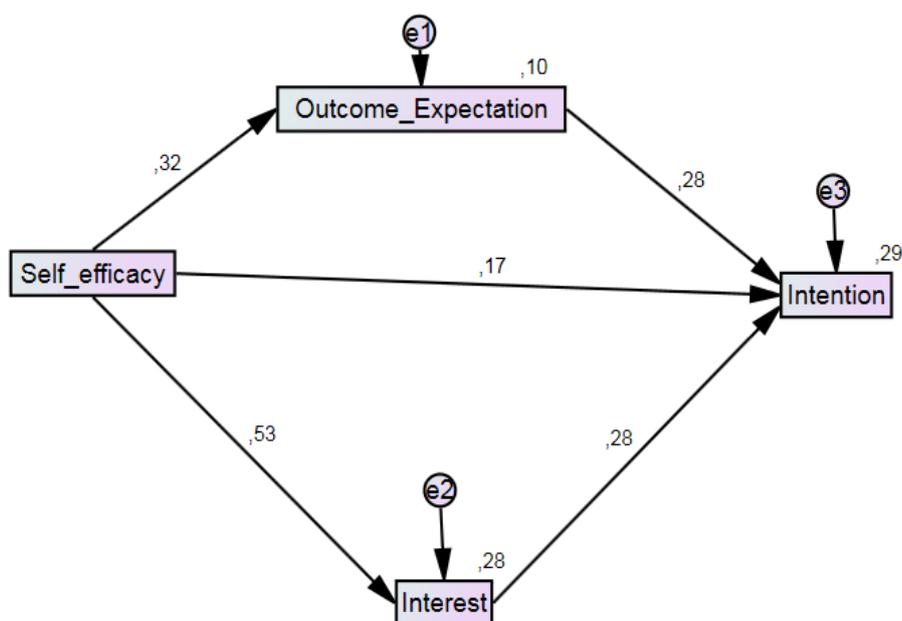
usage of the technology (M= 3.99) and their intention of technology integration in education is in high level (M =4.36).

**Table1.** Correlations between Variables used in the study

Variables	1	2	3	4
Outcome Expectations	–			
Self-efficacy	0.318**	–		
Interests	0.242**	0.532**	–	
Intentions	0.396**	0.408**	0.435**	–
Mean	3.99	3.61	3.64	4.36
Std. Dev.	0.78	0.92	0.84	0.69

\*\*: $p < 0.01$

In this study, to simplify the complex relation between the technological self-sufficiency, result expectations, interests, and intentions of the social studies teacher candidates, a structural equation model was used. According to the results of path analysis (Figure 2), the fit index values of the mentioned model were found as  $\chi^2 / df$ : 1.161, **RMR**: 0.925, **GFI**: 0.996, **CFI**: 0.999, **RMSEA**: 0.034.



**Figure 2.** COE Faculty Model for Leadership in Educational Technology

In this model, there is a direct relation between the technological self-sufficiency and result expectations of the social studies teacher candidates. Also, there is a direct relation between the technological self-sufficiency and interest. However, there are both direct and indirect relations between self-sufficiency and intention. Result expectations and interests are the two factors responsible for the direct relation between technological self-sufficiency and intentions of the social studies teacher candidates. It has also been observed that there is a direct relation between the interests and intentions and a direct relation between result expectations and interests. The explanation percentage of the result expectation, interest, and self-sufficiency is approximately %29. Likewise, the explanation of the interest by self-sufficiency has been found to be approximately 28% ( $R^2=0.29$ ,  $p < 0.01$ ).

## Discussion

The results of these studies reveal that in the technology education of social studies teacher candidates, there are both direct and indirect effects on the relation between the self-sufficiency and intentions. In the study conducted by Sahin (2009), there is an indirect relation between the self-sufficiency and intentions and result expectations and interests. In the study performed by Inda et al. (2013), it is determined that the relation between self-sufficiency and intention is direct and is parallel with our study. A study by Lent (2009) suggests that there is a mutual relation between self-sufficiency and intentions. Lent et al. (2010) presented that there is a direct relation between self-sufficiency and intentions. The results of the study of Scheuermann et al. (2014) demonstrate the same findings.

In this study, a direct relation has been found between the self-sufficiency and result expectations and interests of the social studies teacher candidates for the technology education. In other words, the technological knowledge of social studies teacher candidates directly affects the interests and future expectations. The results of some of other studies also support these findings (Inda et al. 2013; Lent et al. 2010; Sahin 2009; Lent 2009).

The most remarkable element in the findings of this research is the highest relation seen between the self-sufficiency and interests. The lowest relation level is between the self-sufficiency and intentions. This means that there is a high relation between the interests and self-sufficiencies of social sciences teacher candidates, whereas the relation level between the result expectations and intentions is low. Similar results are seen in a study by Sahin (2009). However, the research conducted by Scheuermann et al. (2014) presents a high relation between the result expectations and intentions, but no relation is found between the self-sufficiency and intentions. The study by Lent et al. (2010) reports that the relation between self-sufficiency and intentions is very low, but there is a medium relation between self-sufficiency and interests.

The research indicates a need for the social support programs for the high relation level between the self-sufficiency, interests, intentions, and result expectations, which are the instruments of SSCT (Lent et al. 1994; Wang et al. 2004; Scheuermann et al. 2014; Lent et al. 2010). These findings show a parallelism between the studies of Sahin (2008) and Smith (2002). However, it is considered that the weaknesses in the relation levels in this study shall change in positive direction.

## Conclusions

The university years known as a determinant stage for vocational choice process can be stressful and compeller for the social studies teacher candidates, negatively affecting their health and psychological formations in current and future years. Therefore, the career-oriented programs, especially for the university students, are always framed considering the effects of the psychosocial factors on psychological well-being of students. In Turkey, career consultancy is especially offered to students in career development/planning, implementation, research centers in the universities to ease the stress of vocational choice, and the primary objective of research and the interventions developed by the professionals working in these centers is to create more efficient and qualified candidates.

In comparison to other studies, within different points mentioned in this study focus on to handle the relations between SCCT as comprehensive and specific. Other studies mainly investigated the field of engineering, psychological consultancy and guidance, mathematical, music, and computer technology. However, this study is considered important as it opens a path to the future research opportunities for determining the result expectations and purpose of the technology, the point of view for technology, self-sufficiency of technology, and technology interests of the social studies teacher candidates in the knowledge era.

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**Appendix A:** Results of factor analyses and reliability tests

Variables	Items		Mean	Factor Loadings	KMO and Bartlett test	Std. item alpha
Self-Efficacy in Educational Technology	I feel confident that I can ...	...demonstrate necessary skills to use educational technology in the classroom	3.68	,804	0,900***	0,929
		...help students when they have difficulty with educational technology	3.53	,805		
		...evaluate software for teaching and learning	3.47	,777		
		...successfully teach relevant subject content using appropriate educational technology	3.59	,891		
		...consistently use educational technology in an effective way	3.87	,835		
		...mentor students in using educational technology appropriately	3.90	,869		
		...use educational technology that will aid in meeting curriculum standards	3.39	,721		
		...create a lesson plan that contains student activities requiring educational technology	3.45	,798		
Outcome Expectation from Educational Technology	Using educational technology in my career will likely	...do work that I would find satisfying	4.57	,734		
		...teach effectively	4.68	,745		
		...gain more respect of my colleagues	3.32	,645		

	allow me to...	...increase my sense of accomplishment	3.34	,699	0,921***	0,941
		...increase my teaching productivity	4.47	,721		
		...take more pleasure in my profession	4.21	,764		
		...to be regarded competent teacher by my colleagues	3.61	,720		
		...increase the quality of my work	3.78	,652		
Interest in Educational Technology	How much interest do you have in...	...reading books or articles about educational technology?	3.67	,584	0,886***	0,902
		...learning about new educational software?	3.49	,663		
		...participating in an educational technology conference?	3.66	,738		
		...working on a project involving educational technology concepts?	3.61	,578		
		...getting benefit from a computer lab?	3.72	,729		
		...attending to an educational technology seminar or workshop?	3.69	,737		
Intention to Learn and Use Educational Technology	I intend to...	...gain more skills on educational technology	4.49	,849	0,791***	0,845
		...prepare classroom activities and student projects involving educational technology	4.61	,900		
		...use educational technology more in my teaching	4.71	,893		
		...attend to training programs on educational technology	3.64	,680		

## Seventh Grade Students' Conceptual Understanding about Citizenship: Does a Constructivist Social Studies Program Make a Difference? <sup>i ii</sup>

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### Abstract

Many studies have shown that students at different age levels come into classrooms with a variety of alternative conceptions. Commonly held alternative conceptions are the main source of the difficulties that students and teachers face in learning and teaching. The aim of this study was to compare the conceptual understanding of students who were exposed to previous traditional/behaviorist and the current constructivist social studies programs. Descriptive and quasi-experimental research designs were used together in this study. The participants of this study consisted of 606 seventh-grade students in 15 middle schools located in 5 different districts in Ankara. Data collected through administering a three-tier multiple choice concept test as a post and pre-test was analyzed by using different statistical techniques, such as percentage-frequency tables, independent samples t-test, and chi-square. There was a significant difference between the conceptual understanding of students who were exposed to the previous and the current program after they were taught about the common human rights, democracy and citizenship concepts. This difference was in favor of the current program.

**Key words:** Conceptual understanding, alternative conceptions, social studies, program.

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<sup>i</sup> An earlier version of this paper was presented at The Sixteenth International Conference on Learning University of Barcelona, Spain (1-4 July 2009).

<sup>ii</sup> This study was derived from the master thesis titled "Elementary school 7th grade students' conceptual understandings related to the citizenship subjects taking place in social studies course" conducted by the first author.

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## Introduction

Concepts are words that include categories enabling us to classify objects and ideas (Ülgen, 2004; Senemoğlu, 2011). Categories represent mental structures (Bruning, Schraw & Norby, 2011). Therefore, concepts can be considered as the categories into which we group those entities, events and concepts that are part of social studies using our experiences. “Conceptual development is a lifelong developmental process and conceptual understanding requires a higher-level, integrative thinking ability that needs to be taught systematically through all levels of education” (Erickson, 2002, p. 8). Concepts help with the formation of basic cognitive structures in primary school pupils’ minds and with the meaningful building of new information on this foundation (Yazıcı & Samancı, 2003).

Defining any concept include: “definition, examples, attributes and nonexamples” (Stern, 2010, p. 51). As concepts are the building blocks of knowledge they play a major role in both internalizing the knowledge, skills and values expected by the students and in converting them into behavioral action. Teaching concepts to students is important in learning reasoning skills and basic scientific principles (Yazıcı & Koca, 2014) because learning a concept is the means by which the student gains a new perspective that helps understanding new ideas and forming real-world relationships. For example, understanding abstract concepts such as democracy paves the way for the student to interpret many better historical and cultural events (Gabler, Schroeder & Curtis, 2003). It should not be forgotten that learning democracy concept will become significant “when a political sphere in which the state protects the rights of its citizens with its unique power” (Touraine, 2002, p. 45).

Strongly held alternative conceptions are the main sources of the difficulties that students and teachers faced in the process of concept learning. The term alternative conception is well defined in the area of science education. Alternative conceptions, which the pupils have acquired as a result of their own experiences before being taught scientific concepts, are the ideas that are different from those accepted as correct by the scientific community (Smith, diSessa & Roschelle, 1993; Tekkaya, Çapa & Yılmaz, 2000; Yakışan, Selvi & Yürük, 2007). According to Güneş (2006), alternative conceptions arise as preconceptions based on superficial information that the individual has acquired largely from non-scientific sources combined with the information derived from the individual's past experiences.

When pupils start school they draw on various experiences of their lives, their families, events that go around them, their friends and media devices in identifying the world they live in (Sewell, 2002). This situation verifies the notion that students do not come to class as blank slate. On the contrary, they come to classroom with a combination of preconceptions based on superficial information acquired from mostly unscientific resources and also scientific information. Although students listen to the same lecture from their teachers, they interpret and make sense of the information presented to them and develop their own perspective due to the differences in their existing thoughts and value judgements (Kabapınar, 2007). It is also seen in other studies that, many students remember the alternative conceptions expressed by peers rather than the target conceptions that the teacher was attempting to develop (Brophy & Alleman, 2008, p. 41). At this point prior-knowledge of the students is of great importance just because the more incorrect, incomplete or incompatible prior-knowledge is, the more difficult is to perceive and make sense of the incoming information (Alkış, 2012).

Unlike science education, the introduction of alternative conceptions in the area of social studies education is less sufficient. When we search the literature for alternative conceptions qualitatively and quantitatively, we found out that these studies were limited to contents related with Science and Technology (Yürük, 2005; Subaşı & Geban, 2009; Okoye, 2015) Mathematics (Türkdoğan, Güler, Bülbül & Danişman, 2015) and Geography (Öztürk & Alkış, 2010; Pınar & Akdağ, 2012; Akbaş, 2013) courses. According to Driscoll (2005) “most constructivist instruction aims to debunk students’ naive conceptions or alternative conceptions particularly in the areas of

science and mathematics” (p. 395). Bal (2011, p. 283) states that alternative conception is also one of the main problems encountered during concept teaching which plays a big role in the achievement of historical thinking capabilities. In other words, students who can not learn the concepts have difficulty in understanding the subjects, too (Bal & Gök, 2011). One of the chief obstacles to improving social studies instruction is teachers’ disparaging view of students’ knowledge and understanding. In the early elementary grades, teachers often believe that students are incapable of understanding topics such as history, geography, citizenship, or economics (Barton, 2010, p. 312).

The importance of concepts in the area of Social Studies, must not be overlooked in the process of learning. Social Studies course is not a lesson to be learnt by heart, but as a lesson in exercising the mind so as to identify today's societal problems and find solutions to them by drawing lessons from the past (Binbaşıoğlu, 1991). Moreover, social studies program help students to give meaning to the society and the world they live in (Tokcan, 2015). One of the basic aims of social studies includes raising democratic citizens. Education in this context is a process which plays a key role in actualizing the acquisitions related with democracy concept in social studies (Yanpar Yelken, 2011). According to Dönmez (2003, p. 33) social studies, covers basic and common elements that are necessary for people living in a society and the findings of social science research.

It is believed that teaching-learning activities that occur at the conceptual level contribute to the creation of the targeted human profile. Here comes the important role of the concepts in internalizing and adopting the building stones of information in the area of social studies, specifically citizenship. However, the importance of alternative conceptions in learning social studies concepts was overlooked in the literature. There is a limited number of studies regarding students’ alternative conceptions in the area of geography. Therefore there is a need for conducting studies that examine students’ alternative conceptions in the field of social studies or that compare the effect of different teaching programs on students’ conceptual understanding in the same field. In addition, these concepts are made up of verbal arguments requiring high-level mental abstracts (Ministry of National Education, 2005). Akbaş (2013) in his research conducted with geography and social studies teachers stated that the possible reasons for the alternative conceptions of the students are; lack of knowledge and mastery learning as well as permanent learning in previous educational levels or the misconceptions of the concepts during the lesson. The other reasons are indicated as students’ lack of interest in the lesson, the incorrect information acquired from their environment, the structure of the concept and the daily usage.

In Turkey the fundamental and important information with regard to citizenship topics is largely provided as part of the Social Studies program. The existing alternative conceptions regarding the citizenship may not only prevent students to construct an acceptable conceptual understanding of citizenship concepts, but also make it harder for citizenship rights and freedoms to be used within the framework of human rights and democracy. Kepenekci (2014) pointed out that before making further discussions on the human rights and citizenship course, it would be rather useful to define the concepts to be used in the discussions.

### **Purpose of the Study**

The primary education Social Studies course program in Turkey underwent a reform in 2004 taking into account the criteria of the modern education approach necessitated by this century. This change came out towards the beginning of the 21<sup>st</sup> century when it was understood that knowledge was not simply transmitted to students passively and that approaches to education involving the continual conditioning of the student with the emphasis on behavioral rather than mental functions would be unable to raise future generations of the desired quality (Güneş, 2007). According to this view learning is no more a process which includes the exact transition of the information from the resource to the learner foreseen by the traditional understanding. Instead it is a process in which the learner makes sense and constructs the new information regarding the current information (Eryaman, 2006; Kabapınar, 2014). Due to the deficiencies observed in the previous program which is based on the application of behaviorist theory a current program whose basis is formed by constructivism has

come out. The current program stresses the teaching of the structural concepts and their scientific meanings without mentioning the names of the disciplines that constitute social studies (Ata, 2009).

The Social Studies course is important as it gives students the opportunity to develop the understanding, behavior and skills that are the preconditions for good citizenship. This importance also means that students may be influenced by changes carried out in educational programs. The change carried out in educational programs was structured in a way that the programs were firstly implemented at the classroom level in different pilot schools and then the results of this implementation were used to evaluate the program in order to rectify their faults. This structure has resulted in the previous and current programs being applied at different educational institutions at the same time.

At schools where the previous program was applied, the traditional method of teaching was the norm. This method of teaching generally entailed the teacher explaining the topic while the students listen to what is explained as passive receptors of knowledge. The lessons were presented to the students in a teacher-centered fashion using the behaviorist approach. In contrast to this, in those institutions where the current program is applied, a constructivist approach to learning is the norm. In the constructivist learning theory the emphasis is on the students' constituting meaningful wholes by forming relationships between existing knowledge and new knowledge, and by associating all new information with the existing information. In this study, the term "previous program" refers to the program which emphasizes traditional method of teaching, foundations of which are formed by the behaviorist approach; whereas the "current program" is comprised of methods and techniques of instruction, the foundations of which are based on the constructivist learning. The current program includes a spiral approach in which topics are expanded and elaborated throughout the years. The program emphasizes conceptual learning, multiple intelligences, active learning and problem solving techniques in its integrality. Unlike "traditional teaching views knowledge as transmitted by the teacher or textbook the constructivist theory creates a network of experiences, ideas and relationships that educators call knowledge" (Sunal & Haas, 2011, p. 30-31). According to "constructivism, as a set of beliefs about knowing and knowledge, can be used as a referent to analyze the learning potential of any situation" (Tobin & Tippins, 1993, p. 8). Constructivism is a learning theory which is based on the central notion that as learners we construct our own understanding of the world around us based on our experiences as we live and grow (Eryaman, 2007; Pritchard & Woollard, 2010). Giambattista Vico has expressed his thoughts about constructivism with these statements "who can explain anything it knows" or "to know how to make" (Glaserfeld, 1995; Özden, 2005). In the previous program (1998) course objective statements mostly include expressions at cognitive level such as "gain", "comprehend" and "learn" (Dönmez, 2003a).

The primary aim of this study is to compare conceptual understandings of the 7<sup>th</sup> grade primary school students who were exposed to previous and current social studies program regarding the common citizenship concepts taught in the social studies, citizenship and human rights education course.

As a result of this study the strengths and weaknesses of the current program in terms of students' conceptual understanding in citizenship concepts were identified. Identifying the deficiencies of the current program compared to the previous program will enable us to develop more efficient social studies programs. This in turn will enable social studies to take one more step towards the goal of turning out good and productive citizens by instilling students, who will be the adults of tomorrow, with the skills that social life requires (Jarolimek, 1964).

## **Methods and Procedures**

### **Research Design and Participants of the Study**

Descriptive and quasi-experimental research designs were used together in this study. "Quasi-experimental designs are the types of research in which experimental process is applied but not all the external variables could be taken under control" (Özen, 2015, p. 316). In other words, "if an

experiment does not possess all of the features of a standart experimental design then it is a quasi-experiment: it may look *as if* it is an experiment ('quasi' means 'as if') but it is not a true experiment, only a variant on it" (Cohen, Manion & Morrison, 2007, p. 275). Quasi-experiments include "assignments, but not random assignments of participants into groups" (Creswell, 2012, p. 309). Moreover, "as establishing control on the participants of the research is quite limited quasi-experimental method is applied" (Ekiz, 2013, p. 112). The other used resarch design in the study, descriptive studies, "describe a given state of affairs as fully and carefully as possible" (Fraenkel & Wallen, 2006, p. 14). "Descriptive studies aim to define the interactions among the situations taking into account the relations of the current events with previous events and conditions" (Kaptan, 1998, p. 59). The research was conducted in five pilot schools where the current program and in 10 schools where the previous program was followed. The schools were randomly selected from different districts representing the various different socio-economic strata (5 districts: Çankaya, Keçiören, Yenimahalle, Mamak and Elmadağ) in Ankara, Turkey. The sample of this study consisted of 289 students from five pilot schools and 317 students from 10 schools. Briefly from these 15 schools, totally 606 seventh-grade students participated in this study. In this study first quantitative then qualitative data was collected to identify students' alternative conceptions of citizenship topics.

The instruction of citizenship concepts in the current program which started to be applied in the 7<sup>th</sup> grades at pilot schools in 2006-2007 academic year can be observed in the concerned learning cycles prepared in terms of constructivist, spiral and active learning approaches and multiple intelligence theory. The traditional method of concept teaching in the previous program first elicits the related vocabulary from the students, then provide the meanings of the words elicited from the students and finally classifies the words into groups as related and non-related to the concept. In the current program tool such as meaning analysis table, concept networks, concept maps were used (Ministry of National Education, 2005). It also directs the teacher to find out and to correct if there is a misconception of student (Ata, 2006). In the current program, it is observed that the number of concepts increases proportionally to the grade level and the concept attainment level (entry, development, enhancement) differs in each grade level (Yazıcı & Koca, 2014). Traditional teaching methods based on the behaviorist approach were employed in those schools which used the previous program. Alternative conceptions were compared within the context of schools applying the previous and current programs in accordance with the objectives stated above.

### Instrument

The data were obtained using a three-tier conceptual understanding test consisting of 36 multiple choice questions developed by the researchers. First common citizenship concepts within both the previous and the current teaching programs were listed for comparison. The identified concepts covered in the multiple choice test can be seen in Table 1:

**Table 1.** *Table of concepts*

Constitution	Tolerance	Elections
Independence	Public Opinion	Responsibility
Peace	Participation	Charter
Declaration	Board	Copyright
Republic	Culture	Civilization
Environment	Secularism	Homeland
Solidarity	Nation	Citizen
Value	National Sovereignty	Law
Democracy	Common Heritage	Legislature
State	Freedom	Executive
Sovereignty	Patent	Judiciary
Tradition	Renaissance	
Rights	Reform	

In order to identify students' current understanding of the concepts about common citizenship provided above, a test comprised of open-ended questions was given to a group of 50 sixth and seventh grade students chosen from six randomly selected schools during the 2005-2006 academic year. Taking the data obtained from this test into account, the questions for the conceptual understanding test were written. In writing the test items, the concept attainment level (entry, development, enhancement) of each citizenship concept provided in the current program was also taken into consideration.

Every question in the conceptual understanding test, which was made into a three-tier test, had only one correct answer. The three distracters of each item include students' alternative conceptions in the topics of citizenship gathered from the responses of students to open-ended questions.

The causes of using a three-tier test are both to eliminate errors that are originating from lack of knowledge of students related to questioned concept and to enable highly reliable measurements supporting each other. Furthermore, the mistakes made by the students due to a lack of knowledge of the concepts were eliminated from the test. In previous studies, Eryılmaz and Sürmeli (2002), Eryılmaz (2010), Taşlıdere and Eryılmaz (2015) were able to distinguish students' alternative conceptions from lack of knowledge or errors in the topic of electricity through using three-tier test. Similar to these studies, students' alternative conceptions were differentiated from their lack of knowledge and errors through using a three-tier test in the topic of citizenship. Different from the regular multiple choice tests, the first tier measures students' existing conceptual understanding of a certain concept; the second tier ask students to express the reasons why they choose an option in the first tier in their own words; and the third tier asks students how certain they were of the answers they gave in the first two tiers.

After the opinions of experts were asked regarding the content validity of the data collecting tools, reliability studies were done by using the data collected from 313 seventh grade students in the pilot study. According to the results of the pilot study, the reliability coefficient was calculated as (Cronbach alpha) 0.74 for the first tier of the test. This reliability coefficient showed that the test is quite reliable (Can, 2016).

Three examples to the items of the three-tier multiple choice test and three students' responses to the items are provided below:

Student A (An example of the concept of participation):

1.1 Which of the concepts below is being reinforced by practices that take place throughout the academic year in your schools such as "Student Clubs" "Honor Boards" and "Student Boards"?

- a. Opinion                      b. Solidarity X                      c. Ideas                      d. Participation

1.2 Why did you choose the answer you did?

School is where society takes place. In society everybody's idea not just one person's needs to be heard. Therefore solidarity is necessary.

1.3 How certain are you of your answers?

- a. Certain X                      b. Undecided                      c. Not certain

Student B (Example of the concept of Value)

11.1 The right target must be chosen,  
Laziness is the greatest obstacle and must be overcome without waiting,  
Correctness and industriousness must be the key principles,  
This *Culture* in our life must be preserved.

Which of the following concepts is the correct one to fill in the blank above?

a. Culture X    b. Opinion.    c. Value    d. Change

11.2 Why did you choose the answer you did?

In this paragraph it tells us to be industrious. An industrious person is a cultured person and this culture must be preserved.

11.3 How certain are you of your answers?

a. Certain X    b. Undecided    c. Not certain

Student C (Example of the concept of Patents)

29.1 A student friend of yours in Erzincan makes a mathematical discovery by finding out that the difference in the squares of any two consecutive numbers is equal to the third number. Your friend needs to obtain a document in order to show that he or she has the right in the practical use of this discovery. Which of the documents below matches this concept?

a. Copyright X    b. Patent    c. Declaration    d. Charter

29.2 Why did you choose the answer you did?

Copyright is the right of protection of an idea, a theory or a work of art.

29.3 How certain are you of your answers?

a. Certain X    b. Undecided    c. Not certain

**Data Analysis**

Independent samples t-test and chi-square were used in this study. 0.05 was accepted as the significance level.

In evaluating the three-tier conceptual understanding test by alternative conceptions, "1" point was given for the first tier when the students marked the wrong choices; if in the second tier the written statement as to why they answered so gave the impression that the student had misunderstood the concept another "1" point was given, but "0" score was given only if the conclusion was that they had not misunderstood the concept or if they left it blank; in the third tier "1" point was scored if the students were certain of their replies and "0" score was given for the replies of "Undecided" and "Not certain." In other words, if the student scored "1" in every tier of the test an overall score of "1" was recorded but if during any tier of the test a score of "0" was given, then the overall score was recorded as "0" in the statistical program. The responses of the students provided in the second tier of the three-tier test, namely the open-ended answers of the students, were analyzed through content analysis (Yıldırım & Şimşek, 2013) to identify their alternative conceptions regarding citizenship concepts.

**Results and Conclusions**

The results of the study are provided under two main headings:

**a. The Conceptual Understanding of Students Before the Instruction**

In order to determine whether or not there was a significant difference between the conceptual understandings of students before they were exposed to the previous and current programs the developed three-tier concept test was administered. The data obtained in the conceptual understanding test, which had been applied as a three-tier test, were used in the analysis of the t-test and chi square tests of the independent samples and the results are summarized in Table 2.

**Table 2.** *The difference between the conceptual understanding of students before being exposed to the previous and current program*

Program applied in school	N	$\bar{X}$	S	t	sd	p
Previous program	317	17.08	5.02	1,090	604	0.276*
Current program	289	17.50	4.61			

\*p>0.05

There was not found a significant difference between the conceptual understanding of students before being exposed to the previous and the current program regarding the citizenship concepts. According to the Table 2, the mean of the scores of students gathered from the three-tier test administered as a pre-test before being exposed to the current program was  $\bar{X} = 17.50$ ; the mean of the scores of students gathered from the three-tier test administered as a pre-test before being exposed to the previous program was  $\bar{X} = 17.08$ . Although there was a slight difference in the means the difference was not significant (p>0.05). In other words, no significant difference was found between students before being exposed to the previous and the current program in terms of the 37 concepts regarding citizenship (p>0.05).

**b. The Conceptual Understanding of Students After the Instruction**

Independent samples were tested and analyzed to see whether or not there was any significant difference between the conceptual understandings of students in the previous and current programs after their respective program's modules on citizenship concepts had been taught, and they are summarized in Table 3.

**Table 3.** *The difference between the conceptual understanding of students after being exposed to the previous and current program*

Program applied in school	N	$\bar{X}$	S	t	sd	p
Previous program	317	28.53	3.80	2,234	604	0,026*
Current program	289	29.24	3.93			

\*p<0.05

When it was tested to see whether or not there was any significant difference between the conceptual understanding for the students in the “previous” and “current programs” a significant difference was found to exist between the two (p<0.05). According to Table 3, the conceptual understanding of the students at the schools on the current program was  $\bar{X} = 29.24$ , which is higher than the level of  $\bar{X} = 28.53$  for the students on the previous program. This result show that students taught with using previous program had more number of alternative conceptions compared to the students taught with using the current program.

Similar to this finding when Acker (1996), Eryılmaz (1996), İbrahim (2001), Gallop (2002) analyzed the effectiveness of the traditional and constructivist methods of instruction in studies based on the identification and correction of conceptual misunderstanding, they discovered a significant difference favoring the constructivist methods of instruction. According to Doğanay (2008) the current social studies program reflects the contemporary social studies concept with its general qualities as an understanding. However, there is a remarkable deficiency in the teaching activities that emphasize concept learning in social studies. Ünal and Ünal (2012) in their study examined the 7<sup>th</sup> grade textbooks prepared according to previous and current program in terms of concept teaching. As a result they found out that the textbooks prepared according to the previous program did not serve to the aims in terms of conceptual learning neither quality nor quantity. On the other hand, they stated that the authors of the textbooks of the current program have got rid of the authority role in which they explain the cause and effect relations, form the explanations, make the definitions and decide on the value judgement. Akpınar and Kaymakçı (2012) determined that compared to previous social studies programs, the current social studies program more frequently and systematically include cognitive, affective and psycomotor qualities of Bloom Taxonomy. In addition to this, Bebe and Ünlü (2012) determined in their study that most of the teachers find the course objectives, skills and concepts in the current social studies program more clear and obvious and they think positively about including geography content skills in the program (p. 281). Hersan and Kabapınar's (2008) study examşned the opinions of the parents on the student-centered applications in the current program. According to the results they think that the current program contribute to the self-improvement and social development of the students (p. 151). According to McCray (2007) most teachers agreed that a variety form of constructivism improves social studies skills.

The results of this survey seem to confirm this information. In addition, a further test was carried out in order to determine whether or not there was any significant difference between the previous and the current programs with respect to individual concepts. This test involved a chi-square test for each concept as summarized in Table 4. This table contains only those citizenship concepts that were found to have a significant difference.

**Table 4.** *Students' ability to learn concepts under previous and current programs*

Concept	Number of Students Misunderstanding the Concept	Program Applied in the School		Total	Chi-Square Value	sd	p
		Current Program	Previous Program				
Participation	N	90	137	227	9.410	1	0.002*
	%n	39.6%	60.4%	100.0%			
State	N	47	72	119	3.985	1	0.046*
	%n	39.5%	60.5%	100.0%			
Value	N	66	96	162	4.280	1	0.039*
	%n	40.7%	59.3%	100.0%			
Public Opinion	N	40	64	104	4.286	1	0.038*
	%n	38.5%	61.5%	100.0%			
Solidarity	N	42	22	64	9.227	1	0.002*
	%n	65.6%	34.4%	100.0%			
Sovereignty	N	64	113	177	13.328	1	0.000*
	%n	36.2%	63.8%	100.0%			
Patent	N	20	40	60	4.882	1	0.027*
	%n	33.3%	66.7%	100.0%			
Civilization	N	100	77	177	7.775	1	0.005*
	%n	56.5%	43.5%	100.0%			
Tradition	N	83	54	137	11.798	1	0.001*
	%n	60.6%	39.4%	100.0%			

\*p<0.05

The findings show that there is a significant difference in the levels of conceptual understanding between the students on the previous and current programs for the concepts: “participation”, “state”, “value”, “public opinion”, “solidarity”, “sovereignty”, “patent”, “civilization” and “tradition”. No significant difference was seen in the levels of conceptual understanding between students on the previous and current programs for the other concepts. Keskin, Kirtel and Keskin (2015) found in their study some misconceptions for the association of the government, citizenship, state and public opinion concepts.

### Conclusion

Alternative conceptions are the conceptions that students have formed in their minds as a result of experiences that differ from scientific knowledge. A change of program has taken place in Turkey. The aim of this study was to compare the conceptual understandings of students who were exposed to the previous and the current programs. The results of the study indicate that there was found a significant difference between students who were exposed to the previous and current program in terms of their conceptual understanding regarding citizenship concepts. The findings indicate that students exposed to the previous program had significantly more alternative conceptions. The current program being applied today takes the alternative concepts that students bring in classrooms into consideration and enables them to build new concepts based on these concepts. It enables concept learning to go beyond the limits of traditional approach which is in the way of just knowing and telling the meaning. This gives students an opportunity to use citizenship rights and responsibilities in the frame of human rights and democracy. If students learn to discuss which is an element of democracy, it means that they have also learnt thinking, listening and showing evidence (UNESCO, 2000). For instance, the source of sovereignty in a democratic state is the “public” (Kepenekci, 2014, p. 60).

It was determined that the students on the previous program had more alternative conceptions than the students on the current program for citizenship concepts such as participation, state, value, public opinion, sovereignty, patent and tradition. However, although there was a significant difference between students, in terms of “solidarity” and “civilization” concepts the difference was in favor of the previous program. Moreover, there was no significant difference between the understandings of the students studying on the previous and current program on citizenship concept such as constitution, independence, peace, declaration, republic, environment, democracy, rights, tolerance, board, culture, secularism, nation, national sovereignty, common heritage, freedom, renaissance, reform, elections, responsibility, charter, copyright, homeland, citizen, law, legislature, executive and judiciary. Although there was found no significant difference in terms of these concepts the number of the students who were exposed to the previous program was higher than those who were exposed to the current program in terms of having alternative conception regarding all these concepts.

Seeing that the results of the preliminary test given to the students were equal it is possible that the differences noted in the test administered after the instruction stemmed from the programs being applied at the schools. It has been emphasized during the study that citizenship concept is a learning process that starts in the family and continues in the school and the society and that the prior knowledge of the students in the formation of alternative concepts is quite important.

The difference found between the programs directly corresponds with the perspectives on the teaching of the concepts. Instruction based on the presentation method, which is how the traditional methods used in the teaching of concepts are reflected in education, not only fails to make abstract concepts more concrete but also it emphasizes verbal expression of the concept being studied. In contrast to this, the approaches inherent in the current program not only allow students' initial understanding of the concepts to be questioned but they also give an opportunity by means of the discovery method to make use of "Tables for Derivation of Meaning, Conceptual Networks, Concept Cartoons and Conceptual Maps" using the activities, teaching strategies and graphic materials offered by instruction. In addition, while the teacher is at the center of the behaviorist and cognitive

approaches to learning, it is the student who is at the center of the constructivist approach to learning. “Concept teaching in social studies should be dealt with real examples from students’ lives” (Ersoy & Kaya, 2009, p. 73). When the studies on the previous and current program have been analysed in terms of various variables, it has been found out that the studies have been conducted with teachers, pre-service teachers, students, parent views, school textbooks, disciplines, teaching materials and technology (Kaymakçı, 2015). More research studies should be conducted regarding the effects of the programs on students’ conceptual understanding about variety of social studies concepts.

### Contribution

There are limited number of research studies that have investigated students’ alternative conceptions with respect to the teaching of citizenship concepts on Social Studies courses. Social studies concepts usually embody elaborate meanings that evolve with experience and learning over a period of years (Bryant, 1994, p. 17). This structure makes it harder to eliminate the alternative conceptions within the fields of learning relating to social sciences. The three-tier multiple choice data collection tool used in this study could be used as an alternative mean of determining exactly what the alternative conceptions were in the light of the students’ understanding of the vague concepts found within citizenship topics, which make up part of the social studies lessons given to the 7<sup>th</sup> grade students, and it could also reduce, albeit by a little, the stated difficulties. In addition to this, this study provided an opportunity to critically question the changes to the social studies program taking place in Turkey through studying the alternative conceptions. Moreover, it is an example of how the alternative conception studies that take place largely in the natural sciences may be also studied for social sciences, which make up the foundation of social studies. In addition, in the development of conceptual understanding test level of the concept attainment (“entry”-“development”-“enhancement”) were taken into consideration. Therefore, in this study taking into account the Bloom taxonomy; the “entry” level has been measured in correspondence to knowledge level, whereas “development” level has been measured in correspondence to comprehension level. Finally, “enhancement” level has been measured as a correspondence to application and analysis level.

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## The Effects of an Argument-Based Inquiry Approach On Improving Critical Thinking and the Conceptual Understanding of Optics among Pre-Service Science Teachers

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### Abstract

The aim of this study was to investigate the effect of the university-level application of an Argument-Based Inquiry Approach, as compared to the traditional laboratory teaching method, on the ability of students to learn about optics and to demonstrate critical thinking. In this quasi-experimental study, pretest-posttest scores and CCDTI were used as data collection tools. The study sample consisted of a total of 44 students receiving lessons in science education and laboratory applications in two separate classes within the Faculty of Education at a small university in the north of Turkey in the school year 2013-2014. While the students in the control group carried out experiments using the traditional laboratory method, the students in the experimental group carried out activities in groups of three to four based on research using the ABI approach. Students in both groups performed seven activities. In the study, we used pretest and posttest results. The Cronbach's alpha reliability coefficient of the test was determined to be 0.71. In addition, the CCDTI scale, adapted into Turkish, was used at the beginning and end of the study in an attempt to determine the change in students' capacity for critical thinking. The findings show that university-level use of the ABI approach provides a statistically significant contribution to students' success in learning optics. Moreover, it was established that the argument-based approach produces significant differences in students' capacity for and tendencies towards critical thinking compared to the traditional method.

**Keywords:** Argument-based inquiry approach, Critical thinking, Science education, Scientific achievement, SWH.

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## Introduction

In a clear statement of the goals of science education, the “American National Science Education Standards” (Collins, 1998) emphasize the need for all students to achieve a series of recognized standards and be scientifically literate (NRC, 1996). With a large range of meanings, “science literacy” can be variously expressed as the attainment of knowledge and the ability to separate the unscientific from the scientific; understanding science and its applications; knowing what is scientifically important; thinking scientifically; using scientific skills in problem-solving; having the knowledge to be able to share relevant information across science-based subjects; understanding the relation of science to culture; knowing the benefits and risks of science, and manifesting critical thinking about science and scientific experiences (Norris & Phillips, 2003). In Turkey, the aim of science education is to produce scientifically literate individuals (Doğan, Çakıroğlu, Bilican & Çavuş, 2009; MNE, 2013). The curriculum for science in primary education institutions in Turkey was revised in 2013 and defines scientifically literate individuals as follows:

Scientifically literate individuals are those who investigate and question, make effective decisions, solve problems, have trust in themselves, are open to cooperation, make effective contact with others, practice lifelong learning with an awareness of sustainable development, have knowledge of, skills relating to, and positive attitudes, perceptions and values regarding the sciences, as well as an understanding of the relationship of the sciences to technology, society and the environment and who also demonstrate [the required] psychomotor skills (MNE, 2013 p.3).

Rather than skills and common applications, science literacy focuses on the structuring of knowledge, the understanding of scientific concepts and the education of individuals who are interested in scientific subjects and discussion (Hand & Prain, 2002). However, it is not possible for students to succeed educationally by simply repeating the scientific facts, laws and knowledge they are expected to learn in classes (Deboer, 2000). With regard to the spreading of science literacy and the inculcation of science literacy in individuals, the use of language has now assumed greater significance and a number of researchers have conducted studies and made suggestions concerning the effective use of language in science education (Alverman 2004; Gee, 2004; Hand *et al.*, 2003; Lemke, 1990; Yore, Bisanz & Hand, 2003). Students are required to understand the importance of language in comprehending science, demonstrate how scientists use linguistic processes in structuring science and understand how scientists are influenced by studies from different researchers. Students should also be given opportunities to improve understanding of all these processes in science lessons (Hand *et al.*, 2003).

Language is the basic instrument for using scientific concepts, communicating information when carrying out scientific activities and for understanding and sharing scientific results (Yore *et al.*, 2003). Language has four basic components: reading, speaking, listening and writing (Eming, 1977). Reading is defined as the act of making sense out of printed or digital text. An individual needs to understand what she/he is reading in order to learn from it. This goal can be attained only if reading is supported by the power of understanding (Ocak, 2004). Another important component of language, speaking, is the communication established between the individual and other people through language, allowing exchange of emotions, thoughts and information (Özbay, 2005). Listening, on the other hand, is the process of paying attention to and evaluating what is being said and/or read aloud in order to understand it. As the primary resources for success in verbal communication, speaking and listening form a whole and provide the basis of educational activities by being used in the exchange of information, explanations, representations and assessments which pass between teacher and student and from student to student in the educational environment (Karadüz, 2010; Özbay, 2005). On the other hand, writing is an epistemological instrument that enables learners to structure their knowledge and develop concepts and which guides them in attaining science literacy (Hand, Prain, Lawrence & Yore, 1999). It is known that the use of writing by students as a means of learning enables them to learn concepts and develop science literacy, understand the cause and effect relations involved in

scientific articles, and also become successful writers, producing their own scientific texts (Hand & Prain, 2002).

The components of language, speaking, listening, reading and writing are also the basic components of the process of advancing an argument, a process which demonstrates an individual's science literacy. Being basically scientifically literate involves the skill of recognizing and refuting an argument even if in only a limited way (Osborne, 2005), but the process of advancing an argument is a linguistic activity involving dialogue where individuals discuss opposing opinions with each other (Chin & Osborne, 2010). Argumentation is important for students as it promotes reflective thinking and the process of reasoning. In the social context, argumentation requires students to pose questions, give explanations, refute them with alternative ideas, and give answers defending their own ideas as well as trying to convince those mounting their own counter-arguments (Chin & Osborne, 2010). Posing questions to students is important as it reveals their prior knowledge and enables them to begin to make and sustain relevant arguments. When the process of argumentation is used as a model, students can use the assertions, data and reasoning from their activities as elements of their own arguments (Osborne, 2005). Connections between these elements determine the level of argument. In this regard, making connections between assertions and evidence, the formulation of evidence-based reasoning and questioning or refuting the soundness of the connections between evidence and assertions are among the most important elements in developing a strong argument (Andrews, 2007). The development of these factors not only improves the quality of arguments, but also enables students to structure their field of information at the conceptual level and to develop their science literacy.

### ***Argumentation in Science Education***

Rather than giving basic calculations showing how the natural world functions or explaining the sum of events, science involves the restructuring of theories that explain how the events have occurred. Considered from this perspective, science comprises the theoretical explanations of events, and these explanations are themselves open to refutation and change (Erduran, Simon & Osborne, 2004). Since scientific research aims both to formulate and justify the procedures carried out to better understand the world, as well as the beliefs and knowledge involved, argumentation has an important place in the research process (Kaya & Kılıç, 2008). The aim of science lessons, however, is for students to understand scientific thinking, develop skills of reasoning, review beliefs about the nature of knowledge and develop their ability to work in cooperation with each other (MNE, 2006). Attention should be paid to argumentation in order to achieve these goals in a better and more balanced way (Osborne, 2005).

Class activities in which discussion is promoted enable students to develop conceptual knowledge, research skills and an understanding of the epistemology of science (Driver et al., 2000). Since scientific knowledge is formulated and developed through the process of hypothesizing and seeking proof, evaluating evidence and then advancing an opposing argument, students need to be given an impetus for discussion and encouraged to make arguments or counter-arguments (Osborne, 2005). Such argumentation enables them to understand both the epistemology of a science and the concept of science itself much better (Osborne, 2005). For this reason, it is important to use science classes to advance arguments that will attain and produce knowledge. One of the approaches enabling arguments to be mounted is the Argumentation Based Inquiry, originally named 'SWH'.

### **Argument-Based Inquiry**

The ABI approach is a tool that efficiently and meaningfully integrates the components of language into the learning process in science education with the help of contents such as discussion, written expression of thoughts, written and oral reflection, and by comparing effective reading with the knowledge acquired from reading with a personal bias. Language is involved in every phase of the ABI approach in terms of developing activities involving argumentation-based research and inquiry and in supporting learning in an integrated way.

ABI is an approach that aims to enable students to actively conduct research to promote conceptual learning and to effectively use language at every stage both in the laboratory and classroom environments and outside the lesson (Hand & Keys, 1999). This approach enables students to think about scientific concepts, shape their thoughts in a “question-claim-evidence” structure and defend them in written and oral language activities. The ABI approach consists of a framework to guide activities as well as metacognitive support to prompt student reasoning about data (Hand, 2008). ABI furnishes teachers with a template of suggested strategies to enhance learning from activities (see Table 1). As a whole, the activities and metacognitive framework seek to provide authentic, meaning-producing opportunities for learners (Hand, 2008). In learning environments where the approach is applied effectively, the teacher enables students to form questions, design experiments to seek an answer to their questions, make observations and collect data during well-designed experiments, make assertions that may answer their questions at the end of these observations, and express in a written form their reflections about how their opinions have changed during the process. Students not only record the aforementioned process in their ABI reports, but also orally examine every component in small and large group discussions and compare their differing judgments with information obtained from various resources. Hand (2008, p.7) stated that, “*SWH is a pedagogical tool to encourage students to ‘unpack’ scientific meaning and reasoning*”. The ABI is provided in order to promote scientific thinking and reasoning through activities in which learners are able to become aware of the foundations of their knowledge and can then explicitly monitor their own learning. Because the ABI focuses on the forms of scientific thinking, it has the further potential to increase learners’ understanding of the nature of science, enrich their conceptual understanding and engage them further in the theory and practice of science.

**Table 1.** *The templates for the ABI: Teacher template and student template*

The Argument-Based Inquiry, Part I: A template for teacher–designed activities to promote laboratory understanding	The Argument-Based Inquiry, Part II: A template for students
<ol style="list-style-type: none"> <li>1. Exploration of pre-instructional understanding through individual or group concept mapping.</li> <li>2. Pre-laboratory activities, including informal writing, making observations, brainstorming, and posing questions.</li> <li>3. Participation in scientific activities.</li> <li>4. Negotiation phase I – writing personal accounts of scientific activity (e.g. writing journals).</li> <li>5. Negotiation phase II – sharing and comparing data interpretations in small groups (e.g. making a group chart).</li> <li>6. Negotiation phase III – comparing scientific ideas to textbooks or other printed resources (e.g. writing group notes in response to focus questions).</li> <li>7. Negotiation phase IV – individual reflection and writing (e.g. creating a presentation such as a poster or report for a larger audience).</li> <li>8. Exploration of post-instructional understanding through concept mapping.</li> </ol>	<ol style="list-style-type: none"> <li>1. Beginning Ideas – What are my questions?</li> <li>2. Tests – What did I do?</li> <li>3. Observations – What did I see?</li> <li>4. Claims – What can I claim?</li> <li>5. Evidence – How do I know? Why am I making these claims?</li> <li>6. Reading – How do my ideas compare with others?</li> <li>7. Reflection – How have my ideas changed?</li> </ol>

In examining the applications of the ABI approach we can conduct evaluations from both the perspective of teachers and students. According to some studies, teachers applying the ABI approach in their classes demonstrate effective teaching that enables them to create an effective learning environment and an increase in the number of applications increases success (in terms of the effect on students) (Günel, 2006; Omar, 2004). Moreover, ABI provides professional development for teachers in enabling them to realize their educational objectives (Williams, 2007). The national and international literature includes studies examining how ABI applications can increase conceptual

understanding (Mohammed, 2007) and science success in students (Greenbowe, Poack, Burke & Hand, 2007; Author *et al.*, 2010; Nam, Choi & Hand, 2011); how ABI is able to produce equal levels of success for students with different initial levels (Akkuş, Günel & Hand, 2007; Kınır, Geban & Günel, 2012); how the application is effective in disadvantaged groups (Yeşildağ-hasançebi & Günel, 2013); and how students using it develop positive attitudes towards science (Author, 2014). Apart from these positive effects, there has recently been an emphasis on whether or not the ABI approach increases the skill of critical thinking. In this context, there are a very limited number of relevant studies (Taylor, Therrien & Hand, 2012; Chen, Hand & Benus, 2014; Jang, Fostvedt & Hand, 2014).

This study focuses on investigating the effect of the ABI approach on the success of students in learning about optics and developments in their ability to think critically. The research questions guiding this study are as follows:

- 1) Is there a significant mean difference between the groups exposed to the ABI approach and those following a traditionally designed science course with respect to students' knowledge of optics?
- 2) Is there a significant mean difference between the groups exposed to the ABI approach and those following a traditionally designed science course with respect to students' capacity for critical thinking?

## Methods

### Research Design

The present study used a quasi-experimental and pre/post-test design with control and treatment groups to examine whether argumentation activities improved students' conceptual understanding in test questions and in their scores for critical thinking. Researchers randomly selected one class as a treatment group and the other as the control group. The study took place within the context of the subject of 'Optics', taught for 7 weeks in spring 2014. Both treatment and control groups were simultaneously administered the same pre/post-test and CCDTI scale to examine the impact of the argumentation activities.

### Participants

The study sample consisted of 44 third-year students receiving education in two separate classes at the Department of Science Teaching at a university in northwest Turkey in the first term of the 2013-2014 school year. The students were randomly assigned into an experimental 'application' group and a comparison group of 23 and 21 students respectively.

### Procedure

The study was conducted over a period of 7 weeks structured in such a way as to involve 7 Optics topics in lessons regarding Science Laboratory Applications. Table 2 shows the topics studied according to the order of discussion. Students in the treatment group performed experiments in the laboratory environment on the basis of questions they wanted to investigate with regard to that week's subject, determined by themselves during 4 course hours every week, in groups of 3 to 4. They produced general evaluations by interpreting the data and observations from the experiments and finally made assertions about them. They presented and defended their assertions and evidence in a full group discussion in the classroom. Small group discussions took place during this process and the full group discussion where all the information was shared took place at the end of the process. During the process, the instructor helped the students to attain their goal with the aid of lesson planning, application, evaluation at every stage and through making immediate decisions. Questions posed by the instructor, who was constantly directing the course of the lesson, enabled the students to formulate their own questions around the main idea of the lesson, carry out experiments/observations and make assertions. Students reported the research questions they had generated at convenient points throughout the lesson and recorded the data and their observations, inferences and assertions in the ABI student templates, as well as changes occurring in their thinking as a result of their investigations, discussions, comparisons and reading. These procedures were repeated for 7 weeks.

**Table 2. Subjects**

Week	Subject
1 <sup>st</sup>	Light and shadow
2 <sup>nd</sup>	Reflection
3 <sup>rd</sup>	Mirrors (plane mirror and convex mirror)
4 <sup>th</sup>	Mirror systems
5 <sup>th</sup>	Refraction
6 <sup>th</sup>	Lens (converging lens and diverging lens)
7 <sup>th</sup>	Lens systems

Students in the comparison/control group, on the other hand, carried out their experiments using the traditional laboratory method. In this method, the students carried out the experiments as envisaged by researchers in the laboratory textbooks in small groups (of 3 to 4), in parallel with the subjects in the application group. They also used the textbooks to advise them what to do in every phase of the experiment and where to write down the results. During this process, the instructor discussed the objectives and results of the experiment with each group and how it was carried out, asked the students questions about what they needed to know theoretically and answered their questions. At the end of the process, the students prepared the experiment results in accordance with the traditional laboratory format (title and purpose, outline of procedure, data and observations, result and discussion).

#### **Data Source**

In the study, we used the field information test that was prepared for the topic of ‘Optics’ and the scale of critical thinking disposition outlines below.

*The California Critical Thinking Disposition Inventory (CCTDI):* The CCTDI scale was formulated as a result of the Delphi Project organized by the American Philosophy Association (Facione, 1990). The scale, which consists of 75 items in its original form, involves 7 sub-dimensions (truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, maturity). The CCTDI scale, which was originally in English, was translated into Turkish by Kökdemir (2003) to be used in subjects whose mother tongue is Turkish. It was translated into Turkish by a total of eight individuals, four psychologists with specific expertise, three other general psychologists and one lecturer in a Department of Translation and Interpreting. Even though almost none of the translations showed any incompatibility with the others, it was specifically restructured in line with the suggestions of the expert translator. Once the translation process was completed, the factor structure of the scale was examined. For that purpose, 913 students (468 female and 445 male) aged 17-28 ( $X = 20.08$ ,  $Sd = 1.80$ ) were given a scale battery containing the CCTDI. At the end of the application, confirmatory factor analysis was applied to confirm the factors in the original form of the scale for construct validity. As a result of the analysis, 24 items were excluded from the scale and the scale was reduced to 51 items. Two factors (open-mindedness and maturity) were combined in the scale, which does not significantly differ from the original scale.

As mentioned above, six dispositions of critical thinking were described. These are analyticity, self-confidence, inquisitiveness, open-mindedness, systematicity and truth seeking (Facione, 1990). *Analyticity* expresses the ability to concentrate on potentially problematic situations, the constitution of assumptions regarding possible results or consequences and the ability to use evidence even if it makes the problem more challenging. The analytically-inclined individual is alert to potential difficulties both conceptually and in his/her actions. In general, while solving problems he/she constantly tries to apply anticipatory interventions, explicit reasoning and fact-finding procedures as ways to solve problems. *Open-mindedness* is a construct that describes the tendency to be tolerant, with a sensitivity to different opinions. An open-minded individual is someone who respects others’ different ways of thinking. The *Inquisitive* person is someone who knows the value of being well-informed, wants to learn how things work and appreciates the value of learning even it does not produce results immediately. *Self Confidence* refers to the level of trust in one’s own

reasoning process. Individuals thinking critically and having self-confidence trust themselves to make reasonable decisions and believe that the others also have trust in them, because they believe that they know how to decide what to do and how to bring investigations to a successful conclusion in an appropriate way when asked. *Truth seeking* individuals want to find out the truth, are bold in asking questions and honest and objective during an inquiry even when the findings do not support their interests or preconceived notions. A truth-seeking person prefers to establish the truth and favors discussion rather than competition. *Systematicity* refers to the tendency to be organized, neat, focused and diligent in any investigation. No specific kind of thought or action (i.e. linear or non-linear) is given priority. A systematic individual strives to approach particular issues, inquiries and problems in a neat and focused way. The number and internal coefficient of consistence (alpha) of each dimension are shown in Table 3.

**Table 3.** *Sub dimension of CCTDI and internal coefficient of consistence (alpha)*

Factor	Items	Internal coefficient of consistence (alpha)
F1 (Analyticity)	13	.75
F2 (Open-mindedness)	14	.75
F3 (Inquisitiveness)	11	.78
F4 (Self-confidence)	8	.77
F5 (Truth-seeking)	9	.61
F6 (Systematicity)	8	.63

This Likert scale used the following responses: ‘strongly disagree’ (1 point), ‘disagree’ (2 points), ‘partially disagree’ (3 points), ‘partially agree’ (4 points), ‘agree’ (5 points) and ‘strongly agree’ (6 points). The CCTDI is used in evaluating the critical thinking tendency or, to put it more comprehensively, the degree of complexity manifest in a person’s ability to think critically, rather than measuring a skill (Kökdemir, 2003). In order to determine the reliability of the scale to be used in the study, the scale was applied to 331 third-year undergraduate students receiving education in the Department of Science Teaching at two universities located in different regions and the Cronbach’s alpha value was determined as 0.83. The CCTDI was applied at the beginning and at the end of the study in an attempt to determine any change in the critical thinking of students in this study.

*Pre/Post-test:* In the study, a ‘success test’ consisting of 10 multiple-choice and 10 conceptual questions was used as the data collection tool. The success test was applied as the pre-test and post-test. The test questions were selected from different resources (Çolakoğlu, 2002; Hewitt, 2002) appropriate for the student levels and from the National Test exams (in the state student selection and placement systems in Turkey). Table 4 shows a signal table regarding the questions and Attachment 1 gives a sample question. In order to provide content validity, opinions were procured from two academics who were experts in Physics and Language Studies respectively and some corrections were made to the test. At the end of the application, the Cronbach’s alpha reliability coefficient of the test was determined as .67. An answer key was formed for the conceptual questions and the conceptual questions were scored by an expert researcher independent from the researchers and with the students’ names anonymized.

**Table 4:** *Pre/Post-test Table of Specifications*

Subject	Cognitive Taxonomy					
	Knowledge	Comprehension	Apply	Analyze	Synthesis	Evaluate
Light and Shadow	C3	C7	5,7	C9	6	
Reflection	C3	2,9, C8	3,4,8,10, C5,C6,	C9		
Refraction	C3	2, C1,C8	1,3, C2,C4	C9		C11

Note: Multiple choice questions are shown as numerals (1,2,3,...etc.), conceptual questions are shown as C1, C2,...etc.

## Statistical Analysis

### Analysis of Covariance

To address the research questions, a one-way analysis of covariance (ANCOVA) was conducted to analyze potential differences between the two groups in terms of their achievements in the multiple-choice questions and the conceptual questions in the post-test and post-CCDTI. Scores on the pretest and pre-CCDTI were included as the covariate, scores on the post-test and post-CCDTI were used as the dependent variable and the group was included as the independent variable in the model. The statistical significance was determined at an alpha level of .05 for all statistical tests. Non-significant results were not reported.

### Effect Size

In this study, effect size was recorded to recognize the magnitude of the effect of the application on students' learning and CCDTI using Cohen's *d*, which is widely used in social science because it enables us to measure "the difference between the means relative to the variation within the groups" (Hays, 1994). The criteria for identifying the magnitude of an effect size is as follows: (a) A trivial effect size is below 0.2 standard deviation units; (b) a small effect size is between 0.2 and 0.5 standard deviation units; (c) a medium effect size is between 0.5 and 0.8 standard deviation units; and (d) a large effect size is 0.8 or more standard deviation units (Sheskin, 2004).

### Assumption Test

Prior to conducting statistical analysis, three general statistical assumptions were made in this study: normality, linearity, and homogeneity. A simple graphical method and normal probability plots of model residuals were used to examine the assumption of normality. Analyses showed that the assumption of normality was met by the test. Similarly, the assumption of linearity was addressed by plotting standardized residual values against the predicted values, and the assumption of homogeneity was examined by using Levene's test for equal variances. The result indicated that this study did not violate the assumption of homogeneity in the post-test ( $F(1, 42) = 0.393, p = .534$ ) and post-CCDTI ( $F(1, 42) = 1.391, p = 0.245$ ). A two-step analysis was carried out. First, one-way ANOVA models were estimated to investigate performance differences in the pre-multiple choice question (PRMCQ), pre-conceptual question (PRCQ) and Pre-California Critical Thinking Disposition scores (PRCCDTI) between control and ABI groups. This analysis was carried out prior to the implementation of the argumentation activities. Second, a one-way ANCOVA model was estimated using the post-multiple choice question (POMCQ), post-conceptual question (POCQ), Post-California Critical Thinking Disposition scores (POCCDTI) as the response variable, PRMCQ, PRCQ and PRCCDTI as the covariate, and the group as the independent variables.

## Results

### Statistical Pre-Post-test

Before testing the hypotheses, it was important to determine whether the groups differed prior to the treatment. The descriptive statistics for the pre-test for each group are given in table 5. ANOVA results indicated that there was no statistically significant mean difference between the treatment group ( $M = 2.22, SD = 2.64$ ) and the control group ( $M = 1.38, SD = 2.25$ ) with respect to pre-CQ scores ( $F(1, 42) = 1.266, p = 0.267$ ). There was also no statistically significant mean difference between the treatment group ( $M = 8.74, SD = 5.92$ ) and the control group ( $M = 7.00, SD = 4.48$ ) with respect to pre-MCQ scores ( $F(1, 42) = 1.187, p = 0.282$ ).

**Table 5:** Descriptive statistics for the pre-test: means, standard deviations, and sample sizes.

	CG			TG			Total		
	n	Mean	SD	N	Mean	SD	n	Mean	SD
PRCQ	21	1.38	2.25	23	2.22	2.64	44	1.82	2.47
PRMCQ	21	7.00	4.48	23	8.74	5.92	44	7.91	5.30

Note: Maximum score for PRCQ = 45, maximum score for PRMCQ = 27. SD: standard deviation.

To assess whether the scores on two measures could be used as covariates in ANCOVAs, correlation coefficients were computed among these pre-measured variables and the post-test variables (table 6). Weak to moderately significant correlations existed between the pre-test scores and the post-test scores. Therefore, to reduce error variance, to obtain a more powerful statistical test, and to statistically compensate for the initial differences between the application and control group, scores on the PRCQ, and the PRMCQ were used as co-variates.

**Table 6.** Correlation coefficients between each of the co-variate variables and the dependent measures.

	PRCQ	PRMCQ	POCQ	POMCQ
PRCQ	1			
PRMCQ	.187	1		
POCQ	.433**	.121	1	
POMCQ	.267	.313*	.393**	1

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

\* Correlation is significant at the 0.05 level (two-tailed).

Two post-test scores were analyzed: the conceptual question scores and the multiple choice question scores. ANCOVAs were computed for each of the post-test scores using the general linear model procedure in the Statistical Program for the Social Sciences. Table 7 presents the adjusted means, standard errors, and sample sizes for the post-test scores.

**Table 7.** Adjusted means, standard errors, and sample sizes for each condition for POCQ and POMCQ.

	CG			TG			Total		
	n	Mean	SE	n	Mean	SE	n	Mean	SE
POCQ	21	20.60	1.15	23	24.54 <sup>a</sup>	1.09	44	22.84	0.91
POMCQ	21	12.15	1.44	23	16.47 <sup>a</sup>	1.36	44	14.32	1.05

Note: Maximum score for POCQ = 45 (five for each question), maximum score for POMCQ = 27. SE, standard error.

<sup>a</sup> The mean is significantly higher than the other groups at the 0.05 level.

*The conceptual questions (POCQ) and the multiple-choice questions (POMCQ) for the post-test:* The findings indicated that there was a significant mean difference between the groups with respect to POCQ scores when the effects of PRCQ mean scores were controlled ( $F(1, 40) = 6.106, p=0.018$ ) and to POMCQ scores when the effects of PRMCQ mean scores were controlled ( $F(1, 40) = 4.716, p=0.036$ ). Students in the treatment group had higher mean scores for POCQ and POMCQ than those in the control group. The size of the mean difference for POCQ between the groups was medium (Cohen's  $d = 0.58$ ) and the size of the mean scores for POMCQ between the groups was medium (Cohen's  $d = 0.53$ ). This indicated that the differences detected between the groups arose as a result of the treatment and those differences had a practical significance.

### Statistical Pre-Post CCDTI

It was important to determine whether the groups differed prior to the treatment. The descriptive statistics for the pre-CCDTI for each group are given in Table 8. ANOVA results

indicated that there was a statistically significant mean difference between the treatment group ( $M = 231.39$ ,  $SD = 15.52$ ) and the control group ( $M = 208.67$ ,  $SD = 17.25$ ) with respect to pre-CCDTI scores ( $F(1, 42) = 21.171$ ,  $p = 0.000$ ).

**Table 8.** Descriptive statistics for the pre-CCDTI: means, standard deviations, and sample sizes.

	CG			TG			Total		
	n	Mean	SD	n	Mean	SD	n	Mean	SD
Pre-CCDTI	21	208.67	17.25	23	231.39	15.52	44	220.55	19.83

Note: Maximum score for PRCCDTI = 350. SD: standard deviation.

Two post-CCDTI scores were analyzed: ANCOVAs were computed for the post-CCDTI scores using the general linear model procedure in the Statistical Program for the Social Sciences. Table 9 presents the adjusted means, standard errors, and sample sizes for the post-CCDTI scores.

**Table 9.** Adjusted means, standard errors, and sample sizes for each condition on Post-CCDTI.

	CG			TG			Total		
	n	Mean	SE	n	Mean	SE	n	Mean	SE
Post-CCDTI	21	213.22	4.38	23	233.84 <sup>a</sup>	4.15	44	224.00	4.10

Note: Maximum score for Post-CCDTI= 350. SE, standard error.

<sup>a</sup> The mean is significantly higher than the other groups at the 0.05 level.

*The post-CCDTI:* The findings indicated that there was a significant mean difference between the groups with respect to Post-CCDTI scores when the effects of Pre-CCDTI mean scores were analyzed ( $F(1, 43) = 9.713$ ,  $p=0.003$ ,  $n = 0.192$ ). Students in the treatment group had higher mean scores for Post-CCDTI than those in the control group. The mean difference for Post-CCDTI between the groups was of a medium size (Cohen's  $d = 0.74$ ). This demonstrated that the differences detected between the groups had arisen from the effects of the treatment and that these differences had a practical significance.

## Discussion

The findings of this study show consistency with other national and international studies and with other results regarding ABI, which is an argumentation-based heuristic application. This supports the contention that ABI increases the conceptual understanding of students. In addition, it was determined at the conclusion of the study that students in the group where argumentation-based inquiry was used had a greater ability to think critically compared to those in the control group. These findings indicate that argumentation-based inquiry increases conceptual understanding and improves the skill of thinking critically.

The application of the ABI approach will enable students to develop a better conceptual understanding of concepts in physics. The primary reason for this is that the learning encountered and experienced by students during the application of the ABI approach is a natural result of their immediate environment. During this process of learning, students are involved in carrying out investigations, planning experiments, presenting evidence to explain the significance of experimental results, justifying their experiments and developing assertions about the possible solutions to their questions. In order to form assertions, the students have to display their skills in scientific argumentation by generalizing and finding connections between results produced and by making explanations using examples from their experiments. Such profound discussion of concepts within a real social context enables them to understand the concepts better (Cavagnetto, 2010; Kingir, Geban & Günel, 2012).

Argumentation plays an important role in producing and sustaining the theories, models and explanations of scientists. They produce, deploy and reinforce their arguments using assertions drawn from experimental evidence. One of the objectives of scientific research is to form and justify the beliefs, assertions and procedures followed in order to better understand the universe, which makes discussion very important in this process. Almost all the concepts taught in science lessons manifest this form of scientific knowledge (Jimenez-Aleixandre, Rodriguez & Duschl, 2000). The fact that students are both able to understand scientists better and also to comprehend the scientific procedures they themselves are going through as they acquire scientific knowledge is considered a critical component of science literacy (Hand, Lawrence & Yore, 1999). In this process students become much better aware of what they are doing and why they are doing it. Being involved in their own learning makes them feel like scientists themselves and encourages them to gain further knowledge.

Moreover, students learn how to make scientifically significant claims about the world through applying an argument-based method (Ford, 2012). This process of interpretation includes (a) understanding the structure of scientific knowledge and results with regards to the goals of a society; (b) understanding the process of criticizing assertions, presenting evidence and making arguments; (c) knowing how to communicate different views regarding the application of science and scientific results, and (d) how scientific progress is repeatedly achieved through this communication. In evaluating Ford's perspective, even though each item can be considered separately, we also have to accept them as parts of a consistent whole. While interpretation is important in the process of structuring knowledge, it is fair that criticism occurs during the process of this structuring, particularly when we focus on the structuring of argument (Ford, 2012). The questions posed, assertions made, and evidence gathered and deployed in ABI classes are the key components of argumentation (Hand, 2008; Keys *et al.*, 1999; Norton-Meier, *et al.*, 2008). Students' participation in the process of argumentation is essential for meaning-making and the advancement of science literacy as it develops their ability to reason and improves their cognitive, metacognitive, communication, and critical thinking skills (Hand *et al.*, 1999; Jimenez- Aleixandre & Erduran, 2007).

Although an individual may have the ability to think, this does not mean that she/he will. Students generally fail to use the skills they are taught and this might result from not being used or habituated to thinking critically (Tishman, Jay & Perkins, 1993). Individuals who have critical thinking skills may not use them if they lack the necessary disposition towards critical thinking. Individuals with this disposition are more willing to think critically, so developing this tendency is one of the fundamental requirements for an individual's being able to use and apply critical thinking (Ertuş Kılıç & Şen, 2014). The most important result of this study is that the ABI approach increases the critical thinking tendencies of students. Individuals with more developed tendencies towards critical thinking can be defined as enthusiastic individuals with the skills in reasoning, giving justifications, collecting evidence, being sensitive to different views, wishing to gain knowledge, making decisions and questioning (Facione, 1990). The aforementioned features can also be gained through the process of argumentation. According to the results of this study, the reason for the increase in students' critical thinking in the application group compared to the control group is that they experienced the process of their own learning. Considered from the cognitive perspective, the process of argumentation involves the application of reasoning (Kuhn, 1993). When lessons are conducted based on argumentation, students express their own thoughts about a subject, an event or body of events. When children advance a strong argument which enables them to express their knowledge or thoughts, the development and adaptation of that knowledge, their beliefs, their values and their thoughts mutually support one another (Erduran, 2004).

Science can be intrinsically defined as a social activity in which there are scientific discussions (Kuhn, 1991). Scientific discussion is defined as a process in which individuals with similar or different perspectives evaluate alternative perspectives in order to solve a problem, understand a phenomenon, make a decision or suggest, support, criticize, and evaluate opinions about a scientific subject (Kuhn, 1993). It consists of the body of proceedings within this process as well as the cognitive products that are formed as a result of this evaluation (van Eemeren, 1995). In this context, in addition to concepts and specific events, the ways in which the skill of thinking can be

developed should also be considered in the process of science education. Thus, it should be required that students participate in discussions more systematically (Zohar & Nemet, 2002). According to Driver et al. (2000), conducting scientific discussions in science classes develops students' epistemological knowledge. Considering that the epistemology of science is related to the beliefs and values held about the nature of the scientific knowledge, it can also be suggested that scientific discussion enables students to learn how to use evidence in the process of their decision-making. Students should have an idea about how scientists work in order to comprehend science. From this point of view, if students work with data, assertions, reasoning, and supportive and opposing arguments, as scientists do, then such scientific discussions will enable them to comprehend science better.

Jimenez-Aleixandre and Erduran (2007, pp.4-12) suggest that a reason for increasing argument-based teaching in science classes is that it can be seen as '(a) being critical for meaningful learning, (b) developing the communicational skills of students, (c) enabling students to develop critical reasoning skills, (d) supporting the scientific culture and applications of students, (e) encouraging science literacy.' The inclusion of students in the process of argumentation in science and technology lessons profits them greatly and makes them more scientifically literate, enabling them to practice this in life (Osborne et al., 2004). This approach is generally thought to be among the primary factors which play an important role in scientific thinking and reasoning in science education (Hand, 2008). Teaching argumentation methods by using relevant activities and teaching strategies will enable us to achieve objectives involving the skills required to structure arguments using evidence, as well as developing social skills (Simon & Johnson, 2008).

Grandy and Duschl (2007) state that it is important to arrange lessons as educational environments where opportunities to undertake research and systematic thinking are provided. They also suggest that the teacher, curriculum and the environment should provide support for the child to demonstrate her/his cognitive activities and develop her/his capacities. This is the point at which teachers have the greatest responsibility. In a study carried out to define the concepts of understanding and thinking, Felton and Kuhn (2007) stated that teachers should advance discussion, evaluation, analysis and research in line with the needs of students. If teachers think about how they should communicate with students in order to develop their argumentation skills and use more dialogical approaches, they will be able to involve students in discussions (Simon & Johnson, 2008). One of these dialogical approaches is the argumentation-based approach. Teachers can inculcate these skills in students. In addition to changes to programs for students (MNE, 2013), the primary group targeted for successful communication with students should be their teachers.

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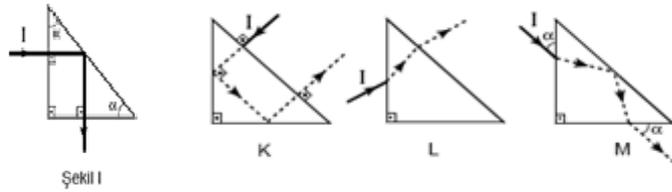
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#### **Attachment 1. Question samples.**

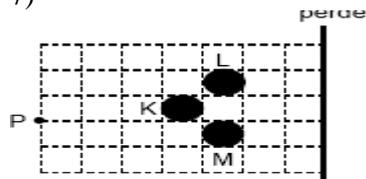
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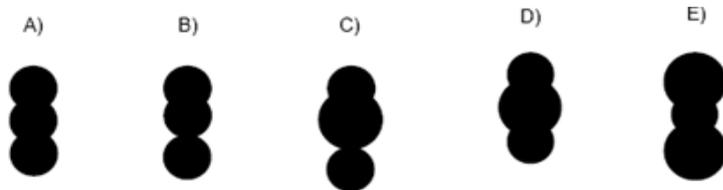
The light ray I reaching the rectangular prism follows the path shown in Figure I. If it reaches the same prism from the directions shown in figures K, L & M, in which of these directions will the light ray I **not** follow the path shown in the dotted lines?

- A) only K      B) only L      C) only M      D) K and L      E) L and M

7)



In a dark environment, the light source P and the balls K, L and M are placed in front of a curtain as in the diagram. Which of the following shows the shadow on the curtain?



C7. Does its wave length change as light moves from one environment to another? Does its frequency change? Does its speed change? Explain.

C2. You are asked to find the image of a candle using a concave lens. Show where you would locate the **object, observer, lens and the image** by drawing a diagram.

C9. You have just got out of class one evening. You are very hungry. As you pass by a restaurant, you can see both a delicious meal on a plate and yourself in the window of the restaurant. Explain this with the help of your in-depth knowledge of optics.

C10. Is it possible to make a magnifying glass using only two lenses? Explain.

## **Building a Community of Practice in a Teacher Preparation Initiative**

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### **Abstract**

The purpose of this study was to investigate the experiences of faculty as they engaged in professional development under a Teacher Preparation Initiative (TPI). This initiative engaged faculty in a community of practice that included activities such as aligning curricula, professional development, and examining teaching practices. This study was developed using an ethnographic approach, including autobiographic narratives as a method of data collection. Faculty narrative responses illustrate Wenger's (1998) concept of identity transformation in their acknowledgement of their professional experience and their willingness to critique, then move beyond the limitations of a professional development program.

**Keywords:** Professional development, Higher education, Teacher Preparation initiative

## **Introduction**

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Continuous professional development in higher education is imperative to keep faculty abreast of best practices and to ensure the quality of teacher education programs. Professional development in academia often consists of presenting at conferences, attending seminars, and reading scholarly literature. These activities may occur in isolation with little opportunity for professional collaboration (Hosssain, 2010; Ness, George, Turner, & Bolgatz, 2010). In addition, within institutions, the practices of full-time faculty (who develop research, teach, and participate in committees) are often separated from lecturers (who may only teach full or part-time) or adjunct faculty (who may be contracted for specific courses), resulting in student learning that lacks consistency (Tait, 2002). Awareness of needs for the diverse student, along with advancement in the knowledge of learning styles has led professors to consider how the college experience affects student development.

Aside from the aforementioned issues, professors, lecturers, and adjunct faculty do not uniformly collaborate with external stakeholders in the local community. Collaboration involves communication and intent to build a community focused on improving learning and practice (Jeffrey & Polleck, 2010). For colleges of education, for example, this goal translates into developing partnerships with local school districts. Collaboration at the institutional level is a skill that involves effective communication and practice between partners and among professors within universities (Jeffrey & Polleck, 2010). For universities, this goal translates into partnership with local school districts as well as with professionals at the university itself. Building a “third” culture between K-12 and higher education stakeholders may be necessary to build effective partnerships (Kezar & Eckel, 2002; Martin et al., 2011), especially with the goal of improving education.

### **Purpose**

The purpose of this study was to investigate the experiences of faculty as they engaged in professional development within an Advancement Via Individual Determination (AVID) higher education Teacher Preparation initiative (TPI). This study of the experiences of faculty participating in professional development under a Teacher Preparation Initiative (TPI) was conducted in one university’s college of education, where a group of faculty, along with school district and college officials piloted and collaboratively redesigned a teacher preparation program to include Advancement Via Individual Determination (AVID) strategies known to help students learn skills to be successful in schools and colleges. The team of College of Education faculty was asked: What are the perceptions of participants as they adopted TPI aligned AVID strategies with courses and programs? More specifically: (a) How did COE faculty integrate the information gathered? and (b) How did they perceive courses and students as improving based on the professional development?

Significant in this study is the observation of professional development in higher education environments. Research on professional development in higher education, especially research on how the AVID program works in teacher education is limited. Results from this study may also speak to the possible benefits of communities of practice for professors in colleges of education who are not often afforded the opportunity to develop cohesive curricula and planning. The processes involved in developing curricula, assignments and assessments through AVID TPI allowed professors in the College of Education opportunities to develop communities of practice to explore best practices for their pre-professional students for work with diverse populations in public schools.

### **AVID: A Description of the Program**

AVID (Advancement via individual determination) is a whole-school “untracking” program designed to place middle and high school students within a regular tracked class into college preparation classes (Lee & Smith, 1999). The AVID program was originally designed as a structure of community support in which teachers and students helped each other prepare for college as students completed high school (Freedman, 2000; Lee & Smith, 1999).

AVID for higher education (AHE), an extension of the high school AVID program, is in existence to prepare for and support a successful transition for high school students who enter college. AHE includes the Student Success Initiative, which builds on AVID pre-college

experiences and serves as a bridge for college readiness and eventually translates into college success. Another related program, the AVID Teacher Preparation Initiative, is designed for college students who want to become teachers. Colleges of education team with AVID in continuing professional development that involves philosophies and motivational strategies focused on building academic rigor and comprehension so that teacher candidates are prepared to teach in a manner that focuses students on being college ready. Faculty attends in-services and conferences throughout the year to enrich their teaching and to provide advice about teacher education to the AVID organization.

The implementation of AVID in our university's program has been ongoing for approximately five years. In the early stages of the AVID TPI implementation at our university, our faculty participated in selected professional development workshops presented by AVID trainers in the areas of math, language arts, critical reading, social studies, student success, and English-language learning. The workshops were open to teachers from local and surrounding districts, as well as teacher candidates attending our university. COE faculty attended workshops with local middle and high school teachers and university teacher candidates. COE faculty met to discuss how they planned to include AVID strategies into their teacher education courses. By spring 2012, COE faculty offered twenty-four AVID-embedded courses (Salgado, Carter, Hurst & Smith, 2014).

### **Literature Review: Professional Development in Higher Education**

The literature for professional development in higher education is spread among a plethora of cultures and disciplines. Changes in student demographics and professors' enhanced awareness of culturally responsive teaching have heightened the need for additional professional development for educators in higher education. In response to such needs, professional development in higher education is exhibiting trends that reflect broader educational and social policies (Gardiner, 2013). This trend in professional development in higher education includes expanding the role of professor participation and clarifying government policies in hopes of resulting in more informed and improved implementation of policies in schools. (Collinson, Kozina, Lin, Lang, Matheson, Newcombe & Zolga, 2009). In this sense, professional development is an ongoing and systematic process that embraces discussion and discovery through inquiry that lead to new skills and approaches in teaching (Shagrir, 2012; Wood et al., 2011).

Professional development at the university level is multidimensional including mentoring or being mentored by a veteran faculty member, scholarship and service. Shagrir (2012) found that as the participants' seniority increased, "so did their confidence vis-à-vis job preservation and their understanding that professional development must include research and service" (p32). As seniority increases it is understood that professional activities become a permanent portion of their careers. For example in Shagrir's study of five faculty members, one veteran commented that she continues her research activity because it is her responsibility as a teacher in higher education to be "constantly included in research, writing and publishing" (p33).

Blanton and Stylianou (2009) explored professional development in a mid-sized state university with the purpose of studying discipline specific professional development in higher education. Both new faculty and veteran faculty participated in the study of changing culture, developing and recruiting faculty and the need for coordinating professional development combining professional development with practice in action. Using tools and materials available in the teaching of lessons as artifacts allowed faculty to investigate and focus on teacher education. The goal was to view professional development through the lens of community and to reflect on issues that were discipline specific. Ongoing discussion was paramount as veteran faculty explored how to induct new faculty into a culture without a shared language of practice.

Professional development in higher education can involve a system of collaborative partnerships with local school districts as with Penn State-State College Elementary Professional School, nationally recognized for exemplary achievement for professional development. Professional development in this setting is ongoing and occurs in activities that invite participation

by all school personnel. The development structure includes teams that include Pre K-12 partnered with university faculty and graduate students that plan, teach and evaluate the professional development experiences in science, mathematics, teacher inquiry, technology and mentoring (Nolan, Badiali, Zembal-Saul, Burns, Edmindson, Bauer, Queeny, & Wheland, 2009).

For this study, Southwest State University (pseudonym) has adopted an ongoing program for professional development. Similar to Blanton and Stylianou's (2009) study, continuous discussion about changes and how to best support faculty in these changes have been important to the development of the AVID Teaching Preparation Initiative. By sharing information on college and university practices with AVID personnel and how it may or may not reflect AVID theories of practice, both entities are involved in a professional development learning process.

### **Conceptual Framework: Communities of Practice**

The framework for this study follows Wenger's (1991) communities of practice. Wenger (1991) applies a social theory of learning to communities or groups of individuals working and learning together in which "participation is recognized as competence" (p.5). Lave and Wegner (1991) define this phenomenon as a social learning process occurring when a community of people who share a common interest on a topic and collaborate over a lengthy period of time. Learning as the system progresses is not bound by intentional effort and often results from "incidental outcomes" within the social process. The "communities of practice" framework is akin to the current study in that it fits Lave and Wenger's (1991) three required components: (a) the domain, (b) the community, and (c) the practice. The current study is embedded in the communities of practice framework in the following manner:

**Domain:** The domain of shared interest was that the community members had all expressed interest in AVID in the area school districts and how to make a seamless transition from high school participation to the university setting. All members were focused on the assignment of developing a higher education handbook for AVID strategies that could be employed in the rigorous training of pre-service teachers and graduate candidates in leadership.

**Community:** The members of the research team were all university faculty members who were selected by administration in the College of Education to participate in the project at its inception as Fellows on a site team. University faculty members were also committed to working with local school teachers and administrators, who were invited to AVID workshops.

**Practice:** As the professors taught courses, they worked to implement AVID strategies into their curriculum. At monthly site team meetings they discussed progress, demonstrated strategies that had proven successful in class sessions, and mapped curriculum for pre-service teachers. Leadership professors studied how to use the information learned in meetings into the field of service to innovate changes in the area districts. Professors outside the College of Education discussed how to make changes in course delivery in selected Arts and Science classrooms at the university. In addition faculty members attended AVID training at National AVID Summer Institutes and AVID trainers held trainings on the university campus on topics such as Reaching English Language Learners, Social Studies, Critical Reading, Language Arts, and Cultural Relevance. At the end of each workshop AVID presenters and administrators met with faculty to debrief and guide the social process.

Wenger's (1998) more recent work delves into connections between community and identity. According to Wenger (1998), meaning-making within a community of practice is ultimately transformative in that it is "an experience of identity" and a "a process of becoming" (p. 215). Clayton and Cuddapah's (2011) study of a new teacher cohort illuminated Wenger's (1998) conceptualization of how new teachers developed professional identities while working within a community of other new teachers. Other researchers have found Wenger's (1998) community of practice helpful in guiding their work with pre-service teachers (Au, 2002; Grisham, Bergeron, Brink, Farnan, Lenski & Meyerson, 1999; Hoagland, Birkenfeld & Box, ). In the process of

implementing AVID, professors in our study re-examined, and in some cases, transformed professional identities as professors prepared teacher candidates in education courses.

### **Methods**

Narrative inquiry was used as a way to understand social, political, and cultural aspects of the TPI initiative. Narrative inquiry as a methodology allows for the observation of a phenomenon, from the participant's point of view – or the opportunity to “adopt a particular view of the phenomenon of study” (Connely & Clandinin, 2006, p. 375). The study was guided by the question: What are the perceptions of professors in one College of Education as they adopted TPI professional development strategies in the coursework for their pre-service teachers and aligned these AVID strategies with courses and programs? The study explored the experiences of thirteen faculty members--professors, lecturers, and leaders across education disciplines developing a community of practice.

### **Procedures**

Professors and lecturers in a college of education at a State university were invited to participate in this study. The participants were part of an initiative focused on training higher education professors, lecturers, and leaders, to apply AVID strategies in the preparation of student teachers. The 9 participants interviewed included the dean and associate dean at the College, the local school district's AVID director, as well as professors and lecturers from different academic focus, such as one Assistant Professor in Counseling, one assistant professor in Educational Leadership, and a total of six faculty members in Curriculum and Design (one full professor, one associate professor, three assistant professors, and two lecturers).

AVID training, which had been historically offered at the district level, was being proposed (by the AVID organization) to be delivered by professors as part of preparing new teachers. After receiving training of AVID strategies, the professors were embedding these strategies into the teacher preparation coursework for a period of three years. The participants were invited to reflect in written narrative form about the adoption of AVID strategies in their teaching and coursework content. The written narratives followed Chang's (2008) idea that, “through writing exercises of chronicling, inventorying, and visualizing self, you are encouraged to unravel your memory, write down fragments of your past, and build the database for your cultural analysis and interpretation” (p. 72).

The participants met monthly to discuss progress of the TPI implementation. In addition, intense onsite professional development trainings in AVID methods as well as attendance in AVID summer institutes constituted the continual professional development of this group between spring 2011 and summer 2014. At a debriefing meeting in the fall of 2013, AVID participants were invited to share about TPI as improving pedagogy and collaboration. Participants agreed to develop short written narratives focused on how AVID had affected their teaching of education students. These narratives formed the foundation of the current study.

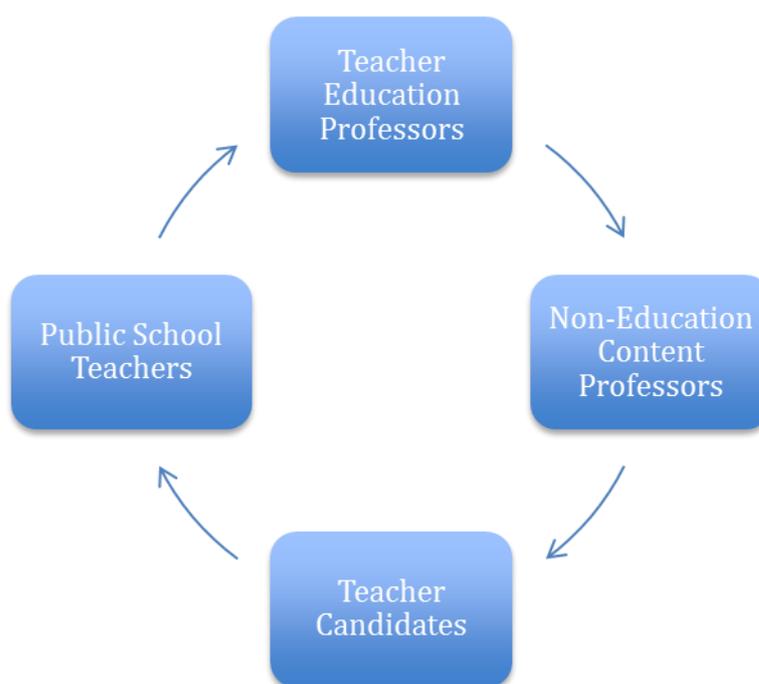
### **Data Analysis**

The professor narratives were analyzed through open coding (Creswell, 2006). The participants were analyzed for their efforts in designing and aligning courses, as a community of practice. Individual perceptions were respected. Codes were compared in order to develop categories or themes (Corbin & Strauss, 2008). Using constant comparison, sections of the narratives were interpreted for placement in three thematic categories that framed the perceptions of professors as they reflected on the following areas: (a) How did professors integrated the information gathered?; (b) How did they perceive courses and students as improving based on the professional development?: and (c) What are challenges as they move forward in the implementation process?

### **Findings**

Findings reflect the process of the communities of practice model as professors worked together and with their students to integrate AVID strategies and learning models into their classrooms. Perceptions of professors as they adopted learning from AVID TPI professional development addressed in the research questions mentioned above. In considering the research questions, the authors examined professors' reflections on their work with course preparation and teaching. A model of communities of practice based on Wenger (1998) was considered. Figure 1 illustrates the model of professional development supported by the authors, who viewed their professional development in AVID as a component of a larger community of content area professors, education professors and public school teachers. Local public school teachers, content professors, and student teachers were also invited to participate in AVID workshops. This community contributed to the authors' and participants' understanding of how to best prepare teacher and counselor candidates for future work.

Figure 1. *Professor integration of AVID Information*



In response to the first research question, “How did professors integrate the information gathered?” the authors’ analysis of the professors’ reflections revolved around two themes: (1) Course planning with colleagues and (2) Changes in teaching strategies. In preparation for both an upcoming NCATE (National Council for Accreditation of Teacher Education) review and for the purpose of incorporating AVID strategies into the education curriculum, the professors on the AVID site team worked together to design course planning matrices. These matrices helped professors to decide which AVID strategies and content would work best in each course. Professors’ understandings of the process for planning and designing the matrices are discussed next.

**Course planning with colleagues.** Professors who were AVID site team members reflected on the strengths of the course planning matrices for their own understanding of how to implement AVID. For example, Professor. J., a counseling professor, viewed this work as a positive contribution to her own planning:

As my exposure to AVID increased and deepened, I gained two primary tools that enhanced my teaching—exposure to course planning matrices and strategies to move my teaching style away from a predominantly lecture format to one that heavily focused on student

engagement. The planning matrices provided a vehicle for week-by-week planning that allowed me to review course content, identify key concepts, consider appropriate student engagement strategies that foster learning and build in assessment strategies.

Professors are not always exposed to curriculum alignment, goals and matrices unless they have spent time in public schools, so this experience allowed the professors to communicate across disciplines toward the goal of incorporating AVID into the College of Education curriculum.

Professor G, who teaches math and science education methods courses, commented on the importance of instructional mapping in helping to assess the gaps in his methods courses:

Developing the instructional maps and course planning maps for my courses, and collaborating with colleagues to create the broader maps for our programs, provided me with a picture of where the strengths and gaps were in my own courses and within the overall program. In response, the use of AVID strategies in the math and science methods courses was adjusted and revised to not only progress more intentionally within each course, but to better fit within a scaffold of support and growth across courses.

The AVID site team and workshops provided opportunities for the authors of this study and other professors to discuss the structure of their courses in relationship to the college of education curriculum as a whole. Overall, these planning and discussion sessions contributed to advance the preparation for an NCATE accreditation visit as well as self-evaluations of individual courses.

**Changes in teaching strategies.** Although some AVID participants believed the AVID strategies presented in workshops were simply re-packaged best practices, most agreed that the strategies were indeed useful for helping future educators work with students. The second theme, *changes in teaching strategies*, describes a couple of the professors' experiences with the AVID workshops. For example, Professor J, who explained that she had limited college pedagogical training, believed that AVID allowed her to revise her instructional methods. Professor J described her experiences in this way:

Prior to AVID training, I typically covered the basic tenants of psychodynamic, humanistic, and cognitive-behavioral theories by reiterating main points from the text. With AVID's focus on student engagement and active information processing, I incorporated classroom activities that allowed students to write, question, collaborate, reflect, and review material from the chapters. I provided additional opportunities for processing through reflective journal prompts that allowed the student to process how a particular theoretical paradigm fit with his/her personal belief system.

The purpose of Professor J's implementation of journals and class activities was to promote higher levels of self-reflection and participation in discussion with their peers. As part of a community of teacher-educators, Professor J observed the higher level teaching methods her colleagues implemented while designing methods appropriate for counseling education. Of all of the professors in this study, Professor J seemed to experience the most transformation in the ways that she thought about teaching her students to reflect and participate actively in classes. Professor J's identity as "professor" within the university community seemed to take on a new teaching identity, one that allowed her to provide more opportunities for students to take control of their own learning. Wenger (1998) describes individuals within communities sustain growth through participation in a "repertoire of that practice" (p. 153). Professor J's participation in the new AVID TPI community allowed her to reinvent her identity as professor and teacher.

Teacher Educators at Southwest State University are most concerned about how their teacher candidates will understand and apply AVID strategies with their future students. The second research question addressed these concerns: "How did the College of Education professors perceive courses and students as improving, based on the AVID professional development?" The theme of

*improved teacher candidate self-efficacy and pedagogical knowledge* best described the university professors about their teacher candidates.

### **Teacher Candidate Self-Efficacy and Pedagogical Knowledge**

Professors who incorporated AVID strategies discussed their beliefs about the strengths and weaknesses of AVID for preparing teacher candidates for their work in public schools. According to their narratives, the college of education professors believed that their teacher candidates demonstrated improved self-efficacy for preparing their future students for academic success. Further, the professors believed their own strategy instructional methods had improved with the implementation of AVID. Professor L, who teaches early literacy classes, commented:

The AVID Professional Development has caused me to think more systematically about the strategies I teach and to directly teach more pedagogy. For example, I directly teach the “WICOR” acronym and methodically model how each letter is used within a strategy during class. Then in EDUC 4373, I turn the job of making the “WICOR” connections over to the candidates. The candidates have learned enough strategies that they have the ability to make the connections.

In AVID, WICOR is a learning model that stands for Writing, Inquiry, Collaboration, Organization and Reading to Learn (AVID.org). These are the components that tie the strategies together and provide a purpose for teachers to help their students learn and communicate effectively.

Professor L and other professors believed the consistent use of terminology for the strategies contributed to teacher candidates’ understanding of the ways AVID strategies could be used with their future students. Professor H, Associate Professor of Reading and Department Coordinator, commented: “I learned that AVID had workshops and books that could only enrich my pre-service and graduate teachers. I could help my students see the connection between theory and practice and affirm my own teaching by blending my philosophy with AVID.” Most professors agreed that the AVID materials and workshop content was beneficial for preparing their teacher candidates to help their future students improve academic skills. The strategies and repeated focus on critical reading and writing-to-learn were already supported in the education course curricula. As they applied the learning strategies that AVID offered into their own coursework, the professors participating in AVID TPI learned from each other’s interpretation of how AVID worked within their own courses. Through discussions in monthly meetings and AVID workshops, the professors demonstrated what Wenger (1998) refers to as “mutuality of engagement” (p. 152). As members of the AVID TPI community, individual professors were respected as knowledgeable and experienced, and all were actively involved in processes of learning the best ways to apply AVID strategies and philosophies in their own classes. Not knowing how to apply the strategies effectively was not viewed as a deficit (Wenger, 1998). Instead, professors asked each other questions, and shared instructional examples throughout the workshops and meetings.

Most helpful to the faculty was the opportunity to observe these strategies modeled by experienced public school teachers who taught the AVID workshops. Professor H explained, “The AVID professional development led me to consider more systematically the strategies that were used and taught, and not only to model their use but to directly teach the methodology.” Professor H and other College of Education professors received positive feedback from their students about the AVID strategies and applications. Professor H believed the reason for this positive feedback was that the use of AVID strategies involved collaboration with peers and interactions at higher levels of critical reasoning.

Professor H also believed that the consistent use and application of AVID terminology and strategies across disciplines helped teacher candidates to plan and participate actively. Professor H explained, “Conversations include planning for lessons that include AVID strategies that are introduced in one class focused on teaching early elementary grades as “Cats and Fish” and reformatted to the next pedagogical level for the upper elementary as “Philosophical Chairs,” and

scaffold yet again to the high school level as the “Socratic Seminar.” The professors believed that this consistency throughout the education courses helped their teacher candidates to think about how to adapt research-based strategies to a variety of content areas and grade levels.

The Implementation of AVID produced challenges along with benefits. Consistently mentioned across professor narratives was the need to prepare teacher candidates to apply AVID strategies to class content and instruction. Simply supplying teacher candidates with the strategies and activities was not enough preparation for teacher candidates to translate this into their own practices. Professors needed to think about how to model the strategies. Often education classes contained students with mixed content area majors, which meant that teacher candidates needed to be taught to think about how to apply these strategies to their content areas. Professor C, who teaches classroom management, explained, “My goal was to help them see that AVID strategies and ideas can be implemented no matter the content.” Professor A agreed that it was necessary to provide time in class for students to practice teaching the strategies in small groups in content area reading classes beyond simply observing the strategies being modeled by professors. Professor Y also described challenges that occurred with adapting AVID to second language and instruction:

In bilingual or ESL, the main focus does not begin with the subject or the strategy, but on *who* is receiving the knowledge (as background knowledge needs to be considered) before we teach or use a strategy and *how* is it being delivered? Is it comprehensible to the receiving end?

Professor Y and other Southwest State University professors re-interpreted AVID strategies and created assignments and class activities that they believed best prepare their teacher candidates to teach in their content areas. Much of this work occurred privately; however, professors were able to share course revisions and experiences during monthly AVID site team meetings and department meetings.

College of Education professors must consider their teacher candidates’ future students and how they can best help their students learn. In a city with high levels of poverty and a large number of Second Language English speakers, teacher candidates’ need preparation for working with students of varied backgrounds and academic skills. Teacher-educators participate in what Wenger (1999) refers to as “boundary trajectories” (p. 154). Participants in boundary trajectories find value in connecting across various communities of practice. Professors of reading, for example, must keep in mind the needs of their teacher candidates who will teach English Language Learners (ELL). ELL professors must prepare their teacher-candidates to consider their students’ learning in a variety of content areas. Teacher educators also work with communities of public teachers and professors who teach in other disciplines. The College of Education professors believed that AVID provided them with some tools to help their teacher candidates become successful in working with their future students while considering the possibility that their students may have poor language and academic skills.

The final research question invited professors to voice critiques and shortcomings of AVID as well as plans for future implementation and research: “What are challenges as they move forward in the implementation process?” The theme, *Suggestions for Future AVID Development*, best described professors’ reflections about the strengths and weaknesses of AVID and their goals for future work with AVID, and is detailed in the following section.

## Discussion

This study explored the experiences of faculty as they engaged in professional development under AVID’s Teacher Preparation Initiative (TPI). The grant-funded initiative, and the invitation to

contribute to a new initiative that could be replicated at a national and international level propelled this group of faculty at Southwest State University to engage in a community of practice.

As a college-wide effort, there seems to be little resistance to initiate activities in a community of practice. Incentives provided for leading initiatives in different programs, and the idea of piloting a program that could be replicated were significant motivators in capitalizing efforts for this initiative. At a college of education, where pedagogies are the center of all programs, providing a domain of shared interest where professors engaged with school districts and aligned the curriculum to prepare future teachers resulted in a successful model.

Nevertheless, although some professors fully embraced AVID philosophies, academic strategies and workshop content, other Southwest State University professors critiqued AVID and explained their plans to work within and outside the boundaries of AVID. Professor S, for example, requested that AVID design program specific component. Professor S critiqued her experiences with AVID in the following narrative:

I couldn't find any connection between AVID, the goals of the site team, and what I did in my program. After my first year, I figured there was some merit in this, but I needed to push for a leadership component. They (AVID) are in the process of developing a leadership component. I also wish there was better online training for AVID. I still struggle to find application for AVID in my program, but feel the professional development I have gained has been useful.

Like most programs, AVID is not designed to address all issues and solve all problems with student learning. The professors met weekly as a team to discuss how AVID's program fit into their own class content. As a result of the conversations and her own thinking, Professor S experienced an "outbound trajectory," which Wenger (1998) defines as those that "lead out of the community" (p. 155). Although Professor S believed learning about the AVID program was important, she decided it was not directly relevant to her field of leadership. Professor S. teaches graduate students, and the TPI focused on developing pre-service teachers. Professor S continues to be an active member of the College of Education community, yet remains on the periphery of AVID involvement by participating as an instructor in the Freshman seminar class where she implements AVID strategies that support the College Ready guidelines defined by the state.

Professor S's involvement may take a turn inward as AVID incorporates the leadership component which is currently under development. In relation to building communities of practice, it seems that the Teacher Preparation Initiative at the college level inspired professors to connect to the student practice within content areas such as Reading. Professor A connected with students when some pre-service teachers in content area reading classes expressed concern about the relevance of these strategies for their content area. Professor A explained how she addressed these concerns:

I began to occasionally remind the pre-service teachers that they needed to think about the appropriateness of the strategy to the content area, reading purpose, and grade level of the students they teach. As I plan my teaching of the content literacy course, I think about how to teach pre-service teachers to critique each strategy and how it may or may not work with the kinds of texts they assign within their content areas.

As a site team, the professors examined their Reading related practices according to pre-service teacher critiques and their own analysis of what strategies were in place that were compatible with AVID and what additional AVID strategies might augment the pre service teacher training for the EC-12 classroom experience. Professors committed each education course syllabus to a scope and sequence crosswalk and its applicability to teaching. This action by faculty allowed faculty to plan for consecutive semesters and to refine which strategies most benefitted the content of each course. An added benefit of the crosswalk process occurred when the site team discovered that the pre-service teachers practice at least thirty nine AVID core strategies during their training.

This process of examination brought into focus the goal of the university's president that each teacher candidate would graduate with enough exposure to AVID to confidently function in the local districts that use AVID strategies. Evidence of supporting community partnership emerged from teacher candidates' Observation Field Packet charts that list the thirty nine strategies that pre-service teachers record if they see or teach each strategy. Checkmarks indicate that teachers are implementing multiple AVID strategies in their classrooms and that the university teacher candidates recognize their use.

For Professor A, informed by a social justice lens, the initiative did not seem to provide enough preparation for teacher candidates. Although AVID offered a culturally responsive teaching workshop to both district teachers and Southwest State University professor A's critiques focused on the lack of in-depth analysis that is necessary for exploring issues of social justice with students. Professor A wrote,

I decided that AVID strategies alone did not sufficiently prepare pre-service teachers about culture, power and literacy. Further, the AVID workshop on culturally responsive teaching also did not explicitly address methods for teaching criticisms of social and cultural power. For example, the AVID culturally responsive teaching did not address *positionality*, an element of social justice thinking that I work on with my undergraduate and graduate students to teach them about cultural responsiveness and critical literacy.

Culturally responsive teaching is a key component of the cultural and social characteristics of literacy taught by most of the professors at Southwest University. Although there are different conceptual positions that influence the teaching of critical literacy and cultural responsiveness. Professor A and Professor L illustrate Wenger's (1998) concept of identity transformation in their acknowledgement of their professional experience and their willingness to critique, then move beyond the limitations of a professional development program.

As in many initiatives, those involved in the COE TPI, needed to understand the hoped-for outcome behind the initiative before implementing the strategies. Professors found a common intent in supporting their students in becoming successful teaching professionals, regardless of a subject or focus. In the end, the College of Education professors believed in the value of AVID to help teacher candidates and their future students improve academic skills. Through mutual respect and collaboration, coupled with feedback from students, faculty continues to evaluate the appropriateness of AVID content for their coursework.

### **Conclusion**

This study explored the narratives of individual faculty in one college of education integrating AVID strategies in a Teacher Preparation Initiative. Even though the initiative was being piloted and designed while being implemented, they all agreed on the benefits of infusing AVID TPI innovations into their courses. The majority of professors recognized that the initiative was contributing to the preparation of new teachers. While developing a higher education handbook for TPI, the faculty had the chance to reflect on the connections between their own training and the preparation of teachers, who would, in turn, support students in schools. During the next phase of implementation, faculty members planned to research the outcomes of implementing AVID.

Wenger (1998) suggests that "Engagement, imagination, and alignment are all important ingredients of learning—they anchor it in practice yet make it broad, creative and effective in the wider world" (p. 217). This process of critique and adjustment will most likely continue as professors work together in communities of practice. This combination of engagement and distancing through research allows participants in this or other learning community to analyze and reflect on the relevance of new information.

Implications for further research in the development of communities of practice among higher education faculty relate to strengthening partnerships with local public schools. The requirement of participating in professional development with school teachers and district administrators generated visibility and interest. The participation of professors in the craft of teaching and learning with public school teachers and other community members generated authentic conversations about improving the practice of future teachers.

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## **Preparation and Evaluation of Children's Rights Education Curriculum: An Action Research Regarding on Protection Rights Module<sup>i</sup>**

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### **Abstract**

Children's rights education is to enable children to gain the necessary social behaviors and essential knowledge for creating a democratic society that is based on respecting human rights. The purpose of this study was to investigate the preparation, application and assessment of a curriculum for teaching children's rights in elementary education. The research was designed as action research. The study was conducted in 2011-2012 education year during spring term in Ankara with the participation of 5th grade students whose families have middle and low income levels. Within the context of this study is a part of 11-weeks children's rights education curriculum which comprises activities to enhance awareness about children's rights were implemented. Protection rights activities were conducted from 6th weeks to 10th weeks. During the implementation period, in line with their ordinary study curriculum, students were requested to participate in various activities at least for 2 days in a week (6 hours) about kidnapping, protection from all forms of violence, child labor, sexual exploitation, refugee children, the right of privacy, other forms of exploitation, children in the war detention and punishment. Data collected in this study were based on both qualitative and quantitative methods. As a result of the quantitative and qualitative assessments done over the curriculum, it is revealed that the study group had demonstrated a clear progress on learning of children's rights, using this knowledge as a behavior, developing an awareness of these rights and freedoms. A significant difference was seen on students about teaching children about their rights. Moreover, it was revealed that a great awareness was seen in the study group about children's rights.

**Keywords:** Children 's rights, Convention of children's rights, Children's protection rights, Curriculum

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<sup>i</sup> This study was a chapter o from Sukran UCUS's PhD thesis supervised by Hakan DEDEOGLU.

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## Introduction

Respecting human rights, tolerance and peace create a democratic society. This depends on grown children who are citizen as they are endowed with these values in order to hand the culture generation to generation. Human rights education for a child should be started with children's rights so that children make perceive their rights and correlate their experiences easier than human rights. Children's rights education is beginning of human rights education and essential part of it. The phenomenon of children's rights is an important part of human rights. Thus, the emergence, realization, development and acquisition/application of children's rights have been studied along with the development process of human rights more generally (Doğan, 2000).

The Convention of Children's Rights (CCR) is one of the most important agreements accepted all around the world and aiming the greatest common benefits to children. This is the most well-known indicator of both children's significance and the promotion of this importance all around the World. CCR is comprised of 54 articles and includes rules that govern children's rights in four major groups, such as civic, economic, social, and cultural spheres, similar to the Universal Declaration of Human Rights. As can be understood from the articles of the CCR, the "concept of Children's Rights", in the largest meaning, is a concept that includes social, philosophical, moral and legal dimensions. Seen from philosophical and social perspectives, children's rights are considered under four main titles such as welfare rights, protection rights, adult rights, and rights towards parents (Akyüz, 2001, Franklin, 1993, İnan, 1968, Polat, 2007). It is guaranteed by the countries which signed the convention that children would be informed about their own rights.

United Nation's Convention of Children's Rights (UNCRC) compose of four main rights. These are right to protection, the right to life, and the right to participation (Akyüz, 2001, Franklin, 1993, Lansdown, 1994). They are listed as survival rights, development rights, protection rights and participation rights. Survival rights are the rights providing basic needs such as living, having proper life standards, medical care, nutrition, sheltering. Development rights are the rights such as education, games, recreation, knowledge acquisition, freedom of religion, conscience and thoughts that are necessary for a child to realize himself preeminently. Participation rights are the rights aiming at providing the child to gain an active role in the family and society. These rights are pointed out that expressing opinions, taking part in the decisions process concerning children issues, setting an association and collecting in peace. Protection rights are the rights providing the child to be protected against every kind of negligence, misuse, and exploitation. These are the rights that provide children to be protected in the judicial system, from use as soldiers and gunfighters, child laboring, having physical, emotional and sexual abuse, drug abuse and the issues related to special care and refugee children.

The concept of children's rights means the provision of benefits and protection by legal rules in order to allow children to develop mentally, physically, emotionally, socially, morally, economically, independently, decently, healthily and normally. In terms of child's safeguarding, it is served that protecting benefits of children in developing physically, intellectually, socially, morally, liberally, honorably (Akyüz, 1991, 1999). Children and children's rights need to be protected with the notion of people's responsibility towards children, regardless of language, religion, race, color, nation, faith and ideology. Protecting children's rights, improving them, keeping children away from any kind of inattention and abuse will require internationally binding documents (İnan, 1968, Ünal, 2008). Articles which are on the behalf of CRC (Convention of Children's Rights) are listed such as Article 11 kidnapping, Article 19 protection from all forms of violence, Article 20 children deprived of family environment, Article 21 adoption, Article 22 refugee children, article 32 Child labor, Article 33 drug abuse, Article 34 sexual exploitation, Article 35 abduction, sale and trafficking, article 36 other forms of exploitation, article 37 detention and punishment, Article 38 war and armed conflicts, Article 39 rehabilitation of child victims, Article 40 juvenile justice, Article 41 Respect for superior national standards (UNICEF, 2004).

According to 42nd article of United Nations CCR, “States Parties undertake to make the principles and provisions of the Bill widely known, by appropriate and active means, to adults and children alike.” It is the fact that it is a responsibility for children as well as adults to know the provisions and principles of the bill. Therefore, while this article mostly advises on children’s rights, it also implies that children need to receive human rights education. Children informed about the rights they have will be individuals who are aware of their rights as adults, capable of using their rights, protecting them, and respecting others’ rights (Karaman- Kepenekçi, 2000). United Nations Children’s Rights Committee examined “The First National Report” and gave suggestions on the entire convention to be included to each level of the education system and curriculum so that children’s rights could become widespread in Turkey (Karaman-Kepenekçi, 2009). Hence, it is stated that the 42nd article of the bill is closely related to children’s rights, and these related issues need to be taught at social institutions (family, school, etc.). It also has formed a basis for the study to be performed for the development of a curriculum related to children’s rights education.

Societies can be provided positive changes on condition that children have ownership of their rights and responsibilities and adults are provided with knowledge and conscious regarding educating on this issue. Thus, Children should be educated and be made conscious about their rights and their responsibilities from starting early childhood education to all grades (Akyüz, 2010). The Special Child Session of United Nation General Meeting which is held in May 2002 were accepted and highlighted that curricula, education materials, and tools were suggested to develop on the behalf of serving the protection of human rights, peace, tolerance, gender mainstreaming with referring to Article 42. It is stated that Institutions related to National Human Rights could help about children’s rights education researching and integrating it to curricula (United Nations, 2004).

When it comes to Curricula of Turkish National Education, survival rights, and protection rights are not included sufficiently in curricula. It is possible to tell that particular rights are focused (Merey, 2012, Özdemir-Uluç, 2008, Uçuş, 2009). Turkey, by signing the convention, guarantees that children’s rights will be taught to both children and adults with appropriate means (42nd article). On the other hand, while schools are the most appropriate environment. Required sensitivity are not still created about children’s rights in Turkey and learning outcomes, education methods and school climate do not provide knowledge and skills about knowing and using rights. From this point of view, children right education curriculum can be a necessity.

If children’s rights education is given successfully, it is certain that children will have big awareness, knowledge about children’s rights and protection. It is a well-known fact that preventative implementations are very important regarding child abuse and neglect. In that sense, children’s rights education can be a preventative work about child abuse and neglect. This study was conducted to assess the impact of an elementary school curriculum on the students’ cognitive and affective development and to evaluate how students benefit from their rights and liberties.

### **The Purpose of the Study**

The main objective of children’s rights education is to enable children to gain the necessary social behaviors and essential knowledge for creating a democratic society that is based on respecting human rights. This study is based on the preparation, application and assessment of a curriculum for teaching children’s protection rights. It also aims at assessing the impact of an elementary school curriculum on the students’ cognitive and affective development and to evaluate how students benefit from their protection rights and liberties. These questions can be examined:

1. How does a children’s rights curriculum benefit children’s cognitive and socio-emotional skills regard to their protection rights and freedoms?
2. Does developed curriculum bring awareness and sensitivity to children about children protection rights?
3. Does developed curriculum bring different viewpoints to children?
4. How does teaching actualize in the curriculum implementing process?

## Method

### Research Model

In this study, action research method of qualitative design was used. The action research is known as “teacher research” in literature because of the researcher role of the teacher in the process, promote understanding of new perspectives for some teachers (Cain & Milovic, 2010, Schoen, 2007, Şimşek & Yıldırım, 2006). Besides, it has positive effects on teachers’ understanding, practice and morale, with consequent benefits for students, although these are not universal outcomes of the research process (Cain & Milovic, 2010). Berg (2001) was grouped action research in three topics and these are “technical/scientific/action research,” “implementation/reciprocal collaboration/discussion oriented action research” and “emancipator/developer/critical action research.” Obtained data was analyzed by the descriptive method of qualitative research. In general, action research is constituted by a cycle that includes “planning,” “acting,” “observing,” and “reflecting” stages (McNiff, Lomax & Whitehead, 2004, McNiff & Whitehead, 2002).

### Participants

Participants in this research consisted of freshmen continuing their education in the department of elementary school teaching in an elementary school of located in Ankara during the 2011-2012 spring term of the academic year. Twenty-four of the participants were female and 20 were male students. When determining the participants, the criteria sampling method, one of the methods of purposeful sampling, was used. According to this method, a sampling is envisioned and determined in relation to a certain purpose or the subject being focused on (Şimşek & Yıldırım, 2006.). In this research, this was a group who didn’t receive any education on the subject of children’s rights education until Grade 5 and who only completed the unit called “Learning My Rights” in a social science course. In this unit, there were not included protection rights in social science curriculum for grade 5 (Meray, 2012, Özdemir-Uluç, 2008, Uçuş, 2009).

The Practice Education Teacher Mr. A (PT): Mr. A was a classroom teacher with 7 years’ professional experience, who graduated from a teacher’s training school. He had no experience relating to the topic “children’s rights.” He had four meetings for coaching and feedbacks with the researcher regarding protection rights. Mr. A had the responsibility applying activities for the whole class during the process.

The Researcher (R): The researcher graduated from Hacettepe University, Department of Elementary Education Program. Her role in the process was to collect data and guide the teacher in the analysis of the data as well as being the participant observer. The practice teacher and the researcher had four meetings about protection of rights.

*Practice Students (PS):* Five grade students from the first level of elementary education participated in the research. There were 24 females and 20 males, a total of 44 students. They were 11 years old. They mostly participated curriculum activities from the first week to last week of application. Students’ first name and surname initials were coded for ID. For example, “AD”, “MY”, for the whole class “WC” etc.

*The Trustworthiness Committee:* The committee included four college professor, associate professor, assistant professor specializing in the area of elementary education. In the scope of the research, the roles of the committee members were to observe the data collection process and provide guidance and expertise for data and instruments.

### Data Collection Instruments

Data collection instruments used in the research, are composed of rights of protection. In the scope of the research, semi-structured interviews were conducted with the practice education teacher and participant students who were chosen 25 (intentional sampling from their scores from awareness of children’s rights scale); researcher participated the curriculum implementation process as a

participant observer thus she reported the process and she also used a observation form which was developed by her. Researcher diary, students' diaries, children products which were expressed children feelings were also data collection instruments. However for quantitative scores, protection part from awareness of children's rights education scale planning meetings was applied as pretest and posttest. Table 1 explains that process.

**Table 1.** *Data Collection Instruments*

<b>Researcher</b>	<b>Teacher</b>	<b>Students</b>
Observation	Semi-structured interview	Children's Rights Awareness Scale pre-post test
Researcher Diary		Semi-structured interview Children's products and materials Children's diaries

*Awareness of Children's Rights Scale:* This scale was composed of 36 questions which were Open-ended questions, multiple-choice questions, true-false questions with contained cases and scenarios (Uçuş, 2011). Questions were prepared on the behalf of CRC, that's why participation, development, protection, rights of life were four main constructs. The reliability of the scale was 0.90.

*Observation:* It is important in the action research the researcher has participant observation duration of implementation in terms of obtaining data in depth analysis (Balci, 1991). In the observation process, another observer joined particular classes. The researcher and supply observer took notes, reported the process and observation notes and reports were compared each other by researcher and trustworthiness committee. Besides a control list was prepared by the researcher for evaluating the practice teacher's classroom management. According to data obtained from check list was used for coaching and giving feedbacks to the practice teacher in the meetings.

*Classroom Activities/ Student Products:* Production rights module of children's rights education were composed of case study, role-play, utilizing newspapers and movies. Children participated those activities. They worked on some papers, drew some images and discussed some issues in order to express their feelings.

*Diaries:* Researcher and students kept a diary to evaluate each module. Diaries which kept by students were accepted as a reflecting part of children's rights day and investigated for students' perceptions and their learning outcomes. Researcher kept diary in order to identify limitations and impact of curriculum and providing feedbacks for the practice teacher.

*Semi-Structured Interviews:* Semi-structured interviews were conducted with the practice teacher and 25 students who had low, medium and high scores from awareness of children's rights scale. The practice teacher was asked about outcomes and difficulties for himself and his students for the whole process. In this paper, findings of semi-structured interviews were not used with very detailed way in the protection module.

**Data Analysis**

Data collected with this study was analyzed by using both qualitative and quantitative methods which comprise "semi-structured student and teacher interviews", "student diaries", "researcher observations", "notes and diary taken by the researcher", "students' products' comments" and for the quantitative part "Children's Rights Awareness Scale" which is developed by the researcher herself. These data are analyzed in two phases: during and after the collection. In an action research, analysis is carried out during the data collection process, and it sheds light on the type and the quality of the additional data which needs to be collected. Statistical analyses were conducted using the package program SPSS 17.0 for Windows. In the analyses, mean and standard variations of

the scores were calculated by using participating students made in the preliminary and final tests were also calculated. Validity and reliability of an action research is carried out differently than in quantitative research. As action research focuses on local problems, the results obtained do not have to be generalized (Neumann, 2006). Moreover, action research focuses on a specific problem determined in a specific environment/situation. In that regard, the implementation process of the curriculum is interpreted more freely. Adding that, in the course of the validity studies in this research, researchers provided continuous communication with students and with the practicing teacher. Qualitative data is analyzed via descriptive analysis, content analysis and discourse analysis. The main program for qualitative analysis is developed by focusing on the previous studies and is considered under protection.

Data analysis process could be considered from a series of process. Firstly, all data which was provided from different methods such as observation reports, diaries' outcomes, products of learning activities was converted to written forms. Data put down on papers was organized as a data set for each module of curriculum. Secondly, two field experts from trustworthiness committee also examined data sets in order to provide for researcher's analysis consistency. After that examination, the reliability of the study was calculated with the use of Agreement / Agreement + Disagreement X 100 suggested by Miles and Huberman (1994) and it was 0.91. Some data sets were reviewed via coming back by returning to raw data. All written data were read in depth and taken reasonable notes on the source of data. This phase was very important step to go up the coding step. Thirdly, identifying themes were used for this research instead of coding. Thus, concerned literature and data of evaluation were utilized to compose and classify main themes and sub-themes. As data sources for analyzing were read, they were organized under similar themes. All main themes and their sub-themes were supported with source of data sets and were compared with each other. At the end of the analyzing data, findings were described and interpreted with body of literature and were related to previous researches.

**Research Process**

In the first step, data were collected to prepare for the teaching applications and the construction of curriculum. In that sense, the grade of implementing curriculum was determined on behalf of advising field expert, pedagogue, some master elementary school teachers. Grade 5 (Age 11) was found convenient for children's rights education curriculum. The first step, body of literature was reviewed and the construction of curriculum was designed to related previous research results. The second step was the application process. Some planned lessons from modules were applied for the different classes. After that, some activities revised and organized. Planned lessons were implemented one day a week. While co-planning meetings were held each week before applying the lesson, reflection meetings were actualized after the applications for particular lessons from modules. The application process lasted for 4 weeks for protection rights and 7 co-teaching meeting were implemented in this process. In the application process, the trustworthiness committee met, on average, every month. Re-evaluation was carried out in the last step. Table 2 explains the process of protection module between 6<sup>th</sup>-10<sup>th</sup> weeks.

**Table 2.** *Children's Rights Education Curriculum: Protection Module*

<b>Related Articles from CRC</b>	<b>Protection Rights</b>	<b>Period</b>
2	Respect to Individual Difference, Anti-discrimination	3
11, 19, 20, 22, 34	Abuses of children's rights	10
35-40	Protection from child abuse and neglect	5
32	Child labor	3
16	Right of Privacy	1
17	Protection from Media	3

Teaching and learning materials were prepared by the researcher but the practicing teacher's opinion was asked for each lesson planning. "Free Activity Lessons" were occupied for implementing

modules. Learning environments for protection module have common principles on the behalf of CRC principles. Supplying such as;

- Equality for all children, supporting anti-discrimination
- Child's best interest in all situations.
- Child participation and "freedom for expression"
- Respect for all freedoms and all human rights.
- Respect for child's privacy
- Knowledge of physical and emotional violence, child neglect and abuse

### Findings

Protection rights module is one of four main modules from children's rights education curriculum. Learning-teaching activities were defined and classified in particular themes such as child labor, discrimination against child and respecting individual differences, child abuse, violation, neglect (right of privacy, protection from media were evaluated in this session) in the protection rights module. 21 lessons were taught for this module from 6<sup>th</sup> week to 10<sup>th</sup> week.

#### Findings of Learning and Teaching Activities Related to Child Labor

Reports from newspapers and the related Article 32 of CRC were attached on the classroom walls in advance. PR provided PS viewed to these advance organizers in order to have pre-information about that session. PR shared a story which was about a child worker with PS as an introductory activity of this session.

*PT: Which right do think about this child doesn't exercise according to CRC? What are the limitations and shortages for him/her? What kind of precautions and implementations does CRC have? What kind of changes are there if a child starts to work? Think about these issues."*

*WH: Economic shortages cause child labor. That's why we meet street children every day, they have to work in order to get their basic needs.*

In the progress, the whole class were divided into three small groups and they were provided work sheets which were written basic discussion questions. Announcers of three groups were stated and explained their groups expressions and discussions.

*CN: According to CRS, child labor is not allowed.*

*AD: Protection of child labor is highlighted. Their rights are under protection.*

*CRC. They fall behind their education.*

*MK: Children work because of poverty. Poor children only fall behind their education; their all basic needs are also under risk.*

*PT: Which organizations are responsible for preventing child labor? Is there any document about child labor to protect children except CRC?*

*CN: Some non-governmental organizations, unions, ministries of family and social policy...*

*MK: UNICEF, United Nations*

*PT: What is the child labor? Can you describe it?*

*CN: It is a kind of abuse and violence damaged to the child.*

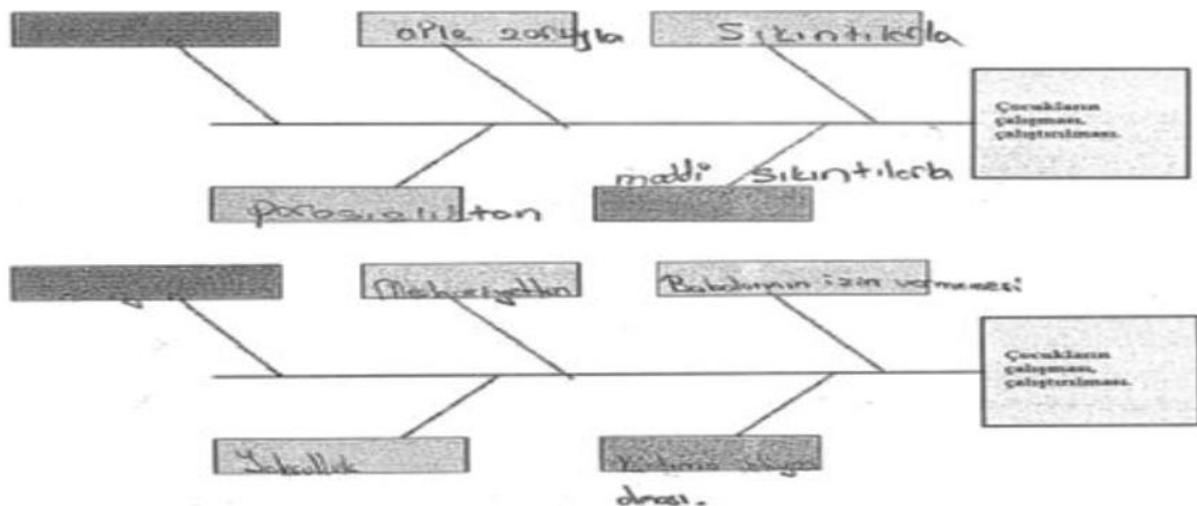
*PT: Is there a child labor in your neighborhood or generally in your country?*

*AD: Definitely. Children do different kind of works from seasonal agriculture working to housework.*

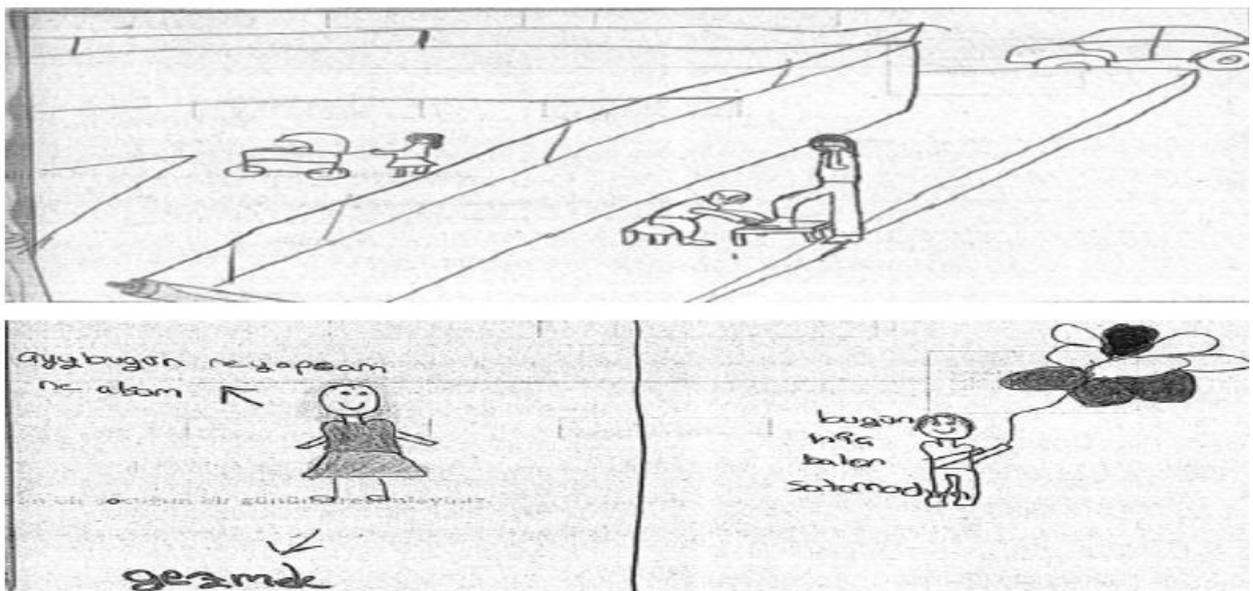
*MK: In our country, I honestly say there a lot of children labors. Children even are involved in illegal activities. Sometimes we read news about children who are forced to carry drugs or work in insecure places such as mines.*

Students were re-divided into 11 groups. Each group was given photos of children working in dangerous conditions. PT asked all the groups their ideas about how this photo was taken and told them to write a story telling the moments about the child's life in the picture. PT gave an instruction to all groups that "How did this photo take? Like a flashback before the moment of the photo.

Compose a story for your photo and play it.”. Each group’s creative drama shows were watched and PT asked some questions to PS in order to guess the photo related to each role-play. In the last phase, a fishbone diagram was used for reasons, results and solutions of child labor and also a routine day of a child worker was drawn by WH. Children had high motivation in the child labor progress. The drama was the most attractive part of this session.



**The Image 1.** Fishbone Diagram Sample (Child Labor Reasons are economic issues, poverty, parental pressure like etc., Solutions are legal sanction, child welfare etc.)



**The Image 2.** A Drawing Related to A Routine Day of Child Worker

Classroom management were mostly effective. PT had some partly sufficient summarizing the current lessons and he was enough for preparing and presenting materials in this module. When it comes to children’s rights awareness’ scale, Table 3 explains the difference between pre-test and post-test used mean. There is a significant difference of the value of t test both of them.

**Table 3.** *Depended t Test Results of Child Labor Questions Pre-test and Post-test Scores*

Children's Awareness Scale	Rights	N	X	S	T	p
<b>Question 1</b>						
Pre-test		44	8.76	2.17	-3.136	.000*
Post-test		44	16.73	6.32		
Children's Awareness Scale	Rights Scale	N	X	S	T	p
<b>Question 2</b>						
Pre-test		44	8.86	2.31	-9.319	.000*
Post-test		44	18.89	6.35		

\*p< 0.05

### **Findings of Learning and Teaching Activities Related to Preventing Child Discrimination and respecting Individual Differences**

Classroom was organized in advance in order to let PS move easily. The related Article 2 of CRC was attached to student board. Introduction activity was called "Similarities and Differences Dance" presented with International Folk Dance Music Sound. PT told that "*Students who are tall, come together... Students who have brown eyes, like red etc. come together and keep dancing*" PT gave some instructions to PS with the music... (*Bach Concerto 9*)

"Everybody makes a colorful sphere. You make it bigger and then make it smaller. Think it as your world and individual differences. This sphere has your emotions, interests, your characteristics etc." PS discussed about their expressions and individual differences each other. They concluded that individual differences are great wealth for societies. After this activity a poster about World Children which had a slogan "We are celebrating it altogether, with all world children.". PS asked some key questions to find April 23<sup>th</sup> "Children's Festival". Some discourses were as follows:

*DS: Turkish children invite foreign children to celebrate Children's Festival.*

*PT: Why do you celebrate April 23<sup>th</sup> "Children's Festival" together? What is the purpose of celebrating?*

*YK: All children are brothers and sisters. Our great leader Ataturk pointed out it. He attributed a great importance to children.*

*AU: The message for brotherhood, sisterhood and peace. Unity and solidarity.*

A poem which was about April 23<sup>th</sup>, fellowship and peace, was read by PT and then he divided class into two groups. He gave two questions in written worksheet. Groups made a brain storming about these questions.

*Question 1: What does respecting to yourself and someone else mean?*

*Group 1: If a person has a self-respect, he/she has also respect to another one.*

*Question 2: If someone has a different or good interest that you don't have, do you respect him/her or do you feel jealous? Why?*

*Group 2: If we get younger, we can feel jealous. But it is the best what to tell him/ her good features. It is a good opportunity to learn new experiences from him/ her.*

PS sat down in a round table. Carton houses (Miniature was called) which were designed in previous visual art class. Children photos from different countries were attached to blackboard and a number was given for each photo. PT gave some information (age, country etc.) about children in photos and he told students that they would choose three of them in order to stay in their houses. They discussed how they chose at the end of this process. They pointed out that they identified their reasons without discrimination. The last activity of this session was creative drama. Children were assigned to different groups for role-playing different cases which were about anti-discrimination and respecting individual differences. They empathized with children lives', culture and feelings come from different

countries. There were some disorganized situations in terms of planning and using time, preparation of learning materials. PS didn't envisage PT's some verbal expressions while PT was instructing. When PT was taking part in the play, PS made a sense of discrimination in role-play and discussion activities. In this session, PS were asked open-ended question and requested to fill gaps about anti-discrimination and all children in the world. All questions were coded under their sub-themes similarities.

**Table 4.** *Child Anti-Discrimination and Individual Differences Questions Pre-test and Post-test Frequencies*

Sub theme	Pre Test f	Post Test f
Children have special rights	11	1
Respect individual differences	1	12
Article 2 of CRC		5
Respect to all children	9	14
Equality	12	12
No answer	11	
Total	44	44
Sub theme	Pre Test f	Post Test f
Kids in the world.....		
Children must be provided education		1
People make their life easier	9	
They have different features	11	15
Tey need to respect	19	7
Tey like playing	2	1
All of them are equal	3	12
They must be protected		8
Total	44	44

Table 4 explains Child Anti-Discrimination and Individual Differences Questions Pre-test and Post-test Frequencies. "Children have special rights", "Equality" were most commonly used sub-themes in the pre-test for the first question. "Respect to all children", "Equality", "Respect individual differences" were most commonly used sub-themes in the post test. It may be predicted that Children had an agreement and awareness on equality and respecting on individual differences. For the second question about gap filling, on the one hand "They have different features", "They need to respect" were mostly used in the pretest, on the other hand "They have different features" and "All of them are equal" were mostly used in the post-test. In this context, they may have had reasonable awareness on this session related the matter.

### **Findings of Learning and Teaching Activities Related to Child Neglect and Abuse**

In this session, there were different kinds of child abuse cases such as child poverty, abuse of right to health, gender mainstreaming, children with disabilities, kid brides. PT posted different photos on classroom walls, news like "child gallery". He also added students' stuff (works/products) which they collected for homework and their portfolio about their protection rights. They investigated all of photos and news. PT wanted from students to write an identity card or tag each photo or news. At the end of this activity, they looked over all of identity tags, children had awareness on children related matters. They also explained each issues related to article of CRC by using CRC document which was attached on the classroom board and separated them in terms of bad or good news.

Afterwards, students grouped and they wrote a petition on one of child abuse. Besides, they chose the institution (public, non-governmental organizations etc.) to submit the petition. The conflict was constituted between to whom it may concern from institution and people written petition. They wrote down their demands, tried to negotiate on one idea. One leader of these groups used her communication and speaking skills very well and she guided the flow of discussion. Thanks to her,

students used their argumentation skills in a democratic classroom environment. These following questions were used in that process:

*“Why do countries abuse children’s rights? Think about a country which has child abuses and neglect, what do you say about this country’s legislative and judicial system?”*

*“As a right was misused, how does it affect other rights? As a right was developed and protected, how does it affect other rights?”*

PT: Now that, each group develops a system which secures all children’s rights, covers all children (at least %90) needs. Besides all governments and countries support this system or organization.

*First Step PT: “Identify the purpose of this organization, the story of its foundation, the construction of its working system. How does this system work? What kind of people work here?”*

They established a non-governmental organization which aims at creating a rehabilitation system for abused children. Psychologists and medical staff were important. Moreover, volunteers were also working in the organization and most of them were children.

*Second Step PT: “Your organization is celebrating its fifth anniversary. How would your organization be? What changed (Positive or Negative)? Think about the future?”*

*WH: Organization has a mission. Our staff has just got bigger and there are field experts from each child development domain. New approaches and technology support children. Children welfare is getting better. But, unfortunately there are still wars and conflicts so they still affect children-related issues. It is a big challenge for us.*

*Movie Days:* PS watched five movies about child abuse (war, kid brides etc.). Children liked watching movies a lot every week. After each movie day, “The Movie Evaluation Form” was distributed in order to investigate students’ perceptions. It was found out that student had lack of knowledge about their protection rights. That issue was very new area for them

*Child Poverty:* PT gave a set of keywords about child poverty “Hunger- inefficient nurturing-health problems” to each group. They made a brainstorming before they composed news about child poverty.

*Abuse of Right to Health:* PT presented a case which was about a child’s health problem and its effect. They evaluated it by using six hat thinking exercise. Children stated that socio-economic factors cause many problems effecting children lives.

*Gender Mainstreaming:* A paper grid was prepared. PS discovered features based on gender mainstreaming. These features divided typical features and typical activities for men/boys or women/girls (Flowers, 2009).

*PT: Is there any discrimination about genders in your neighborhood or in your life?*

*RT: My grandmother behaves my male cousin differently. She cares and loves him so much.*

PT read a fairytale whose main characters were switched their genders. Students’ assignments were about switching genders in a well-known fairytale. Afterwards, a group game was played about gender mainstreaming (Flowers, 2009).

*Children with Disabilities:* They showed empathy towards disabled children. They shared their experiences with disabilities. A photo was attached to the blackboard. It was about child with physical disability. They acted about this child’s family life, school life when he grows up and his friends. They discussed solutions to reduce disabled children problems.

*Juvenile Delinquency:* A case was shared with students. They discussed hanging down a child as a group study. They came to the conclusion that international legislations and laws must be empowered and media has a major to change perception in under-developed countries.

*Child Brides:* Another case was shared with students which was about a girl becoming a child bride. They performed a creative drama. First phase was composing an identity for the girl by using creative thinking skills. The second one was understanding the plot of case so a gossip around who were the girl's neighbors, friends, relatives was composed. Lastly, teacher was in role as a TV program moderator. He assigned to students as field experts (lawyer, social service expert, the girl's teachers or friends, the person which girl married with etc.). Teacher sometimes read newspaper and law books and made telephone calls about this issue.

PS grouped into three different part. They evaluated and discussed negative impacts of war on children in the evaluation process and wrote a column about children in war as a group activity. Another evaluation activity on writing was "problems encountered with children in your neighborhood". Children got bored with that activity so, they prepared this study together. In this session, level of children participation in the activity was low. Watching movies took so much time so that time schedule had to be reorganized and time for other activities was reduced. They also stated that media causes a lot of child abuses especially newspapers.

PT instructed this session in 10<sup>th</sup> week, He had a bias on this session because of critical and sensitive issue. PS were asked about three most seen act of violence in their own life with brain storming. The most commonly expressed violence was "physical". Domestic violence, violence to woman and animals, peer victimization was applied by using physical force, swearing, insulting. They discussed reasons of violence.

*MY: We see them on the TV or in newspapers.*

*MN: Even in our neighborhoods.*

*PT: What is the reason of domestic violence?*

*AD: Semi-illiterate or non-illiterate.*

*DK: People are in depression or their mood were bad due to various issues such as economic problems. They inflict violence to other family members to get rid of their anger.*

Students were paired in groups to play a game about mother-child relations. Each couple created a case "Why does a woman beat her child?" and responded to that question by acting. They composed some keywords for their act and discussed about them in detail in their act. They listed some words which children were mostly exposed. They thought about alternative solutions to figure out the problem in the role instead of violence.

*WH: Everybody or any institution has a responsibility If he/she meet a violence ...*

PT wanted from students to prepare a mission grid for government, family, society, school, neighborhood, ministries, media etc. when they meet violence. They mostly stated that rules and regulations reorganized and revised as soon as possible. Immediately afterwards, PS composed scenarios on using a newspaper about child neglect and abuse. They envisioned some photo frames about their scenarios with different kind of music as like a trailer. Three of students inferred from this activity that violence was everywhere and every time. In the second part of this session PS watched different cartoons which were about child neglect and abuse and they discussed them.

*PT: "What do you think of these cartoons? What kind of features and principles did you see?"*

*What is the most highlighted expression of child abuse?"*

*Some PS' statements: '*

*"Violence is not only physical. Someone has a big power and predomination, she/he commit to violence anybody else who has weak and poor. Violence (Each kind of violence like emotional etc.) is a child abuse and it gives very big harm to child development.*

Afterward of cartoon activities an awareness poster of child abuse and neglect was used in the process. It was prepared in maximum size for attaching to the blackboard. PT wanted from each student to write five main principles after they examined the poster. Students had some difficulties on composing principle. That's why, PT inferred from general expressions from students' answers. Some of them are following:

- "Personal privacy is very important. It must be protected."
- Everybody has a moral one of kind.
- Each touch is not always a good one.
- You cannot trust someone even an adult if you don't know very well."



Image 3. An Awareness Poster of child Abuse and Neglect

These principles were written students' worksheets and then tree different color flashcards (Meaning of them: Agree. Disagree, Neutral) were distributed to students. They chose a card which one was correct for them related to one of teacher statements. They also explained their ideas why they chose that card. For instance, "Only girls are exposed to sexual abuse".

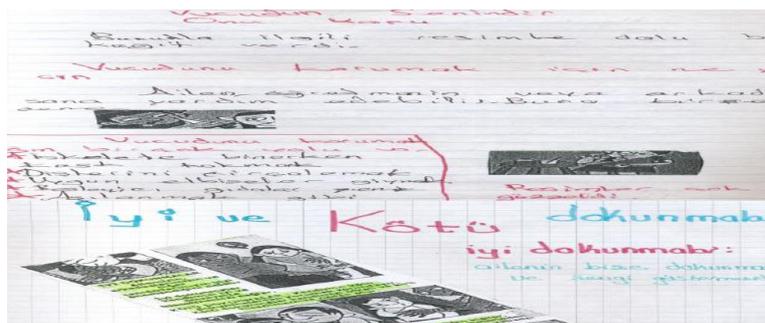
Blue: I agree      Green: Neutral      Yellow: I disagree

In this activity, students discussed child abuse very well and they gave some samples from media. Most of them were active participants and expressed their feeling freely in the discussion process. PT also mentioned about child protection service and children police and he organized an activity to integrate children police into the plot by using news. By this means of it, he accommodated children with noticing child protection services' missions. Afterwards, PS composed stories related to pictures which were given by PT as an evaluation activity. They also noticed with composed stories that child labor is a different child abuse.



Image 4. Some Pictures from Composing a Story

When they also evaluate the whole session, they mostly pointed out awareness poster of child abuse and neglect were helpful. They also stated that they established a link between life, experiences and child protection rules, legislations. However, it was observed that PT couldn't give feedbacks according to students' answers. Thus, he didn't evaluate students' products in the process.



**Image 5.** One of Student Diary “Bad Touch and Good Touch”

When it comes to children’s rights awareness scale, Table 5 explains the difference between pretest and posttest used mean. There is a significance difference the value of t test both of them. It can have said that teaching-learning activities about child abuse and neglect session created an awareness on children.

**Table 5.** *Depended t Test Results of Child Abuse and Neglect Questions Pretest and Posttest Scores*

Children’s Rights Awareness Scale	N	X	S	t	p
Question 1					
Pre-test	44	8.65	2.80	-5.33	.000*
Post-test	44	14.42	5.31		
Question 2					
Pre-test	44	9.5	5.80	-5.845	.000*
Post-test	44	16.7	6.55		

\*p< 0.05

**Findings of Learning and Teaching Activities Related to Different Kinds of Child Abuses**

When it comes to children’s rights awareness scale, Table 6 explains the difference between pretest and posttest used mean about multiple-choice question. There is a significance difference the value of t test both of them. It can be said that teaching-learning activities about this session created an awareness on children.

**Table 6.** *Depended t Test Results of Child Abuse and Neglect Questions Pretest and Posttest Scores*

Children’s Rights Awareness Scale	N	X	S	T	P
Pre-test	44	15.85	1.80	-2.33	.000*
Post-test	44	24.42	4.31		

\*p< 0.05

**Table 7.** *Pretest and Post Test Frequencies of Gap Filling Questions*

Children’s Rights Awareness Scale	Pre-test	Post-test
A disabled child.....	F	f
He/she has special rights	-	19
child’s life should be made simple	9	2
He/she has different features compare with others	-	15
He/She needs respect	29	7

Irrelevant answer	2	1
No answer	4	
Total	44	44
<i>Children's Rights Awareness Scale</i>	Pre-test	Post-test
<i>Boys and girls.....</i>	F	f
Equal	9	18
There is a discrimination	10	3
Equality is not possible in terms of culture, customs, live standards	-	8
They have different features	14	6
They don't get along with each other.	9	9
No answer	2	-
Total	44	44
<i>Children's Rights Awareness Scale</i>	Pre-test	Post-test
<i>Give an example for abuse of right to life</i>	F	f
Children trial	-	7
Children get hanged	-	7
Children die in war, poverty, earthquake	4	11
Children live in unhealthy and unhappy environment	16	9
Children expose harmful products and drugs	9	10
Unrelated answer	8	-
No answer	7	-
Total	44	44
<i>Children's Rights Awareness Scale</i>	Pre-test	Post-test
<i>Children in poverty, fatal accidents, disasters.....</i>	F	f
Government helps	2	8
Even all people are in trouble	26	16
Harmful for human psychology	15	18
Unrelated answer	1	-
No answer	-	2
Total	44	44

Table 7 explains disable child gap filling Question Pretest and Posttest Frequencies. "Child's life should be made simple", "He/She needs respect" were most commonly used sub-themes in the pretest for the question "A disabled children...". "He/she has special rights", "He/she has different features compare with others" were most commonly used sub-themes in the post test for the question "A disabled children...". It may be predicted that Children had an agreement and awareness on equality and respecting on individual differences. For the second question about gap filling "Boys and girls", on the one hand "They have different features", "There is a discrimination" were mostly used in the pretest, on the other hand "Equal" and "They don't get along with each other" were mostly used in the post test. In this context, they may have had reasonable awareness on this session related the gender mainstreaming. The third question about gap filling "Give an example of abuse of right to life", on the one hand "Children live in unhealthy and unhappy environment" and "Children expose harmful products and drugs" were mostly used themes in the pretest. On the other hand, "Children die in war, poverty, earthquake" and "Children expose harmful products and drugs" were used in the post test. It seen that child life standards and welfare may have an impact on right to life. The last gap filling question "Children in poverty, fatal accidents, disasters.....", "Even all people are in trouble" and "Harmful for psychological" were commonly used in the pretest but, "Harmful for human psychology" and repeated sub-theme "Even all people are in trouble" were used. It is fact that children have common idea on poverty, fatal accidents, disasters are universal problems and they give lots of harm to people in terms of psychological

## Results and Discussion

In this research, qualitative research methods and supportive quantitative research strands were used to collect and analyze the data. Results of the study showed that major part of children didn't have enough knowledge sexual abuse, physical and mental violence, injury, neglecting. Children's attitudes were evaluated in terms of their protection rights' awareness. They mostly stated that sexual and physical abuse were the worst child abuse. They also stated that girls' marriage in early ages, deprivation of children welfare were big issues about children's rights. However, it certain that children had experiences about different kind of discriminations. There was significance difference between pretest and posttest inferred from implementing children protection rights module.

It was inferred from participant children's reflections, protecting children's rights cannot be succeeded in mentioning and announcing child abuse and neglect. When regulations, good samples and implementations are announced, it is certain that constituting awareness of children's rights and developing rights can prevent child abuse. The other impact of protection rights education module. Children were worried child labor inferred from their life experiences. They mostly think that there wasn't enough regulation about child labor although it should be considered important. They also stated that child laboring was the second worst child abuse. It was resulted that economical deficiencies cause many issues in children lives so child labor was one of these issues inferred from children's learning outcomes.

Media is very important tool to put public union into motion in order to create a sensitivity and push people who are responsible for making and stating new policies about child protection. In this education process participant children had positive impact about the effect of media on figuring out children's issues. In addition, media has noteworthy responsibility for children on the using and utilizing freedom and rights. Nonetheless, Güler (2009) pointed out that children's rights and children issues were neglected in broadcasting programs including children programs. It was also stated that TV or radio programs did nothing to give importance children's participation and their demands and children were regarded as passive citizens.

When it comes to curriculum implementing process, children enjoyed in the process and they participated to all learning activities in eagerly. They stated that they liked classes which were conducted with children's rights activities and those activities were different from children's rights unit (I learn my rights!) in current social studies curriculum for Grade 5. It was observed and pointed out by children that children got big awareness on their protection rights and they also enhanced their social and communication skills by using different learning strategies. Moreover, they enjoyed classes by joining learning activities. This developed curriculum by researcher could have contributed children's protection rights learning outcomes and knowledge of freedom and protection rights.

Decoene and DeCock (1996) research supports this result that children liked children's rights education and they were mostly interested in activities which were related to children's rights. Besides another research which was conducted by Covell and Howe (1999), was about the impact of children's rights education on children's level of understanding rights, their attitudes and behaviors. They stated that children who had got children's rights education had wider knowledge and intellection to be the owner of a right. Moreover, children had appropriate behaviors, they respected children came from disadvantaged areas or minority groups. Moreover, they started that they were eager to get teacher and peer supports. On the contrary to that, Wade's (1994) PhD thesis had opposite findings. The PhD thesis consisted of a curriculum on children's rights with enriched role-play, discussion, cooperative learning activities for between ages 9-11. There was no significance meaning between pre implementation and post implementation. Children who participated to activities, realized children's rights implementation in daily lives. But, they didn't establish a bound between children's rights and their daily life and give examples about rights. It was pointed out that children right education can actualized level of nominal before age 11 (as cited in Howe & Covell, 2005).

Protection module of children right education curriculum was applied for Grade 5. Participants had not experienced any implementations or had any knowledge about rights to protect. The practice elementary education teacher also stated that level of curriculum was convenient for participants and he pointed out that children could realize their protection rights even though the concept of right was intangible and the protection rights were very complex. The last important fact of children's rights education is identifying convenient teaching methods and using effective the chosen method. Article 29 of CRC supports and focuses on gains and purposes of education. In that sense, child-based activities and teaching activities with appropriate methods are acceptable. Children's rights education should not be arranged with traditional methods.

Interactive teaching methods can help teachers to envision rights in their students' minds. For instance, Torun & Duran's (2014) research was conducted effect of game method on success, permanence and attitude in children's rights education. Statistical results obtained as a result of the research determined that there was not a meaningful difference between the academic success of experimental group students and control group students before pre-test application and their attitudes towards children's rights. After the post-test application, it was seen that there is a meaningful difference in favor of experimental group between the academic success and attitudes towards children's rights of the test group and the control group. However, in permanence test performed 30 days after the posttest application, no meaningful difference was observed between post-test and permanence test for both groups. As far as Torun & Duran's (2014) research and this research, permanent learning outcomes may be important aspect in children's rights education. Democracy education may be an effective domain on actualizing of freedoms and rights. Although the concept of democracy is being tried doing elections and creating awareness on world issues in order to transfer philosophical texts to daily lives in schools. But that is not a solution to implement experimental education methods and activities (UNICEF, 1999, Waldron & Ruane, 2010). With this context, integrative and common educational settings can be provided for sustainable children's rights education in all grades of education to create a democratic society and bring up individuals who are known their rights.

Some research shows that it did not cause any anarchy environment in family, school or society when children have awareness and gain knowledge about children's rights. Informing children about their rights can be considered in three ways. First, it is certain that children have knowledge about their rights and responsibilities thanks to aforementioned children's rights education. Second, it is foreseen that children learn requirements of democratic life and play an active role on equality and claiming their own rights as reflecting the conscious of citizenship. Third, children fulfill their responsibilities and requirements to be a good citizen. By this way, children could get required abilities and knowledge in order to be a citizen brought up in a democratic and human rights-friendly society (Howe & Covell, 2005).

### **Suggestions**

Briefly summarized, a curriculum with supported different and well-constructed teaching-learning activities may support children's learning outcomes regarding to children's rights (survival, development, participation, protection). In addition, teachers and their positive perceptions are also very important facts as much as learning-teaching activities. Thus, teachers may have in-service training or certificate program about CRC and children's rights education. A special course / class can be taught in early childhood education and elementary education undergraduate programs. Concept of children's rights may be integrated to curricula from early childhood education to high school education. Not only curricula, teachers and education settings are important but also the other important factors such as media, products of children's literature, occupational groups who work closely with children, public institutions and non-governmental organizations have a massive impact on shaping up children's rights education.

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## **Investigating the Competence of Classroom Teachers in Terms of Nominating the Students with High Creativity and Gender-Biased Decisions**

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### **Abstract**

The main purpose of this study was to analyse the classroom teachers' competence in identifying above-average creative students, and their gender-bias during the identification process. A descriptive survey model was employed as a research method. A total of 317 elementary school students took part in this study. As data collecting tools, a teacher observation form, the creativity scale, and the Torrance Thinking Creativity Test were used. The results of the study enabled the determination of a teacher rating scale that helped the teachers categorize their students more clearly and differentiate them in such a way as to enable gender-bias to be reduced when compared to the teacher's opinion method. .

**Keywords:** Creativity, Identification, Gender-bias, Effectiveness, Efficiency, Teacher proficiency.

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## Introduction

There is universal support for early and accurate identification of creativity because it is the first step in catering for the needs of students of above-average creativity. Classroom teachers fulfil an important task in the identification process by observing the students in their classes, leading to the possibility of the identification of above-average creative students being provided with relevant support (Sak, 2010). Creative potential can be found to a greater or lesser extent in every individual. Individuals with above average creativity exhibit different behavioural characteristics when compared to their peers (Feist, 2010; Rosenthal, Morrison & Perry, 1977). When students are identified in terms of creativity using the teacher rating scale or a teacher's opinion, it is assumed that creativity exists as a set of characteristics that can be isolated. The behavioural trait approach establishes a link between the psychometric perspective and the behavioural impressionistic perspective, both of which are based on observation in the identification of above-average creative students (Bakheit, 2013).

### *Gender-bias*

One of the issues investigated in the research on creativity is whether or not there are gender-specific differences in creative potential (see Bal-Sezerel & Sak, 2013; Conti, Collins & Picariello, 2001; Kaufman, 2006; Kaufman & Baer, 2004). In one comprehensive review of gender differences in terms of creativity, over 80 studies compared the divergent thinking scores of males and females. Over half of these studies reported no difference; about two-thirds of the remaining studies favoured women or girls, with one-third favouring men or boys (Baer, 1999). Another review of recent studies on a similar topic was carried out by Baer and Kaufman (2008). The divergent thinking abilities of the participants were reviewed in 47 studies. With regard to these research studies, no significant difference in terms of gender was identified in 21 of the studies. However, males had higher significance scores than females in 3 studies, while the females had higher significance scores in 6 studies.

Hyde (2005) put forward the gender similarities hypothesis which holds that males and females are similar in most, but not all aspects, so proposing that gender differences for most cognitive variables are small or non-existent. In a meta-analytical study, Hyde determined that men's scores in terms of extraverted personal characteristics of the effects of creativity - such as openness and assertiveness in activity - were higher than women's scores ( $d = .19, .51, \text{ and } .19$ ). However, women's scores with regard to neuroticism - such as anxiety and impulsiveness - were higher than men's scores ( $d = .32, \text{ and } .01$ ). Another affective characteristic affecting the creativity of the individual is delay in terms of gratification (Silverman, 2003). In a meta-analytical study by Silverman (2003) which included 38 research studies, it was determined that women had higher scores than men with regard to delay of gratification ( $d = .12$ ).

Despite the contradictory findings in the afore-mentioned studies (Baer, 1999; Hyde, 2005; Baer & Kaufman, 2008; Silverman, 2003), another meta-analysis by Peterson (2013) involving 130 research studies, demonstrating that boys were 1.19 times more likely to be identified as gifted compared to girls. However, these findings do not conclude that most teachers are hardly aware of being gender-biased (Berekashvili, 2012).

### **Teacher's nomination competence: effectiveness and efficiency**

One of the most widely used tools of identification is the teacher rating scale (Hunsaker, Finley & Frank, 1997). Hoge and Cudmore (1986) have identified the effectiveness and efficiency of the nominating instruments:

The effectiveness reflects the ratio of the number of pupils nominated by the teacher as gifted [above-average creativity] relative to the total number identified as gifted [above-average

creativity] on the basis of the criterion measure. [...] The efficiency reflects the ratio of successful teacher designations relative to the total number identified by the teacher. p.12

The efficiency and effectiveness indices provide us with estimates of decision accuracy relative to a criterion. The effectiveness and efficiency ratio provides additional evidence related to the technical competence of the measuring instruments developed. However, these criteria do not tell us anything about the statistical significance of particular accuracy levels in particular situations.

The competence of teachers when it comes to nominating primary and/or secondary school students who were intellectually talented was analysed in a group of studies according to dimensions of effectiveness (Akar & Uluman, 2011; Alexander, 1953; Pagnato & Birch, 1959, cit. Gagne, 1994; Şahin & Çetinkaya, 2015). The efficiency ratio of mathematically gifted children with specific learning difficulties (Al-Hroub & Whitebread, 2008), students in groups with particular cultural and economic backgrounds (Gear, 1978), the gifted children in the pre-school period (Dağlıoğlu & Suveren, 2013) and the students of primary and/or secondary schools, were analysed in another group of studies (Alexander, 1953; Pagnato & Birch, 1959, cit. Gagne, 1994; Şahin & Çetinkaya, 2015). In another study, the effectiveness and efficiency of talented students terms of creativity were also analysed (Pagnato & Birch, 1959, cit. Gagne, 1994).

The strengths of the teacher rating scale were also investigated in a group study. It was determined that there was a relationship between standardised instruments and teacher rating scales (Akar & Uluman, 2013; Gagne, 1994; Mayfield, 1979; Neber, 2004), while teachers were able to successfully identify student talents when they used rating scales (Hunsaker, Finley & Frank, 1997). On the other hand, some aspects of teacher rating scales have been criticised by different researchers. One of the most important criticisms is that teachers may make a biased decision depending on student's gender in the nomination process (Endepohls-Ulpe & Ruf, 2005; Guskin, Peng & Simon, 1992; Hernandez-Torrano, Prieto, Ferrandiz, Bermejo & Sainz, 2013; Lindley & Keithley, 1991; Siegle, 2001; Siegle & Powell, 2004).

In theoretical terms, it is recommended that teachers be able to identify talented students in their classrooms when they have a list of characteristics (Hunsaker, Finley & Frank, 1997; Jost, 2006; Peters, 2009). However, an experimental study examining this issue is still lacking. The general purpose of this study is to analyse the competence of teachers in terms of identifying above-average creative students and their gender-biased decisions. In this framework, the answers to following questions were sought:

1. Do the performances of the teachers change according to the method they use in the nominating process and in terms of the gender of the students? Is there a significant relationship between the methods employed?
2. What are the performance levels of the teachers in the nominating process? Do the performances of the teachers change according to the method employed and according to the gender of the students?

### **Method**

The research follows the descriptive survey model. The school where data was collected was chosen according to the principles of easily accessible convenience sampling.

### **Participants**

The students who were evaluated during the nomination process were chosen from among students who have been studying with their class teachers for at least one year in the school where the evaluation was conducted. The students who failed to fulfil the requirements because they had enrolled recently were not included the study. Within this context, a total of 317 elementary school students took part in this study (grades to 2 from 4; age range 8-11; 161 female and 156 male). In

addition, the teachers who carried out the evaluation had been working as teachers for at least for two years in the institution in which the data was collected. A total of 19 elementary teachers of the students in the study group participated in the study (18 Bachelor's degrees, 1 Master's degree). Teachers were trained by the researcher. Such in-service training included the development of creativity thinking skills for 8 hours, some four months prior to the study.

### Data collection tools

**Torrance Test of Creative Thinking (TTCT).** Students' creative potential was measured using the TTCT, figural form B. In this study, the 2007 version of the test was used, but a norm study had not been administered for Turkey for this version. However, it was noted that the studies were conducted in different cultures with TTCT figural forms, while no difference was observed in the creativity potential in terms of variables such as gender, race, socio-cultural and educational factors (Kim, Cramond & Bandalos, 2006). In the light of this result, the percentage norms of the United States of America were used in this study. The TTCT scores of the students in the study group were obtained from the guidance service of the school.

**The Scale for Rating the Behavioural Characteristics of Gifted and Talented Students-Creativity (SRBCGTS-Creativity).** The first sub-dimension of this scale, which was called the "creativity" of the scale and developed was by the Şahin (2013), was used as the teacher rating scale. The multi-dimensional theory and the models of giftedness and talent detailed above were utilised in the scale development. The scale is targeted to measure the individual's general creativity potential. The maximum score to be obtained from the scale is 45 and the lowest score is 9. Cronbach's  $\alpha$  coefficient of the original scale was calculated as .82. In this study, a student who got a score of  $27 \geq$  was considered as a candidate for consideration.

**Teacher's Opinion Form.** The teacher's observation form was created by the researcher. It contains a single statement: "*I think the students called ..... are above-average creativity students.*" The students whose name appeared on the list were considered to be nominated and those who were not on that list were not considered for nomination.

### Data analysis

The research data was first analyzed descriptively. The performance levels of the teachers involved in the nomination process were analysed through their effectiveness and efficiency ratios. Since the distribution failed to provide normality conditions, the differences between the groups were analysed using the Man-Whitney  $U$  test, and the relationship between the scores was analysed using Spearman Brown correlation analysis. The data was collected using TTCT and the nomination form was turned into standard scores ( $z$  value). Spearman Brown correlation analysis was then carried out.

### Procedures

The research consists of two stages. In the first stage, the teachers who voluntarily participated in the study were asked to nominate the above-average creative students in their classes using the teacher's opinion form. In the second stage, one month after the first stage, the teachers were asked to evaluate the creativity of all the students in their classes using the SRBCGTS-Creativity instrument.

### Results

The frequency and percentages related to the students who were nominated using the opinions of the teachers and the rating scale and those who were not nominated are therefore as shown in Table 1.

**Table 1.** *The distribution of nomination status, creativity level, and gender*

Nomination status			TTCT results	Gender	N	%	
Teachers' opinion	Nominated ones		Above–average	Female	7	53.85	
				Male	6	46.15	
				<i>Total</i>	<i>13</i>	<i>100.00</i>	
			Average	Female	23	32.39	
				Male	48	67.61	
				<i>Total</i>	<i>71</i>	<i>100.00</i>	
	Not nominated ones	Nominated ones		Above–average	Female	29	54.72
					Male	24	45.28
		<i>Total</i>	<i>53</i>		<i>100.00</i>		
		Average	Female	102	56.67		
			Male	78	43.33		
			<i>Total</i>	<i>180</i>	<i>100.00</i>		
Teacher rating scale		Nominated ones		Above–average	Female	15	53.57
					Male	13	46.43
			<i>Total</i>		<i>28</i>	<i>100.00</i>	
			Average	Female	25	32.47	
				Male	52	67.53	
				<i>Total</i>	<i>77</i>	<i>100.00</i>	
	Not nominated ones	Nominated ones		Above–average	Female	21	55.26
					Male	17	44.74
		<i>Total</i>	<i>38</i>		<i>100.00</i>		
		Average	Female	100	54.47		
			Male	74	42.53		
			<i>Total</i>	<i>174</i>	<i>100.00</i>		

The teachers in the study group evaluated a total of 317 students. The distribution of the students who were nominated according to the teachers' opinions is as follows: 30 (35.71%) are female, while 54 (64.29%) are male. But the students nominated by the teachers' rating scale were identified as 40 females (38.10%) and 65 (61.90%) males.

Among the total of 84 students nominated according to the teachers' opinions, 13 (15.48%) were determined as being above–average creative students, while 71 (74.52%) were determined as being average. A total of 233 (23.77%) students were not nominated. The students who were not nominated but were found to have an above–average degree of creativity was 53 (23.73%), while 180 (76.23%) were found to have an average degree of creativity. Among those students who were nominated according to the teachers' rating scale, 28 (26.67%) were identified as having above–average creativity while 77 (73.33%) were identified as being average. 105 (33.12%) of the students participating in the study were nominated while 212 (66.88%) of them were not nominated. The students who were not nominated but were found to have an above–average degree of creativity was 38 (17.76%), while 174 (81.31%) were just average.

Whether the performances of the teachers differed according to the method employed and the gender of the students was investigated. Afterwards, the methods used for accurately nominated students were compared. The Mann–Whitney *U* test was used to determine which group or groups caused the difference.

**Table 2.** Mann–Whitney *U* test results comparing gender and nomination process

	Group	<i>N</i>	Mean rank	Sum of ranks	<i>U</i>	<i>P</i>
Teachers' opinion	Above–average creative female	8	7.31	58.50	17.50	.711
	Above–average creative male	5	6.50	32.50		
	Average creative female	22	35.75	786.50	522.50	.945
	Average creative male	48	35.39	1698.50		
	Nominated ones	13	71.77	933.00	68.00	.000 <sup>a</sup>
	Not nominated ones	70	36.47	2553.00		
Teacher rating scale	Above–average creative female	15	18.13	272.00	43.00	.011 <sup>a</sup>
	Above–average creative male	13	10.31	134.00		
	Average creative female	25	45.26	1131.50	493.50	0.880
	Average creative male	52	35.99	1871.50		
	Nominated ones	28	91.50	2562.00	.00	.000 <sup>*</sup>
	Not nominated ones	77	39.00	3003.00		
Above–average creative	Teachers' opinion	83	83.73	6949.50	3463.50	.016 <sup>b</sup>
	Teacher rating scale	105	103.01	10816.50		
Average creative	Teachers' opinion	70	69.64	4875.00	2390.00	.237
	Teacher rating scale	77	77.96	6003.00		

<sup>a</sup>*p* < .01, <sup>b</sup>*p* < .05.

There was a significant difference between the scores of the nominated and the non-nominated ones according to the teachers' opinions. This had a medium effect ( $U = 68.00$ ,  $z = -4.850$ ,  $p < .01$ ,  $d = .53$ ). When the mean rank is taken into consideration, it was seen that this observed difference is susceptible to those nominated according to the teachers' opinions (71.77). In addition, there is a significant difference between the scores of above–average creative females and above–average creative males according to the teachers' rating scales, stating that they had a medium effect ( $U = 43.00$ ,  $z = -2.531$ ,  $p < .01$ , and  $d = .48$ ). The mean rank of the students was higher for female students (18.13) than for males (10.31).

When the scores of the nominated and non-nominated students were compared according to the teacher's rating scales, a slight difference in the level of significance was noted ( $U = .00$ ,  $z = 7.815$ ,  $p < .01$ , and  $d = .00$ ). It was seen that this observed difference tended to apply to the nominated students according to the teachers' rating scale (91.50). Moreover, there was a significant difference between the above–average creative students according to the teachers' opinions and the teachers' rating scale, but with a small effect ( $U = 3463.50$ ,  $z = 2.414$ ,  $p < .05$ , and  $d = .18$ ). The mean rank of the above–average creative students, according to the teachers' rating scale (103.01), was higher than the teachers' opinions (83.73). On the other hand, other comparisons showed no significant difference. Besides, the scores of SRBCGTS–Creativity and TTCT were found to have a significantly positive relationship and had a medium effect ( $r = .53$ ,  $r^2 = .28$ ,  $p < .01$ ).

**Table 3.** Result of efficiency and effectiveness ratio (%)

		Efficiency	Effectiveness
Teachers' opinion	Female	23.33	19.44
	Male	11.11	20.00
	Total	15.48	19.70
Teacher rating scale	Female	37.50	41.66
	Male	20.00	43.33
	Total	26.67	42.42

According to the teachers' opinions, female, male and total effectiveness and the efficiency of the teachers are, respectively, 23.33%, 11.11%, 15.48%, 19.44%, 20.00% and 19.70%. However,

according to the teacher rating scale, those scores are determined respectively, 37.50%, 20.00%, 26.67%, 41.66%, 43.33% and 42.42%.

According to the teachers' opinions, female, male and total effectiveness and the efficiency of the teachers are, respectively, 23.33%, 11.11%, 15.48%, 19.44%, 20.00% and 19.70%. However, according to the teachers' rating scale, those scores are determined respectively as being 37.50%, 20.00%, 26.67%, 41.66%, 43.33% and 42.42%.

### Discussion

In the study, the performance of the teachers in terms of the nominating process will be discussed initially. We will also discuss whether or not the afore-mentioned performance changed according to the gender of the students.

It was found in the study that the scores of the students nominated by their teachers differed from those who weren't nominated when the teachers' opinion and teacher rating scales were used. This finding indicates the effectiveness of both methods with regard to the nominating process. When we compared the TTCT scores of the students who were nominated through two different methods, a significant difference was determined in favour of the teacher rating scale. Those findings may be considered as evidence supporting the theoretical suggestions (Jost, 2006; Peters, 2009) pointing out that the use of a measurement instrument during the identification process might increase performance during the identification process.

When the teacher rating scale was used during the nomination process, a significant difference was noted between the groups in accordance with gender. This finding was thought to be explained due to the expectations of the teachers and the interactions with their students. Namely, males and females students expressed different interests and talents (VanTassel-Baska, 1998). However, teachers' expectations with regard to males are higher than those with regard to females (Lindley & Keith, 1991). Siegle and Powell (2004) suggest that males receive special attention from teachers in the nomination process for gifted programmes because they receive more attention from them in the classroom. Moreover, teachers were inclined to spend more time interacting verbally and non-verbally with male students. When talking to their students face to face, they spend more time on male students than on female students (Sadker & Sadker, 1995, cit. Siegle, Moore Mann & Wilson, 2010).

From the findings obtained in this study, it may be concluded that there are higher expectations with regard to male students than is the case with regard to female students, which is in line with the findings in the literature. In other words, female students are nominated on condition that their creative thinking abilities are higher than their male peers. When the number of the nominated students was analysed, this estimation was verified; namely, 40 female and 65 male students were nominated when the teacher rating scale was used. Male students were nominated 1.38 times more than female.

When the number of the nominated students was analysed according to the teachers' opinions, the results indicate that gender-specific discrimination occurred. However, no significant difference was observed between the groups. The results of the analysis may be regarded as another finding indicating that the use of a tool such as a teacher rating scale during the nominating process helps in reflecting the opinions of the teachers.

Another topic analysed in the study is whether or not the performances of the teachers changes according to the methods used in the nominating process and the gender of the students. Various studies show that the effectiveness ratio with regard to the process in which the teachers nominate students considered as being talented in the intellectual area was .14-.45 (Akar & Uluman, 2011; Alexander, 1953; Pegnato & Birch, 1959, cit. Gagne, 1994) and the efficiency ratio was .27-.85

(Alexander, 1953; Al-Hroub & Whitebread, 2008; Dağlıoğlu & Suveren, 2013; Gear, 1978; Pegnato & Birch, 1959, cit. Gagne, 1994).

In terms of creativity, the effectiveness ratio was .15, while the efficiency ratio was .10 (Pegnato & Birch, 1959, cited Gagne, 1994). When the findings obtained from this study with regard to the effectiveness and efficiency ratio are compared to the study by Pegnato and Birch (1959, cit. Gagne, 1994), the teachers in this study may be considered to demonstrate higher performance.

According to the researcher, this difference may emerge as a result of an eight hour course that the teachers received four months prior to the research. The efficiency and effectiveness of the identification process are in line with teacher qualifications (Akar & Uluman, 2013; Gear, 1978; Hunsaker, Finley & Frank, 1997; Hoge & Cudmore, 1986; Rohrer, 1995; Şahin & Çetinkaya, 2013). Moreover, almost half a century has passed since the aforementioned study prepared in 1959. However, creativity started to attract the attention of educators following the studies by Guilford in the 1950s. Additionally, teachers have encountered numerous warnings concerning developments in communication technologies and scientific studies related to creativity. This situation may have affected the knowledge and attitudes of teachers.

In this study, the general average ratios concerning effective and efficiency in the groups were found to be 42.42% and 26.67%, respectively when the teacher rating scale was used in the process of nomination, while the ratios were found to be 19.70% and 15.48%, respectively when the teachers' opinions were used. Other studies show that the majority of the students who were nominated as being talented were chosen from the successful-bright and those students who won the favour of their teachers (Betts & Neihart, 1988; Schack & Starko, 1990; Rohrer, 1995). On the other hand, teachers did not pay attention to poor psychomotor development, lack of social skills, lack of emotional control or lack of advanced reading ability (Rohrer, 1995), nor to underachievers and children with low achievement motivation (Endepohls-Ulpe & Ruf, 2005).

Hollyhand (2013) has revealed that students displaying positive gifted characteristics, including creative properties, were three times more likely to be nominated for a gifted programme than students exhibiting negative gifted characteristics, including creative properties. According to Jost (2006), identifying talented students becomes difficult when the in-class performances of the students fall behind their ability levels. The effectiveness and efficiency ratios noted in the study were thought to be explained by this aspect. It is possible that the majority of the above-average creative students who were nominated in this study may have been chosen from the students who exhibit themselves and are bright.

The effectiveness ratios of the students who were nominated according to the teachers' opinion related to their gender have thus been analysed. It was determined that male students were identified more effectively than female ones, but the difference between the two genders was too slight to be significant. When the efficiency ratio was analysed, it was determined that female students (23.33%) were identified with hit rates that were more than twice as high as that of their male peers (11.11%). In this context, the effectiveness and efficiency ratios of teacher rating scales largely overlap with the data provided in terms of the teachers' opinions. This is in line with the findings of Peterson (2013) which were that male students were nominated 1.07 times more than their female peers. These findings are common in 9 studies, including the students who were nominated by their teachers for participation in gifted programmes.

Moreover, additional supporting evidence may be considered as the male students noted above tended to be evaluated with higher expectations than their female peers. In fact, using a tool as part of the process of nominating reduced gender bias from 1.70 to 1.38. This finding supports the theoretical suggestions that the use of a measurement tool might improve the outcome of the identification process.

### Conclusion and Limitations

Within the scope of the study, 317 students were assessed by 19 teachers. Subsequently, 84 students were nominated according to the teachers' opinions, while 105 students were nominated when nominating scales were used. The teachers who used the teacher rating scale were able to nominate one in four students correctly, and choose two of the five above-average students in their classes. However, the teachers could correctly nominate three out of twenty students and choose one of the five above-average students in their classes by using the teachers' opinion form.

It was observed that the teachers nominate girls more than the boys. In this process, using an instrument enabled an increase in the identification process performance, and a decrease in gender-bias. This finding is important since it fills an important gap in the literature. On the other hand, the creativity perceptions of teachers in Turkey, and in this context, the reasons for their low expectations for female students, should be investigated. The culture-specific determination of the lower expectations of the educators in relation to female students is necessary for preventing/decreasing gender-bias.

This study has some limitations. The first one is that the information related to the teachers' creative thinking skills has not been evaluated. This is an important limitation affecting the nomination process of teachers. However, it may also have been possible to provide teachers with an 8-hour training session related to creative thinking within the scope of an in-service training programme in the schools where they work, four months prior to the study. This might have provided the basic knowledge they needed in nominating students with a high level of creativity.

A common emphasis on the definitions of above-average creativity adopted by different researchers is that the average has creativity. However, a consensus has not been established in the literature regarding the percentage of society who are creative, and on the need for such a discussion. In this study, the students in the first 25% segment according to the TTCT scores were regarded as being above-average in terms of creativity.

The nominating behaviour of the teachers was not controlled in terms of the Hawthorne effect. Accordingly, the numbers of the students who were nominated by the teachers may be increased or decreased. This situation threatens the external validity of the study, and so damages the generalisability of the research findings.

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## Children's Drawings and Descriptions of their Ideal Schools: A Case Study from Turkey

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### Abstract

The aim of this study is to examine 4-7 year old children's drawings of the school of their dreams and to compare them with today's schools. In a total of 45 children who attend private institutions in Ankara participated in the research. The method of the research is qualitative and data collection tools consisting of picture drawing and interview forms directed at children after drawing are also prepared with a qualitative approach. Children's drawings were examined according to their developmental stages and children's dream schools were compared with today's schools by performing descriptive statistics on drawings and responses to interviews. According to the findings, drawings of younger age range were more unusual than drawings of older age range and physical structures, materials; and education programs of existing schools exhibit a remote image of the dream schools of a large portion of the children who were involved in the survey.

**Keywords:** Children's school drawing, School dreams, Materials and education programs, Creativity.

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## Introduction

By 18 months, a child starts to use symbols in a logical way to represent reality (Piaget and Inhelder 1963). The points they use in their drawings may sometimes represent the precipitation of rain or sometimes show the movements of animals (Berk 1994). By using gestures in their drawings, children may want to give movement to the characters they have drawn (Cox 1992). The basic scribbles that children use in their drawings may be considered as first steps in the development of drawing (Kellogg 1970) and in the later periods, these scribbles can give clues about the character of a child and the development of their individual style (Gardner 1990). Children's pictures do not only reveal the development of an individual but can also be a powerful tool in illuminating the relationship of children with the culture they inhabit (Müller and Isbell 2010). Alland (1983) indicated that there is a relationship between many cultures and the pictures that are drawn and that idea is supported by children's drawings, reflecting the characteristics of the cultures to which they belong. Furthermore, Wales (1990) showed that culture plays a fundamental role in the development of symbolic representations. Children focus on behaviors or tasks which are accepted by society (Erikson 1950) and this focus is reflected in the pictures they draw. In one of the studies supporting this concept, it is revealed that older children try to draw more realistic pictures (Winner 1986) and another work reveals that children whose pictures are considered to be unsuccessful in a class or similar environment tend to give up drawing pictures after 9-10 years of age (Gardner 1980). Drawing pictures can be considered an activity that shows children's neurological maturity and the working of their cognitive functions (Pascual-Leone 1984) as well as supporting their motor developments (Cratty 1986).

Artists, psychologists and psychiatrists have found children's drawing to be remarkable. Artists find children drawings natural, innovative and creative whereas psychologists perceive deep meanings, and educators use drawings as tools to evaluate children's cognitive activities (Di Leo 1996). Furthermore, drawings are also cultural and social assessment tools which play a role in topic and figure selection (Yavuzer 2013). Thus, a child's drawing can include important clues to explain the individual's complicated world and indicate their mental development. Examining children's drawings can provide important data to help understand their physical, emotional and mental development (Crosser 2014). Even ambiguous lines in the scribble period of a child's development can represent some basic emotions. Many therapists encourage children to draw since this helps them explain the situations that they cannot explain through the spoken word. Since pictures drawn by children reveal aspects of their personalities and characteristics (Yavuzer 2013), these pictures have been used in psychology, psychiatry, education and art therapy fields as a tool to reach children (Lowenfeld & Brittain 1987; Malchiodi 1998). Some researchers see drawings of children with developmental problems as therapeutic interventions (Lowenfeld & Brittain 1987). Other examples are the use of drawing to explore the child's reaction to gender differences, social interactions of family members, sociocultural differences and behavior problems (Okyay 2008).

As well as being a diagnostic tool, children drawings are a good record of their development, thinking process and perception of art (Fox & Thomas 1999). Artistic development in children is defined in the following 6 stages, scribble (ages 2-4), pre-schematic (ages 4-7), schematic (ages 7-9), realism (ages 9-12), pseudo-naturalistic (ages 12-14) and reasoning (ages 14-16). The scribble stage starts at about 2 years of age when children start to enjoy drawing ambiguous lines. Conscious drawing begins at about 3 years of age (Lowenfeld & Brittain 1987). The first scribbles are an important stage in the child's development, since it makes the start of their expression of themselves (Yavuzer 2013). In the pre-schematic stage, the child begins to talk about their drawing (Lowenfeld & Brittain 1987). At about five years of age, there are recognizable people, houses or trees in a child's drawing. When they reach six years of age, forms and shapes begin to appear (Yavuzer 2013) and are slowly differentiated (Malchiodi 1998). In the schematic stage (age 7-9), the child will use symbols to make objects distinct and identify relations and places in their drawing (Lowenfeld & Brittain 1987). At this stage, children draw human figures, including various objects and the environment in their pictures (Malchiodi 1998). The children also have their own perspective, and ratios and relations are adjusted according to this perspective. Luquet refers to this aspect as visual realism (Yavuzer 2013).

In the schematic stage, children can also reflect emotions in their pictures; for example, when asked to draw happy, angry or sad expressions, children are immediately able to respond (Malchiodi 1998). When they enter the realism (gang) stage (ages 9-11), children are capable of drawing very detailed and realistic pictures (Malchiodi 1998) using realistic colors (Lowenfeld & Brittain 1987; Yavuzer 2013). In this stage, differences appear between pictures drawn by boys and girls; boys tend to draw boats, airplanes, trains, war and sports scenes; girls mostly draw faces, clothes, houses, flowers and animals with their young (Yavuzer 2013). The pseudo-naturalistic stage (ages 11-13) makes the period in which natural childlike drawings end and drawings similar to adult pictures begin to appear (Lowenfeld & Brittain 1987). In this stage, the child or adolescent begins to include in their picture the ratios, dimensions and depths of objects around them. In this stage, children are aware of color differences and use color optimally (Yavuzer 2013). It is in the reasoning stage that the teenagers decide whether to continue drawing pictures because now they are able to verbalize their thoughts clearly and as they mature they can make the transition to the artistic stage (Lowenfeld & Brittain 1987).

Kramer described the following five ways of using art materials, which help shape both the artist and the art product; precursory activities, chaotic discharge, art in the service of defense, pictographs, and formed expression (1971/1974, p. 54). In paintings, children express more than they draw (Okuyay 2008) and more information can be gleaned concerning their stage of development, and special talents can be discovered and it can be determined whether there is a need for special support. In this manner, children paintings can be accepted as tools that reflect children's characters, inner worlds helping teachers and others to get to know children. As Lewis & Greene (1983) state, various reasons for using drawings as a data acquisition tool in research are that children do not like answering questions but find responding through drawing more enjoyable; the obstacles of spoken communication disappear (Chamber 1983) and lastly, children can broadly express their inner world emotions and thoughts (Crook 1985).

### **Importance, aim and problems of the research**

The importance of the research is that it evaluates schools through the drawings of children aged 4-7, in which they picture an ideal school where they enjoy themselves and are happy. These research findings can be useful in evaluating and updating the architecture and design of existing schools. In this context, the aim of the research is to examine the drawings of these children based on the following questions:

- a. What properties and characteristics do the children's drawings of their ideal school contain in relation to their developmental stage?
- b. Is there a resemblance between the children's drawings/descriptions of their ideal schools and the real world schools they attend?

### **Method**

#### **Research model**

Descriptive and survey methods were used in this research. A survey method is defined as a research model aiming to identify the perceptions or characteristics of a sample group of participants (Büyüköztürk, Çakmak, Akgün, Karadeniz, Demirel 2010).

#### **Research group**

The research group consisted of children aged 4 to 7, who attended a private elementary school in Ankara/Turkey. The research was conducted with a total of 45 children from the age ranges of 48-60 months (15 children), 60-72 months (15 children) and 72-84 months (15 children).

#### **Data acquisition tool**

Data was collected in two stages. First, children were given white papers, pencils, and crayons and asked to draw their ideal school. In the second stage, when children completed their drawings, they were asked to describe their drawings and answer certain questions about their ideal schools. The responses of children were noted by the researcher.

### Procedure

The two stages of data collection were performed in the same environment with all participants. Children were seated at a distance from each other to prevent them from seeing each other's drawings or hearing the interview with other children. The researcher directed the following questions to children who completed their drawings:

- a. Can you describe what you have drawn and your ideal school?
- b. Where is this school and what is around this school?
- c. What is inside this school?
- d. What kinds of activities are available in this school? What kinds of lessons are given in this school?

### Findings and Discussion

#### What properties and characteristics do the children's drawings of their ideal school contain in relation to their developmental stage?

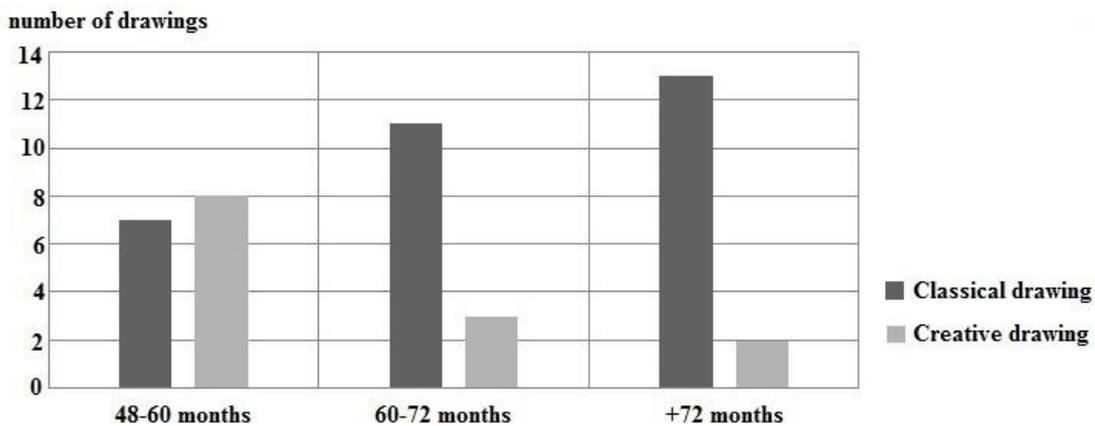
Figure 1 presents examples of children's drawings on their ideal schools.



**Figure 1.** Examples of children's ideal school drawings by age range

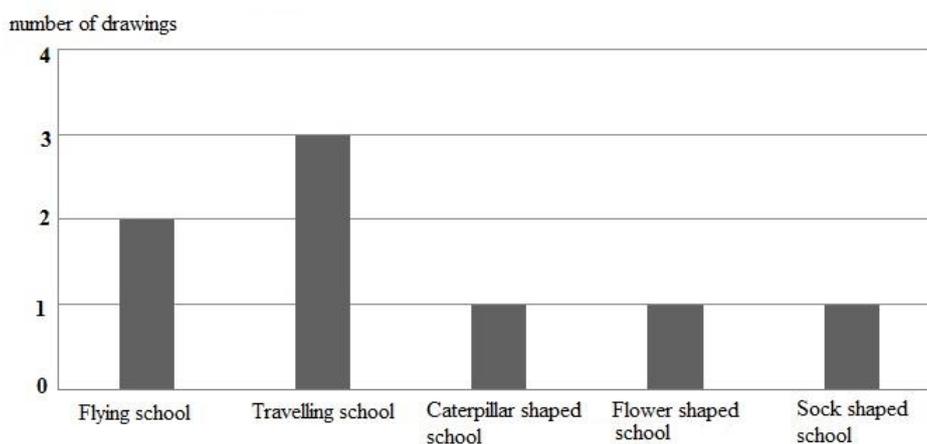
As seen in Figure 1, from children's drawings, their age range can be predicted. In the younger age group (48-60 months), the drawings mostly consist of scribbles and there is a lack of

detail whereas in the age range of 60 to 72 months, imaginary components (such as princesses and castles) begin to have an influence on children's drawings. In the oldest age group (72-84 months), the influence of objects and nature as well as the green color are easily noticed. As described by Lowenfeld & Brittain (1987), the drawings of children in the current study are an indication of their developmental stage; showing the characteristics of pre-schematic stage in the 48-60 month group, schematic stage in the 60-72 month group and realistic components in the 72-84 month group. As proposed by Furth (2002), the relation between green, nature and vitality is also generally used in the oldest group. Figure 2 presents the distribution of children's ideal school drawings according to their age.



**Figure 2.** Distribution of children's school building drawings according to age

The drawings of children aged 4 to 7 years show that some of the school buildings are typically represented with a rectangular door, small square windows and a triangular roof whereas some others have unusual characteristics including sock or caterpillar shapes, wheels, colored windows and wings. When examined by age, most unusual representations belong to children aged 48-60 months whereas most of the typical buildings were drawn by those in the 72-84 month group. This indicates that as the age increases, the unusual characteristics of the drawings decrease and children switch to classical drawings. This is also in accordance with the results reported by Rawlinson (1995) that every child has creative potentials but as children grow older, these potentials may be less expressed due to certain factors such as efforts to obey authority or become a member of a group and worries about being accepted by others.



**Figure 3.** Unusual school drawings of 48-60 month-old children

Figure 3 presents the types of unusual schools drawn by 48-60-month-old children. Unusual and imaginary components are observed in the form of a flying school (2 children), a travelling school (3 children), a caterpillar-shaped school, a flower-shaped school (1 child) and a sock-shaped school (1

child). The interviews with children revealed that the main reason for drawing flying and travelling schools was that children wished to play and perform activities in different environments. The child who drew a sock-shaped school stated that the school in his/her drawing was under the sea and children could only go there by swimming.

**Table 1.** *Characteristics of the External Environment of an Ideal School Drawn and/or Described by Children Aged 48 to 60 Months*

Elements mentioned	Number children	of %
Garden	4	19.04
Sea	5	23.90
Animals	4	19.04
Buses	1	4.75
Forest	2	9.51
Everyday in a different place	2	9.51
Brick-wood	1	4.75
Mountain	1	4.75
Playground Slide	1	4.75
Total	21	100.00

Table 1 shows the elements of the external environment of the ideal schools drawn and/or described by children aged 48 to 60 months. Approximately 70% of these children imagined a natural environment in which there was a garden, sea, animals and forest. The remaining 30% commented on having bricks and woods, mountains, playground slides and different places outside the school.

**Table 2.** *Characteristics of the Internal Environment of an Ideal School Drawn and/or Described by Children Aged 48 to 60 Months*

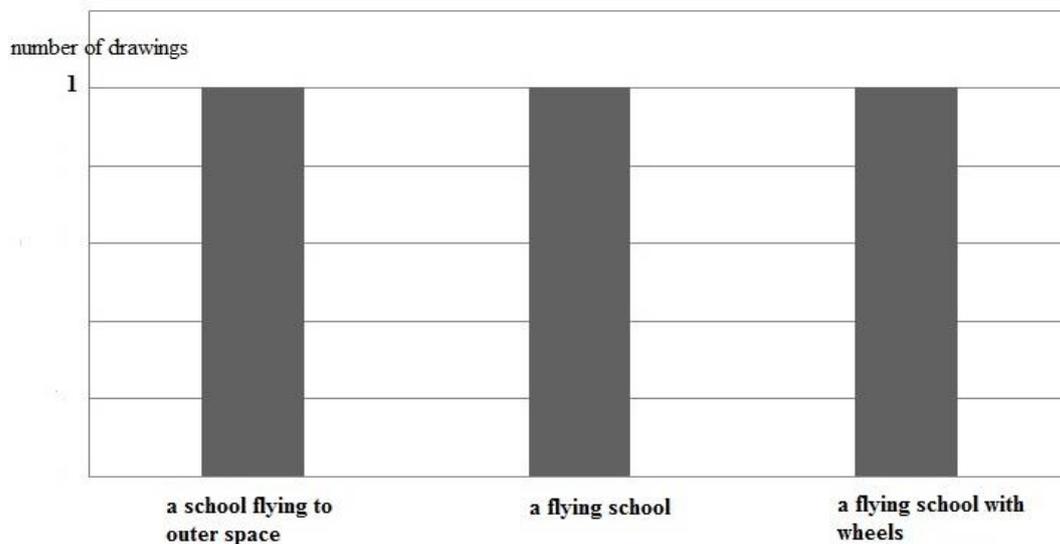
Elements mentioned	Number children	of %
Area for drinking colored water	1	9.09
Play garden	5	45.46
Cafeteria	1	9.09
Animals	1	9.09
Studios	1	9.09
People in costume	1	9.09
Stairs	1	9.09
Total	11	100.00

The characteristics of the internal environment of the ideal schools described by children aged 48 to 60 months are given in Table 2. Approximately 50% of these children imagined a play garden and the remaining 50% commented on a colored area where there were cafeterias, animals, studios, people in costumes and staircases. The child who suggested that there should be people in costume explained that he/she was referring to teachers and school staff wearing costume. Another suggestion regarding the internal environment was to have colored windows and roofs. Children also described their ideal classrooms having large windows and transparent walls that would allow them to see the inside of the school from outside. During the interviews, one child did not give much information about the internal environment since his/her ideal school was a bus. All these internal elements show that, as suggested by Alkan (1983), children experience problems in adapting to places designed by adults and therefore their ideal design differs from the architecture of their present schools.

**Table 3.** *Lessons and Activities Provided by an Ideal School Described by Children Aged 48 to 60 Months*

Lessons and activities mentioned	Number of children	%
Swimming in the sea	4	11.77
Literature (books and letters)	4	11.77
Mathematics	1	2.94
Games	12	35.29
Painting	4	11.77
Plant growing	1	2.94
Sports	2	5.88
Travelling	2	5.88
Playing in the mud	1	2.94
Animal care	1	2.94
Building pyramids	1	2.94
Playing in the snow	1	2.94
Total	34	100.00

Table 3 presents the educational characteristics of the ideal schools of children aged 48 to 60 months. Approximately 35% of the children stated that they would prefer a game-based school program, four children (12%) wished to study literature, four wanted to have swimming lessons and another four wished to have painting lessons. Other less popular suggestions for lessons and activities included mathematics, plant growing, sports, travelling, playing in the mud, animal care, pyramid-building and playing in the snow.



**Figure 4.** *Unusual school buildings drawn by children aged 60 to 72 months*

Figure 4 shows the types of unusual school buildings drawn by 60-72-month-old children. These included a school flying into outer space, a school on wheels and a flying school.

**Table 4.** *Characteristics of the External Environment of an Ideal School Drawn and/or Described by Children Aged 60 to 72 Months*

Elements mentioned	Number of children	%
Garden	3	8.10
Kites	1	2.70
Play yard	2	5.40
Zoo	7	18.90
Sea	3	8.10
Plants (flowers, trees)	14	37.90
Rocks	1	2.70
Pool	2	5.40
Forest	4	10.80
Total	37	100

Examining the responses given by 60-72-month-old children about the external environment of the school, it was found that nearly 68% referred to elements from the nature including a zoo, sea, forest and plants. The remaining children commented on a garden, kites, a play yard, rocks and a pool for the surrounding area of the school.

**Table 5.** *Characteristics of the Internal Environment of an Ideal School Drawn and/or Described by Children Aged 60 to 72 Months*

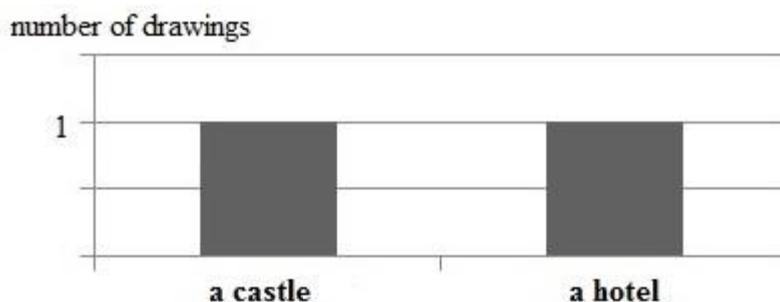
Elements mentioned	Number of children	%
Dormitory	1	4.17
Plants (trees, flowers, leaves)	3	12.49
Ornaments	4	16.65
Kitchen	1	4.17
Library	1	4.17
Large classrooms	2	8.34
Workshop	2	8.34
Speakers	1	4.17
Play Slide	1	4.17
Animals	1	4.17
Television-Radio	4	16.65
Teachers' Lounge	1	4.17
Hopscotch playing area	1	4.17
Cabinets made from leaves	1	4.17
Total	24	100.00

Table 5 shows the internal characteristics of the ideal schools of 60-72-month-old children. When asked to describe the elements in their ideal school, most children commented on having a television or radio, ornaments and plants. In addition, some children suggested having a dormitory, a kitchen, a library, large classrooms, workshops, speakers, a slide, animals, teachers' lounge, hopscotch playing area and cabinets made from leaves. When asked why they needed a television and a radio in schools, the children responded, "so that the students wouldn't get bored". In the interviews, children often talked about schools with large and colorful windows, and included these windows in their drawings. The colored windows, as explained by children, were to see the outside colorful.

**Table 6.** *Lessons and Activities Provided by an Ideal School Described by Children Aged 60 to 72 Months*

Education	Number of children that suggested	%
Games/Toys	4	20
Various activities	3	15
Planting (trees and flowers)	5	20
Animal care	1	5
Swimming	1	5
Sand games	1	5
Exploring the sea and sand	1	5
Painting on large papers	1	5
Having lessons in a different environment everyday	2	10
Lessons on numbers	1	5
Total	20	100.00

When asked to describe education in their ideal schools (Table 6), a considerable number of children aged 60 to 72 months (20%) stated that they wished to play games and be involved in activities in the nature such as growing plants. Children also suggested that each child should have a private garden in their school where they can grow plants. Other suggestions included activities about animal care, swimming, sand games, exploring the sea and sand, painting on large papers having lessons in a different environment everyday and lessons on numbers. Children stated that they enjoyed activities outside the classroom and in different settings. Similar to 48-60-month-old children, most 60-72-month-old children were inclined to integrate natural environment into education suggesting that schools should be located near the sea and a forest area.



**Figure 5.** *Types of school buildings drawn by 72-84-month-old children*

Figure 5 presents the types of school buildings drawn by children aged 72 to 84 months. These drawings were more usual compared to the other age groups. For example, a child drew a school in the form of a castle and another drew a hotel. These children also tended to name their schools as the flower school, summer school, nature school, pine school, princess school, sun school, castle school and hotel school.

**Table 7.** *Characteristics of the External Environment of an Ideal School Drawn and/or Described by Children Aged 72 to 84 Months*

Elements mentioned	Number of children	%
Swimming pool	3	6.67
Garden	4	8.79
Plants (flowers, grass and trees)	11	24.33
Animals	8	17.77
Flag, statute of Atatürk	3	6.67
Forest	6	13.34
River	2	4.45
Sea	2	4.45
Playground	2	4.45
Snow	1	2.27
Helicopter (to go on trips)	1	2.27
School buses	1	2.27
Decorations	1	2.27
Total	45	100.00

When asked to describe the surrounding area of their ideal school, several children aged 72 to 84 months (24.33%) mentioned having grass and plants such as trees and flowers, followed by animals (17.77%) and a forest area (13.34%). Other suggestions for the external environment of the school included a swimming pool, garden, flag, and statute of Atatürk, river, sea, playground, helicopter, school buses, decorations and snow. Most of the children's responses and drawings contained elements from the nature.

**Table 8.** *Characteristics of the Internal Environment of an Ideal School Drawn and/or Described by Children Aged 72 to 84 Months*

Elements mentioned	Number of Children	%
Television	1	5
Classrooms (with colorful desks)	3	15
Animals	3	15
In-class toilets	2	10
Cafeteria	1	5
Teachers' room	2	10
Swimming pool	3	15
Principal's room	2	10
Shopping mall	1	5
Dormitory	1	5
Materials made of leaves	1	5
Total	20	100.00

Table 8 presents the elements included in the ideal schools of children aged 72 to 84 months. The results show that 15% of these children wished to have colorful desks, 15% wanted animals and 15% swimming pools. Children referred to using materials made of leaves and wished to have other school facilities such as in-class toilets, cafeteria, teachers' room, principal's room and dormitory. In addition, one child drew a shopping mall in the school explaining, "Children can go home if they want to; if they don't want to go, they can do their shopping in the school".

**Table 9.** *Lessons and Activities Provided in an Ideal School Described by Children Aged 72 to 84 Months*

Lessons and activities mentioned	Number of children	%
Play	7	25.92
Nature trip	5	11.11
Cultivation	3	18.52
Mural painting	3	11.11
Mathematics and logic	3	7.41
Swimming	2	7.41
Out-of-school education	2	11.11
Animal care	2	3.70
Total	27	100.00

When asked to describe the education in their ideal school, 25.92% of 72-84 month-old children included playing activities and games in the education programs (Table 9). This was followed by activities in the nature (18.52%). These children stated that they wished to study insects in schools, go on field trips and explore the Sun, and emphasized the importance of being close to a forest area. Other suggestions for lessons and activities included drawing on large walls, swimming, mental mathematics, Turkish and animal care. Children in this age group considered that the Turkish and Mathematics courses in their present schools were based on textbooks and thus boring; therefore, they wished to be taught through games. Only one child mentioned that he/she was happy to learn mathematics and Turkish through the textbook.

**Is there a resemblance between the children's drawings/descriptions of their ideal schools and their present schools?**

Studies on the relationship between people and their environment resulted in the formation of an interdisciplinary field, environmental psychology and have gained more momentum since the 1950s (Stokols & Altman 1987). Based on the relationship between each localized physical environment and the person, several concepts have been formed such as behavior scopes/sets, activity limits, sensorial area, personal area, spatial climate, subjective/spatial perception and environment/science (Karaküçük 2010). In this context, children's relation with their environment is a factor that can be used to support their learning. To this end, the design and architecture of schools; can be modified, for example by having big windows in classrooms to allow children to see outside, including elements from the nature in the school area, using wood in the construction of schools and altering school times. This is also in agreement with the idea of Heitor (2005), who suggested that the education environment should be constituted in accordance with the specific characteristics and needs of children. Kuuskorpi & Gonzalez (2011) reported that learning should be supported by modifying physical structures according to the demands of the learners and providing a flexible learning space. In the current study, what children represented in their drawings and described during the interviews in relation to their ideal school was very different from their present school in terms of architectural structure, educational programs and materials used. Therefore, it can be inferred that their present school is far from meeting the needs and demands of these children.

**Conclusion and Implications**

One of the important findings of this study is that children aged 48 to 60 months were more creative than the other age groups in their drawings of their ideal school. The interviews with these children also showed that they described their ideal school in great detail and their imagination was even broader and more diverse than represented in their drawings. In addition, children's love and need for the nature was observed in their drawings and descriptions of their ideal school. Children wished to attend schools where they would be more comfortable, could explore the nature and have fun being educated. Therefore, in their drawings, children placed an emphasis on elements from the nature and thought of nature and education together. Another striking result is that children suggested

having animal care as part of educational activities and included animals in their drawings. However, children's present school was found to be far from what they imagined, being located on the side of the road away from the nature and having a yard mostly made of concrete. It can be understood from children's pictures children want to go schools with creativities elements and also fantastic environment. Creativity elements help to development of children's creativity skills. Besides these, school environment and schools materials should be natural and coming in nature.

Considering the results of the study, the following suggestions can be made with regards to schools for children aged 4 to 7 years. As the children suggested in this study, classrooms can have larger and colored windows to allow children to see outside. Also, to let more light into the classroom and have a view of the sky, the roofs of the schools can be made of glass. In addition, in schools, there can be designated areas for contact with animals, where children are taught about animal care and welfare. In Turkey, although it is rare, there are schools that have areas for poultry animals such as chicken, ducks and geese. It is also possible to keep donkeys, lamb and horses in schools. However, for a healthy and safe learning environment, teachers and students should follow certain guidelines for safe exposure to these animals. Another suggestion of this study is that education should not only be offered in classrooms. As stated by the children in this study, activities in different environments, mostly outside the school, should be organized. In addition, in the lessons and activities, the use of books should be reduced and children should be actively engaged in learning. To this end, learning games and activities for exploring the nature should be incorporated into the education program.

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## **The Analysis of the Relationship between Being a Cyberbully and Cybervictim among Adolescents in Terms of Different Variables**

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### **Abstract**

The purpose of this study is to analyze the factors that cause high school students to commit cyberbullying acts and become a victim of cyberbullying. The study group consists of 622 high school students in two different cities. Relational survey model, which is one of the quantitative research methods, is used in this study. For the purpose of examining the factors that affect students' cyberbullying behaviors and being a victim, "Cyberbully/Cybervictim Scale" is incorporated. Results indicate that there is no statistically significant difference between being a cyberbully/cybervictim and the variables of gender, technological competence of parents, owning a smartphone and the city in which the student lives. However, a significant difference is found with the some of the variables such as grade level, having a personal computer, having an internet connection at home, places accessed to a computer, places accessed to internet, daily internet use, level of technology use, the skill of technology use, educational level of parents. Furthermore, a moderate positive relationship is found between being cybervictim and exhibiting cyberbullying behaviors.

**Keywords:** Cybervictim, Cyberbullying, Problematic internet use, Adolescents, High school.

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## Introduction

With the rapid development of information and communication technology (ICT) and extensive usage of the internet, ICT has become an indispensable part of our lives. Especially, thanks to the mobile technologies and mobile internet, many facilities and opportunities that make people's lives easier have been available for public use in several areas such as banking, health, communication, trade and telecommunications. Using ICT in the field of education is also getting popular day by day. Numerous projects have been designed and implemented to increase the quality of education and student success both in Turkey and around the globe (Demir and Yildirim, 2015). Furthermore, considerable amount of effort is put to integrate ICT into traditional educational environments for individuals to adopt essential skills that 21<sup>st</sup> century demands, like creativity, critical thinking, problem solving, media and information literacy (Eryaman, 2007). As many recent study suggests, utilizing ICT in educational environments affects students' academic success positively (Banerjee, Cole, Duflo and Linden, 2007; Song and Kang, 2012; Sevindik, 2006; Speaker, 2004; Yilmaz, 2005). With recent advancements in mobile technologies, mobile devices have been used in activities in educational environments. Students more specifically prefer mobile electronic devices such as smart phones, tablet computers, iPod to store and access information, course materials, e-books, course distribution tables (Sarrab, 2015). In various studies, it has been reported that mobile learning practices and using mobile devices in education increase students' achievement in learning tasks (Al-Emran, Elsherif & Shaalan, 2016; Hwang, Wu, & Ke, 2011; Wu, Hwang, Su, & Huang, 2012; Pfeiffer et al., 2009) and enhance their motivation to learn (Kinash, Brand and Mathew, 2012; Milošević et al., 2015). However, besides their primary function of communication, they also can be used as a practical tool of abusing especially due to the anonymous nature of wireless and mobile internet services. Acts of harassing, disturbing, throwing racial or ethnic slurs, sending provocative insults, threatening, and humiliating can be categorized as acts of cyberbullying (Civilidag and Cooper 2013). Behaviors fitting into this category that aims to give harm to other people are referred as cyberbullying.

The concept of cyberbullying is defined as the hostile behaviors with the intention of harming an individual or a group, personal or legal entity in a technical or relational fashion using ICTs (Aricak, 2011). Abusive use of ICT is one of the major cases that cause problems and inevitable negative incidents for individuals in today's world. In the literature, this concept is also mentioned as techno-bullying, electronic bullying, or online bullying (Akbulut, Şahin & Eristi, 2010). Willard (2005) states that cyberbullying can be practiced in various forms. These are identified as flaming, cyber-stalking, denigration, impersonation, outing, exclusion and harassment. Those who commit acts of cyberbullying typically send provocative messages that include threats and harassment to their victims using e-mails, text messages and online messaging platforms such as WhatsApp, Messenger etc. Moreover, they post pictures, and offensive, humiliating, threatening messages to victims' social media accounts, web pages or blogs. They shot videos and take nude pictures of their victims using cell phone cameras or computer cameras and publish them on their own accounts or in fake accounts opened in behalf of the victims (Topcu, Yildirim and Erdur-Baker, 2013). Cyberbullying affects emotional, social and psychological development of individuals and has an impact on social relations of victims negatively (Ayas, 2014; Grigg, 2010; Şahin, Sari, Ozer & Er, 2010). Ayas and Horzum (2012) state that students who are exposed to cyberbullying experience distress, restlessness, sadness and frustration, whereas the people, who perpetuate cyberbullying acts, experience enjoyment and claims that the victims, who are exposed to their bullying, deserved it. Batmaz and Ayas (2013) state that there is a positive correlation between the level of the sentiments of hostility and anger, and cyberbullying. It is observed that cyberbullying has serious damages on students' school and academic life. These can be listed as decrease in cybervictims' exam scores (Beran and Li, 2005; Arslan et al, 2012), increase in absenteeism (Raskauskas and Stoltz 2007, Ybarra, West and Leaf, 2007), quitting school (Kirby, 2008).

When the studies conducted on the students in Turkey and in the world are examined, it can be easily seen that cyberbullying is a serious common problem that needs to be dealt with immediately. In a study conducted by Eroglu and et al. (2015), the ratio of cyberbully to cybervictim

is 67.5%, the share of cybervictims is 8.7% and the share of cyberbullies is 6.9% in the whole sample. In another study carried out in Turkey, it is reported that the ratio of cyberbully varies between 2% and 35.7%; the ratio of cybervictim is between 5.9% and 36.7%, and the ratio of cyberbully/cybervictim varies in the range of 17.7% and 23.8% (Arslan et al., 2012). In a study conducted on high school students by Ayas (2011), it is shown that 17.4% of students are exposed to cyberbullying and 15.5% of them are cyberbullies. Another study carried out by Depaolis and Williford (2014) on 660 elementary students reveals that 17.7% of students are cybervictims. Considering all of the mentioned studies, it can be inferred that cyberbullying and cybervictimization are not issues to be overlooked. It is concerned that cyberbullying acts will reform and amplify themselves with the advances of new technologies. When the educational dimension of the studies is examined, it is seen that cyberbullying has profound negative impact on students' school and academic lives. Some example impacts can be illustrated as decrease in victim students' exam scores (Beran and Li, 2005; Arslan et al., 2012), increase in absenteeism (Raskauskas and Stoltz, 2007; Ybarra, West and Leaf, 2007) and dropping out from school (Kirby, 2008).

In the existing literature, there are numerous studies involving factors causing cyberbullying actions as gender, age, grade, type of school, use of internet and the place accessed to the technology. When the literature in terms of gender is examined, although there are studies demonstrating that boys suffer more as cybervictims (Akbulut, Şahin and Eristi, 2010; Erdur-Baker and Kavsut, 2007) than girls, there are other works claiming that girls are more subject to cyberbullying (Dilmac, 2009; Kowalski and Limber, 2007).

When the literature is investigated in terms of cyberbullying behaviors, it is claimed that boys are more prone to present cyberbullying behaviors compared to girls (Aricak et al., 2008; Horzum and Ayas, 2014; Pepler et al., 2008; Peker, Eroglu and Ada, 2012; Vandebosch, Van Cleemput, 2009; Williams and Guerra, 2007; Wolak, Mitchell and Finkelhor, 2002). However, there exists some other studies showing that girls have more tendency to exhibit cyberbullying behaviors than boys (Ayas and Horzum, 2012; Eroglu et al., 2015; Hinduja, S. and Patchin, 2010; Slonje and Smith, 2008).

When the literature is examined in terms of grade levels, there are studies showing that there are more incidents of cyberbullying behaviors in the higher grades (Ayas and Horzum 2011; Kowalski and Limber, 2007). Furthermore, some studies claim that there is not any significant difference among adolescents in terms of cyberbullying (Ozdemir and Akar, 2011; Pamuk and Bavli 2013, Yaman and Sonmez, 2015).

When the literature is examined in terms of internet use, a conclusion, that cyberbullying/cybervictim and internet use might be related, can be made. Erdur-Baker and Kavsut (2007), points out that there is a positive relationship between online communication resources and cyberbullying behaviors and being cybervictims. In Peker and Eroglu's (2010) study, it is shown that rise in the levels of students' internet addiction can also increase the possibility of being a cyberbully or a cybervictim. Moreover, in other studies, it is also claimed that if the use of internet increases, students' cyberbullying behaviors also increase (Ozdemir and Akar, 2011, Soydas and Ucanok, 2014).

There are different findings in the existing literature about parents' educational level. In Soydas and Ucanok's (2014) study, they find that the daughters of the mothers whose education level is low are more often vulnerable to cyberbullying. In a study of Eroglu et al. (2015), they show that the students whose mothers do not have or drop out high school education have more cyberbullying behaviors compared to the students whose mothers have high school education or completed higher education. In a study carried out by Akbaba and Eroglu (2013), it is shown that having a mother, whose education level is low, increases cyberbullying. On the other hand, some other studies report that having a mother, who has high education level, increases cyberbullying (Laftman, Modin and Ostberg, 2013). In his study, Serin (2012) finds out that students whose mothers have an M.A or a PhD show more cyberbullying behaviors than students whose mothers only have primary education, which is one of the most prominent finding about relationship between parents' educational backgrounds and cyberbullying.

When the literature is examined in terms of students' perception of their parents' digital competence, it is stated that perceiving mother's computer skills as inadequate goes hand in hand with being a cyberbully and being a cybervictim (Eroglu et al., 2015). Soydas and Ucanok claims in their study that lower levels of computer skills of a mother triggers girls' being cybervictim while it affects boys in the opposite direction; namely, being cyberbullies. They point out the necessity of getting input from parents about their information and communication tools they use.

In the light of the information provided above, it is seen that there are many different studies about cyberbullying in the literature. It is crucial to conduct academic studies to examine the predictors of cyberbullying, raise awareness about these acts and avoid the incidents that affect individuals negatively. Therefore, in this study, the factors that turn high school students into cybervictims and cyberbullies, who mostly try to prove themselves and their existence, are examined. Other predictors in addition to the studies about the predictors like gender, grade level, the use of internet, parents' usage patterns of technology and parents' educational background are also examined. To the best of this study's knowledge this is the first work that points out to the relationship between being cybervictim and cyberbullying. In the light of this framing, this study is thought to contribute to the literature and further studies.

Studies reveal that cyber bullying is getting more prevalent. Thus, it is necessary to examine the factors that lead to cyberbullying thoroughly to eliminate the negative consequences of cyberbullying and the action itself. Therefore, in this study, it is aimed to examine the factors that turn high school students into cybervictims and cyberbullies and also the relationship between being cybervictims and cyberbullies of adolescent high school students.

In accordance with the general purpose, the following questions are investigated to be answered.

1. In terms of students' cyberbullying behaviors and their being cybervictims,
  - a) Is there a difference in terms of gender?
  - b) Is there a difference in terms of grade levels?
  - c) Is there a difference in terms of having a computer at home?
  - d) Is there a difference in terms of having internet connection at home?
  - e) Is there a difference in terms of having a cell phone?
  - f) Is there a difference in terms of the place to access the computer?
  - g) Is there a difference in terms of the place to access the internet?
  - h) Is there a difference in terms of the time spent on the internet?
  - i) Is there a difference in terms of level of technology use?
  - j) Is there a difference in terms of technology skills?
  - k) Is there a difference in terms of parents' educational backgrounds?
  - l) Is there a difference in terms of father's perceived competence in using technology?
  - m) Is there a difference in terms of mother's perceived competence in using technology?
2. Is there a relationship between students' cyberbullying behaviors and being cybervictims?

### **Methodology**

This study was planned and performed according to relational survey model. Existing situation concerning the issue was described as it was (Balci, 2007). The data needed for relational survey model was obtained from individuals defined as the target population by using measurement tools.

### **Participants**

This study was conducted with 622 high school students from two socio-economically different cities. The 134 (21.5 %) out of 622 students are girls and 488 (78.5 %) of them are boys. The 381 participants are students in a high school in Afyon and 241 participants are students in a high school in Ankara.

**Table 1.** Demographic statistics of participants

	N	%
<b>Gender</b>		
Girls	134	21,5
Boys	488	78,5
<b>Grade Level</b>		
9th Grade	345	55,5
10th Grade	190	30,5
11th Grade	69	11,1
12th Grade	18	2,9
<b>City</b>		
Afyon	381	61,3
Ankara	241	38,7
<b>Having a computer in the home</b>		
Yes	450	72,3
No	172	27,7
<b>Having an internet connection</b>		
Yes	326	52,4
No	296	47,6
<b>Having a cell phone</b>		
Yes	534	85,9
No	88	14,1
<b>The place to access the computer</b>		
Home	353	56,8
School/Work	39	6,3
Internet Café	172	27,7
More than one	58	9,3
<b>The place to access the internet</b>		
Home	277	44,5
School/Work	41	6,6
Internet Café	156	25,1
Smart Phone	43	6,9
More than one	105	16,9
<b>Daily use of the internet</b>		
Less than an hour	345	55,5
Between 1 and 3 hours	209	33,6
Over 4 hours	68	10,9
<b>Technology Use</b>		
Low	36	5,8
Moderate	409	65,8
Advanced	177	28,4
<b>Technology Skills</b>		
Low	21	3,4
Moderate	381	61,2
Advanced	220	35,4
<b>Parents' Educational Level</b>		
Elementary Education I-II	355	57,1

High School	209	33,6
University Graduate	41	6,6
Post Graduate (Master's Degree)	17	2,7
<hr/>		
<b>Father's Technology Use</b>		
Low	262	42,1
Moderate	311	50,0
Advanced	49	7,9
<hr/>		
<b>Mother's Technology Use</b>		
Low	379	60,9
Moderate	226	36,4
Advanced	17	2,7
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### Data Collection Tool

Dataset used in this study was obtained from the participants through the *Cyberbullying/Cybervictim Scale* developed by Ayas and Horzum (2010). The *Cyberbullying/Cybervictim Scale* is a Likert Type scale and graded from "Never" (1) to "Always" (5).

During the development of the scale, exploratory and confirmatory factor analyses were conducted in order to determine validation of the scale. Results of confirmatory factor analysis show that both scales consisted of 3 factors with 17 items. Cyberbully and victim scales including 17 items and 3 factors were found valid and reliable. The both scales were tested separately through confirmatory factor analysis. As a result, the factorial structure of the scales were found to be accurate both theoretically and statistically. For the reliability of the scales, their internal consistency reliability coefficients were calculated. Internal consistency coefficient of cyberbullying and cybervictim as the sub-dimensions of the scale was found to be 0.81. These calculated values indicate that psychometric properties of the scales are within acceptable range.

### Data Analysis

In this study, the analysis was conducted with SPSS 17.0 program. Since the data were not normally distributed, Mann-Whitney U test was utilized in order to analyze whether or not there was a significant difference in terms of gender, having a computer in the home, having an internet connection at home, owning a cell phone and the city they live in. On the other hand, Kruskal-Wallis H test was used to examine whether there was a significant difference in terms of grade level, places to access computer, places to access the internet, daily internet use, level of technology use and technological skills, parents' literacy level, father and mother's perceived technological competence. In addition, Pearson Product-Moment Correlation was used to calculate whether there was a relationship between cybervictim and cyberbullying.

## Findings

### Gender

Mann-Whitney U test was used to analyze the distribution of the scores that were obtained from the scales of *Cybervictim* and *Cyberbully* in terms of gender. The results indicate that the scores obtained from the scales of *Cybervictim* and *Cyberbullying* were not statistically significant in terms of gender ( $p > .05$ ). Therefore, it can be said that cyberbullying and being a cybervictim does not differ with respect to gender.

**Table 2.** Mann-Whitney U test results with respect to gender

	N	Sum of Ranks	Mean Rank	U	z
<b>Cybervictim</b>					
Girl	134	41860.50	312.39	32576.50	-.072
Boy	488	151892.50	311.26		
<b>Cyberbullying</b>					
Girl	134	44582.50	332.71	29854.50	-1.857
Boy	488	149170.50	305.68		

\*p < .05

**Grade level**

Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from the scales of *Cybervictim* and *Cyberbullying* with respect to grade levels. Based on the results of the analysis, the difference between the average score obtained from *Cybervictim Scale* were statistically significant with respect to grade levels ( $\chi^2(3) = 12.447$ ;  $p < .01$ ). In order to discover which grade levels had a significant difference, Mann-Whitney U test was applied to each group and it was seen that the difference between the 9<sup>th</sup> and the 10<sup>th</sup> grades (in favor of the 9<sup>th</sup> grade) and between the 10<sup>th</sup> and the 11<sup>th</sup> grades (in favor of the 11<sup>th</sup> grade) were statistically significant. In addition, the difference between the average scores obtained from *Cyberbullying Scale* were statistically significant in terms of grade level ( $\chi^2(3) = 13.797$ ;  $p < .01$ ). In order to find out which grade levels had a significant difference, Mann-Whitney U test was applied to each grade level. It was found that the difference only existed between the 9<sup>th</sup> and the 10<sup>th</sup> grades (in favor of 9<sup>th</sup> grade).

**Table 3.** Kruskal-Wallis H test results according to grade level

	N	Mean Scores	SD	Chi-Square
<b>Cybervictim</b>				
9th Grade	345	320.22	3	12.447**
10th Grade	190	284.86		
11th Grade	69	353.75		
12th Grade	18	263.58		
<b>Cyberbullying</b>				
9th Grade	345	327.81	3	13.797**
10th Grade	190	280.14		
11th Grade	69	324.33		
12th Grade	18	280.64		

\*p < .05; \*\*p<.01

**Having a computer at home**

Mann-Whitney U test was used to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying* scales according to having a computer at home. According to the results, there was a significant difference between the average scores of the students who had computers in their homes and the students without computers. The difference between average score obtained from *Cybervictim Scale* was in favor of the students who did not have a computer in their homes ( $z = -3.210$ ;  $p < .01$ ). on the other hand, there was a significant difference in favor of the students who did not have a computer in their homes with respect to average scores obtained from *Cyberbullying Scale* ( $z = -2.161$ ;  $p < .05$ ).

**Table 4.** Mann-Whitney U test results with respect to having computer in the home

	N	Sum of Ranks	Mean Rank	U	z
<b>Cybervictim</b>					
Yes	450	134384.00	298.63	32909.000	-3.210**
No	172	59369.00	345.17		
<b>Cyberbullying</b>					
Yes	450	136578.50	303.51	35103.500	-2.161*
No	172	57174.50	332.41		

\*p<.05 \*\*p<.01

**Having internet connection at home**

Mann-Whitney U test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of having internet connection at home. According to the results, a significant difference was found between average scores of the students who had internet connection and the students who did not have internet connection. The difference was in favor of those who did not have internet connection ( $z = -3.400$ ;  $p < .01$ ). It can be seen that there was a significant difference in favor of the students who did not have internet connection when the scores obtained from cyberbullying scale were analyzed ( $z = -3.134$ ;  $p < .01$ ).

**Table 5.** Mann-Whitney U test results in terms of having internet connection at home

	N	Sum of Ranks	Mean Rank	U	z
<b>Cybervictim</b>					
Yes	326	94699.50	290.49	41398.500	-3.400**
No	296	99053.50	334.64		
<b>Cyberbullying</b>					
Yes	326	95724.00	293.63	42423.000	-3.134**
No	296	98029.00	331.18		

\*\*p<.01

**Having a cell phone**

Mann-Whitney U test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of having a cell phone. According to the results, average scores obtained from *Cybervictim* and *Cyberbullying* did not have a significant difference in terms of having a cell phone ( $p > .05$ ).

**Table 6.** Mann-Whitney U test results in terms of having a cell phone of their own

	N	Sum of Ranks	Mean Rank	U	z
<b>Cybervictim</b>					
Yes	534	165715.00	310.33	22870.00	-.445
No	88	28038.00	318.61		
<b>Cyberbullying</b>					
Yes	534	165816.00	310.52	22971.00	-.405
No	88	27937.00	317.47		

\*\*p<.01

**The place to access computer**

Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of the place to access computer. Results indicate that difference between the average scores obtained from *Cybervictim Scale* was statistically significant in terms of the place to access computer ( $\chi^2(3) = 13.630$ ;  $p < .01$ ). Mann-Whitney U test was applied to find out which groups had significant difference with respect to average scores. According to the Mann-Whitney U test results, significant differences were found between the ones who accessed computer in school/work and more than one place (in favor of school/work), and also between

internet cafe and more than one place (in favor of internet cafe). In addition there was no significant difference between average scores obtained from *Cyberbullying Scale* ( $\chi^2(3) = 6.554$ ;  $p > .05$ ).

**Table 7.** *Kruskal-Wallis H test results in terms of the place to access computer*

	N	Mean Scores	SD	Chi-Square
<b>Cybervictim</b>				
Home	353	302.95	3	13.630**
School/Work	39	365.99		
Internet Cafe	172	332.99		
More than one place	58	263.17		
<b>Cyberbullying</b>				
Home	353	305.77	3	6.554
School/Work	39	346.85		
Internet Cafe	172	325.39		
More than one place	58	281.43		

\*\* $p < .01$

**The place to access the internet**

Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of the place to access the internet. According to the results of the analysis, the difference between the average scores of Cybervictim Scale was found to be significant in terms of the place to access the internet ( $\chi^2(4) = 19.761$ ;  $p < .01$ ). Mann-Whitney U test was employed to find out which groups differed from the others. The result of Mann-Whitney U test indicates that the difference between school/work and more than one place (in favor of school/work), internet cafe and more than one place (in favor of internet cafe), cell phone and more than one place (in favor of cell phone) were found to be statistically significant. When it comes to average scores obtained from *Cyberbullying Scale*, it could be seen that there was a significant difference among the groups ( $\chi^2(4) = 19.553$ ;  $p < .01$ ). Mann-Whitney U test was used to find out which groups' differences were statistically significant. According to the results of this test, significant differences were found between the groups who accessed the internet at home and more than one place; also between the groups who accessed the internet at school/work and more than one place (in favor of school/work), internet cafe and more than one place (in favor of internet cafe), cell phone and more than one place (in favor of cell phone) ( $\chi^2(4) = 19.553$ ;  $p < .01$ ).

**Table 8.** *Kruskal-Wallis H test results in terms of the place to access the internet*

	N	Mean Scores	SD	Chi- Square
<b>Cybervictim</b>				
Home	277	304.42	4	19.761**
School/Work	41	355.74		
Internet Cafe	156	335.75		
Cell Phone	43	350.08		
More than One Place	105	261.07		
<b>Cyberbullying</b>				
Home	277	308.70	4	19.553**
School/Work	41	358.37		
Internet Cafe	156	320.61		
Cell Phone	43	362.80		
More than one place	105	266.04		

\*\* $p < .01$

**Daily internet use**

Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of daily internet use. According to the results of the analysis, average scores of *Cybervictim* Scale differed significantly in terms of daily internet use ( $\chi^2(2)= 26.209$ ;  $p <.01$ ). Mann-Whitney U test was used to find out which groups differed significantly. It was found that there was a significant difference between the groups who used the internet less than 1 hour and those who used the internet from 1 to 3 hours (in favor of less than 1 hour). There is also a significant difference between the groups using the internet daily less than 1-hour and over 4 hours (in favor of less than 1 hour). On the other hand, average scores of *Cyberbullying Scale* differed significantly in terms of daily internet use ( $\chi^2(2)= 24.002$ ;  $p <.01$ ). According to Mann-Whitney U Test results, which is done to determine which groups differ, there were significant differences between the groups of less than 1 hour and from 1 to 3 hours (in favor of less than 1 hour). Also, there were significant differences between the groups of less than 1 hour and over 4 hours (in favor of less than 1 hour) and from 1 to 3 hours and over 4 hours (in favor of 1-3 hours).

**Table 9.** *Kruskal-Wallis H test results in terms of daily internet use*

	N	Mean Scores	SD	Chi-Square
<b>Cybervictim</b>				
Less than 1 hour	345	340.31	2	26.209**
From 1 to 3 hours	209	282.68		
Over 4 hours	68	253.90		
<b>Cyberbullying</b>				
Less than 1 hour	345	334.63	2	24.002**
From 1 to 3 hours	209	294.56		
Over 4 hours	68	346.22		

\*\* $p <.01$

**The level of technology use**

**Table 10.** *Kruskal-Wallis H test results in terms of technology use level*

	N	Mean scores	SD	Chi-Square
<b>Cybervictim</b>				
Low	36	389.89	2	13.979**
Moderate	409	316.51		
Advanced	177	283.97		
<b>Cyberbullying</b>				
Low	36	386.85	2	19.932**
Moderate	409	319.81		
Advanced	177	276.96		

\*\* $p <.01$

Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of the level of technology use. According to the results of the test, the differences between average scores obtained from *Cybervictim* Scale were statistically significant in terms of the level of technology use ( $\chi^2(2) = 13.979$ ;  $p <.01$ ). According to Mann-Whitney U test results, a significant difference was found between low and moderate (in favor of low), and between low and advanced (in favor of low). It could be seen that the scores obtained from *Cyberbullying Scale* also differed in terms of the level of technology use ( $\chi^2(2)= 19.932$ ;  $p <.01$ ). Mann-Whitney U test was used to determine which groups differences were statistically significant. According to Mann-Whitney U test results a significant difference was found between low and moderate (in favor of low), between low and advanced (in favor of low) and finally between moderate and advanced (in favor of moderate).

**Technological skills**

Kruskal-Wallis H test was applied to analyze the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of technological skills. According to test results, the students' average scores obtained from *Cybervictim Scale* indicated a significant difference in terms of technological skills ( $\chi^2(2)= 12.155$ ;  $p <.01$ ). According to the results of Man-Whitney U test, it was found that there was a significant difference between the groups of low and moderate (in favor of low, between low and advanced (in favor of low) and also between moderate and advanced (in favor of moderate). In addition, the scores obtained from *Cyberbullying Scale* indicates a significant difference in terms of technological skills ( $\chi^2(2)= 15.015$ ;  $p <.01$ ). According to Mann-Whitney U test results, the difference between the groups of low and advanced (in favor of low), between moderate and advanced (in favor of moderate) were statistically significant.

**Table 11.** *Kruskal-Wallis H Test results in terms of technological skills*

	N	Mean Scores	SD	Chi-Square
<b>Cybervictim</b>				
Low	21	403.45	2	12.155**
Moderate	381	319.64		
Advanced	220	288.62		
<b>Cyberbullying</b>				
Low	21	386.40	2	15.015**
Moderate	381	323.17		
Advanced	220	284.15		

\*\* $p <.01$

**Parents' educational background**

Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of educational background of parents. According to the results of the analysis, it can be seen that differences between the the average scores obtained from *Cybervictim Scale* were statistically significant in terms of their parents' education levels ( $\chi^2(3)= 11.088$ ;  $p <.05$ ). Paired comparisons were made using Mann-Whitney U test to determine which groups had significant difference. Accordingly, it was found that there was significant differences between the groups of primary education and postgraduate education (in favor of primary education); between high school education and postgraduate education (in favor of high school education) and between graduate and postgraduate (in favor of graduate).

**Table 12.** *Kruskal-Wallis H test results in terms of parents' education levels*

	N	Mean Scores	SD	Chi-Square
<b>Cybervictim</b>				
Primary Education	355	312.01	3	11.088*
High school	209	320.89		
University(Graduate)	41	311.61		
Postgraduate	17	185.12		
<b>Cyberbullying</b>				
Primary Education	355	313.69	3	19.913**
High School	209	323.07		
University	41	297.62		
Postgraduate	17	157.00		

\* $p <.05$  \*\* $p <.01$

The results indicates that scores obtained from *Cyberbullying Scale* differed significantly in terms of parents' education levels ( $\chi^2(3)= 19.913$ ;  $p <.01$ ). Paired comparisons were made by using Mann-Whitney U test to determine which groups differed significantly from each other. According to the results of the test, it was discovered that there were significant differences between the groups of

primary education and postgraduate education (in favor of primary education); between high school education and postgraduate education (in favor of high school education) and between graduate and postgraduates (in favor of graduate).

**Father’s technological competence**

As a non-parametric test, Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of perceived technological competence of the father. According to the results of the analysis, average scores obtained from both *Cybervictim* and *Cyberbullying scales* did not indicate a significant difference in terms of perceived technological competence of the father ( $p > .05$ ).

**Table 13.** *Kruskal-Wallis H test results in terms of father’s perceived technological competence*

	<b>N</b>	<b>Mean Scores</b>	<b>SD</b>	<b>Chi-Square</b>
<b>Cybervictim</b>				
Low	262	309.26	2	.573
Moderate	311	310.77		
Advanced	49	328.11		
<b>Cyberbullying</b>				
Low	262	306.81	2	.950
Moderate	311	312.70		
Advanced	49	328.96		

\*\* $p < .01$

**Mother’s technological competence**

As a non-parametric test, Kruskal-Wallis H test was applied to analyze the distribution of the scores obtained from *Cybervictim* and *Cyberbullying Scales* in terms of perceived technological competence of the mother. According to the results of the analysis, average scores obtained from both *Cybervictim* and *Cyberbullying Scales* do not indicate a significant difference in terms of perceived technological competence of the mother ( $p > .05$ ).

**Table 14.** *Kruskal-Wallis H test results in terms of the mother’s perceived technological competence*

	<b>N</b>	<b>Mean Scores</b>	<b>SD</b>	<b>Chi-Square</b>
<b>Cybervictim</b>				
Low	379	307.44	2	.677
Moderate	226	317.11		
Advanced	17	327.47		
<b>Cyberbullying</b>				
Low	379	303.09	2	5.034
Moderate	226	328.29		
Advanced	17	275.85		

\*\* $p < .01$

**The relationship between Cyberbullying and being Cybervictim**

The relationship between the total scores of *Cybervictim* and *Cyberbullying* were analyzed through Spearman’s Correlation Coefficient ( $\rho$ ) and a moderate positive relationship was found between these two variables ( $r = .70, p < .01$ ).

**Table 15.** Spearman’s Correlation Coefficient results about relationship between Cyberbullying and being Cybervictim

		<b>Cybervictim</b>	<b>Cyberbullying</b>
<b>Cybervictim</b>	Correlation Coefficient	1 ,000	0,695**
	Sig. (2-tailed)		,000
	N		622
<b>Cyberbullying</b>	Correlation Coefficient	0,695**	1 ,000
	Sig. (2-tailed)	,000	
	N	622	622

\*\* . Correlation is significant at the .01 level (2-tailed).

### Conclusions and Discussion

It is suggested in numerous studies that various factors are playing roles in cyberbullying. Since the results of studies regarding gender variable show significant inconsistencies among each other, further effort on investigating that dimension is required. In this study, according to the analysis of the results in terms of gender, a relationship cannot be found between the genders in terms of being a cybervictim and acting cyberbullying behaviors. This finding supports the claim of the studies indicating no difference between girls and boys in terms of being a cybervictim (Peker, Eroglu and Ada, 2012; Topcu, 2008; Raskauskas and Stoltz, 2007; Ybarra and Mitchell 2004). As discussed in introduction section, contrary to the results of this study, there are other studies in the literature reporting a significant relationship between boys and girls in terms of being cybervictims.

In terms of cyberbullying as well, findings of this study contradict with some of the existing studies in the literature. As given examples of in the introduction section, it is reported that boys are more prone to exhibit bullying behaviors than girls in various scientific studies. Nevertheless, there exists other works claiming that girls are more likely to show cyberbullying behaviors. In addition to these issues discussed in the introduction section, it is timely to introduce Horzum’s work (2011) to shed light on the reasons of the issue here. In his study conducted on gender variable, Horzum (2011) states that boys in developing countries who do not have internet access at home prefers to go to internet cafes often, while girls do not have the chance as much. He claims that the underlying reason of boys being a cybervictim or a cyberbully more than girls can be the former observation. Previous studies show that male students involve in cyberbullying activities more than girls and girls are exposed to cyberbullying activities more than boys. Back in the day, in the case of boys not having the necessary technologies at home, they can carry on these acts with the help of internet cafes. On the other hand, restricted ability of female students to access those technological tools can be the reason of the mentioned phenomenon. However, in today’s world, the reason of not being able to detect a significant difference between genders in cyberbullying activities in this study is considered to be because of the easy access and popular use of smartphone by both girls and boys.

The analysis of the results in terms of grade level of the student imply significant differences in terms of being a cybervictim and showing cyberbullying behaviors. The differences for being a cybervictim are found between the 9<sup>th</sup> and the 10<sup>th</sup> grades (in favor of the 9<sup>th</sup> grade) and between the 10<sup>th</sup> and the 11<sup>th</sup> grades (in favor of the 11<sup>th</sup> grade). In terms of cyberbullying, it is concluded that the difference is between the 9<sup>th</sup> and the 10<sup>th</sup> grades (in favor of the 9<sup>th</sup> grade). In the light of these findings, it is concluded that younger students tend to show more cyberbullying behaviors and they are more prone to being cybervictims than other students. The reason of observing such phenomenon can be the uninformed use of technological devices and unawareness of its possible harmful nature by students.

Some studies supporting the findings of this study claim that the older the student is, the less cyberbullying behavior is performed by (Raskauskas and Stoltz, 2007; Slonje and Smith, 2008; Williams and Guerra, 2007). In one of the contradictory studies with this study, Pepler et al. (2008)

states that bullying tendencies of students are performed mostly in the transition period from primary school to high school. Ayas and Horzum (2011) indicate that students' cyberbullying actions differ according to grade level and this difference increases when the grades get higher. Kowalski and Limber (2007) discovers in their study that the rate of cyberbullying acts increases with the higher grades. Therefore, it can be concluded that with the higher grades and older ages, technological skills of teenagers improve and the chances to reach cyberbullying tools increase accordingly. According to Campbell (2005), acquired technological skills thanks to the experience coming along with older ages is also a variable to be considered for cyberbullying acts.

In this study, a significant difference is detected in favor of those who do not have a computer and an internet connection at home in terms of being cybervictims. Similarly, in terms of cyberbullying, a significant difference is observed in favor of those who do not have a computer and an internet connection at home. This pattern can be explained by the fact that students who do not have access to a computer or an internet connection are likely to have lower levels of skills with technology use and be more vulnerable to cyberbullying acts. It is also shown that the students with lower levels of technological skills have more vulnerability and tendency to show more cyberbullying behaviors. Another significant finding of this study is that a relationship between the frequency of computer and internet access in internet cafes and being cybervictim and cyberbullying behaviors.

There exist numerous studies in the literature supporting findings of this study about computer and internet access patterns of students. In a study, conducted by Eroglu et al.(2015), the frequency of going to an internet cafe is found to be related to being a cybervictim and exhibiting cyberbullying behaviors. In a study carried out by Akbulut et al. (2010), it is shown that there is a significant relationship between the frequency of going to internet cafes and cyberbullying due to the lack of surveillance over online activities in internet cafes. Being self-conscious of that one is surveilled about their online activities may prevent the individuals from involving in cyberbullying actions. It is suggested that lack of surveillance is inviting new cyberbullies to the scene every day.

Findings of this study in terms of having a cell phone does not indicate a significant difference in terms of being a cybervictim and exhibiting cyberbullying behaviors. This may be due to the fact that cyberbullying behaviors are performed not only by cell phones but also through various methods and technological tools, particularly personal computers.

However, findings of this study do not align with existing results by other researchers. It has already become popular opinion both among researchers and everyday citizen that the development of wireless communication network and mobile internet has enabled more people to access the internet through their mobile phones and consequently, cyberbullying acts have increased. Raskauskas and Stoltz (2007) state that peer victimization existing among students has begun to take place in cyber environments such as internet and mobile phones. In another study, it is found that most frequent cyberbullying incidents take place through mobile texting services (NCH, 2005).

The results of this study in terms of the place to access the internet show that students access a computer in an internet cafe are more likely to be cybervictims more than the ones who access to it through school or work environments. However, a significant difference is not detected in terms of cyberbullying. In terms of the place to access the internet, it is found that students access the internet at school/work, in an internet cafe and via cell phones according to being cybervictims and presenting cyberbullying behaviors. These results are aligned with previous findings of this study. It is already shown that those who do not have a computer or an internet at home tend to be cybervictims and exhibit cyberbullying behaviors.

Ybarra et al. (2006) report in their study that state school students, which is known to have lower economic backgrounds, spend more time in internet cafes than private school students do and state school students are more likely to be exposed to more cyberbullying. Topcu et al. (2008) present a link between being cybervictim or cyberbully to students' access types and behaviors to the internet

and shows that internet cafes where there is limited control over students are likely to be the root cause of the pattern.

The results of this study in terms of daily internet use concludes that students who spend less time in internet are less likely to be cybervictims. Likewise, a conclusion is inferred that those who use internet less are likely to present less cyberbullying behaviors.

A common proposition among the studies claiming there is no direct relationship between being a cybervictim and more internet use is that there are other mediator agents in between (Erdur-Baker, 2010). Determining those mediator factors enables to understand the causality relationship better (Eroglu et al., 2015). Topcu et al. (2008) state that frequent use of ICTs is crucial prior of cyberbullying but using the internet frequently do not necessarily make someone cyberbully. However, there are studies in the literature that report different results. Peker and Eroglu (2010) discover that an increase in students' internet addiction also increases the possibility of being a cybervictim or a cyberbully. It further agrees with other studies in the field (Ozdemir and Akar, 2011; Soydas and Ucanok, 2014; Ybarra and Mitchell, 2004; Gardner, 2010). Rather than the variable of time spent on the internet by individuals, the quality and the extent of internet usage may be more definitive for students to be cybervictims or cyberbullies. Regardless of the time spent in the internet, students may show cyberbullying behaviors when they do not have the proper piece of guidance. Furthermore, to explain the mentioned phenomenon it should be taken care into consideration that individuals being exposed to cyberbullying may choose to end their internet subscription which eventually represented as less usage of internet in the analysis of the results.

The results of this study also shows that students having lower levels of technological skills are more likely to be cybervictims and cyberbullies. This agrees with the work of Sezer, Sahin and Akturk (2013) in which the authors reason that lack of technological skills and levels comes with lack of information about cyberbullying behaviors and methods as well, which eventually increases the risk of students to be cybervictims.

According to the results related to parents' educational level, there appear to be a significant difference in terms of being a cybervictim and cyberbullying. Students whose parents have only primary school education are more likely to be a cybervictim, compared to those whose parent have postgraduate education. Same pattern is observed with parents having high school education or university level compared to ones with postgraduate education level. In conclusion less educated the parent is, more vulnerable the student is to be a cybervictim. In addition, it is find out that the case of cyberbully students follow the same pattern. Cyberbully students likely have parents with lower level school diplomas.

The results of this study can be justified by several other studies in the field. Previous researches indicate that parental control in online environments is an effective tool to decrease risky online behaviors among teenagers (Mesch, 2009; Ybarra and Mitchell, 2004). Soydas and Ucanok (2014) reveal that the daughters of mothers with a lower level of education are more exposed to cyberbullying. Eroglu et al. (2015) discover that the students whose mothers have a level of education lower than high school have more cyberbullying behaviors than others. To present a further agreement in the literature, in a study conducted by Akbaba and Eroglu (2013), it is found that having parents with a low level of education increases cyberbullying behaviors. However, there exist some studies reporting that having a mother with a high level of education increases students' chances to be cyberbullies (Laftman, Modin and Ostberg, 2013). As another contradictory work, Serin (2012) reports that the students whose mothers have an education level of M.A and PhD show more cyberbullying behaviors compared to those whose mothers have only primary school education.

According to the results in terms of technological competence of parents, a significant difference cannot be detected in terms of being a cybervictim or cyberbully. Both considering other contradictory works in the field and the imprecise definition of the *technological competence*, it is difficult to draw a conclusion based on results of this study. To illustrate with some other works in the

field, Soydas and Ucanok (2014) state that mother's computer skills have an impact on students to be a cybervictim among girls while it motivates cyberbullying behaviors among boys. In this case, it is necessary to get further detailed information about the ICT tools parents use. Eroglu et al. (2015) shows that mother's internet skills have a great impact on students to be cyberbullies or cybervictims. Akbaba and Eroglu (2013) state that having a higher perception of parents' internet skills by students decreases cyberbullying behaviors in primary school students. Anderson and Sturm (2007) mention that parents have difficulty in dealing with cyberbullying cases of their kids due to the lack of knowledge. It is also stated that raising awareness of parents about technology and its use motivates them to follow and surveil their children's online activities which is a essential to overcome cyberbullying effectively (Franek, 2006; Keith and Martin, 2005).

When the relationship between the total scores of being a cybervictim and cyberbullying behaviors is examined, a moderate positive relationship can be seen. This indicates cyberbullying and being a cybervictim is correlated. It further shows that cybervictims may have tendency for cyberbullying behaviors or those who exhibit cyberbullying behaviors can be cybervictims. One explanation of seeing such a pattern can be summarized as that students exposed to cyberbullying fight back with the intention of revenge. Moreover, those who are cybervictims meet with cyberbullying behaviors, internalize and practice them in other online social settings. To compare in this study's findings with the existing studies, Turan (2013) reveal that since male students are more exposed to cyber peer victimization, they may exhibit more cyber peer bullying. In another study, it is mentioned that most of the male students who are cybervictims tend to fight back and retaliate aggressively in the same fashion with what they are exposed to. Same study also states that most of the female students prefers to ask the cyberbully to stop the action instead of fighting back or retaliate (Akca, Sayimer and Ergul, 2015). To present one contradictory work with findings of this study, Tamer and Vatanartiran (2014) report that cybervictims who are exposed to cyberbullying such as getting sexually abusive phone calls with unknown caller IDs, getting sexually explicit messages and e-mails, getting malicious e-mails, getting threats through online services do not tend to exhibit cyberbullying behaviors.

### **Suggestions**

It is necessary to develop strategies for elimination and intervention of cyberbullying in schools. It is crucial to raise awareness about cyberbullying, especially of educators and students. Psychological counselors should be easily accessible for cybervictims which are eager to talk about their experiences. Furthermore, cybervictims need to be informed about what they can do and where/who they can refer to in case of bullying acts with no hesitation to disclose what they are exposed to. Seminars or courses can be given about the topic to raise awareness of the student body. By having these precautions, undesirable incidents and their damaging results may be prevented.

The findings of this study reveals that there is a relationship between being a cybervictim and cyberbully. To put it into perspective, this result can be framed as cybervictim's fight back with the intention of revenge. It is crucial that instructors of technological sciences must be informative, resourceful and raise awareness about how to use the internet and technological tools for educational purposes. Shifting the focus of the students (Akca, Sayimer and Ergul, 2015) from social media and playing non-educational computer games to educational games and m-learning applications may help not only to decrease both cyberbullying behaviors and cybervictim cases but also to prevent a decrease in academic success.

It must be noted that proper use of internet and technology stands as a critical issue, since uninformed use of them invites cyberbullying acts. Increasing the surveillance of places where students access the internet, such as schools or internet cafes, and utilizing software that prevent and report cyberbullying acts can be helpful in resolving the problem (Cohen et al., 2014). As further security measures, parents being in touch with their kids and gaining knowledge about technology can be taken to motivate students to have more insight and be more aware of their online activities. In this way, it is possible to prevent or decrease problematic internet use (Ang et al., 2011; Huang et al.,

2010; Milani, Osualdella and Di Blasio, 2009). It should be kept in mind that young individuals take adults as role models; therefore, it must be known that adults' attitude is vital in prevention (or prevalence) of cyberbullying (Basturk et al., 2014).

Finally, information about the possible negative implications of social media should be taught to students. More specifically teenagers must be informed that their inappropriate pictures and text messages regardless of their intention (to prove self-identity etc.) to make online social contacts can be abused for the sake of others' bad intentions. Students can easily fall into the traps of cyberbullies presenting fake identities in online settings. Recent studies reveal that the use of online social networks among students has a positive relationship with being cybervictims (Staksrud, O'lafsson and Livingstone 2013; Sampasa-Kanyinga and Hamilton, 2015; Dredge, Gleeson and Garcia, 2014). Moreover, guiding students about how they can make use of ICTs, such as smart phones and the internet, in a reasonable, responsible way while also considering the ethical dimension of it is very crucial for the elimination and prevention of cyberbullying (Peker, Eroglu and Citemel, 2012; Yaman, Eroglu and Peker, 2011).

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## The Correlation Between School Managers' Communication Skills and School Culture

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### Abstract

The purpose of this study was to explore the correlation between school administrators' communication skills and school culture. This research was conducted as a survey using a descriptive method in order to ascertain the views of school managers and teachers about the correlation between school managers' communication skills and school culture in Turkey. The data were collected from teachers and managers working in Kindergartens, Primary Schools (1-8th grades), and High Schools in the province of Antalya, Turkey via the "Interpersonal Communication Skills Questionnaire" and "Organizational Culture Questionnaire" designed with five-point Likert scales, ranging from strongly disagree to strongly agree. A total of 1037 questionnaires were included in the analysis. Pearson correlations coefficient and Hierarchical regression analyses were conducted to examine the extent to which communication skills of school managers predict school culture. Consequently, interpersonal communication skills of school managers and organizational culture were found to be correlated moderately.

**Key words:** School culture, Interpersonal communication, Managers' skills, Culture change.

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## Introduction

The purpose of this study was to find out the correlation between school administrators' communication skills and school culture. As Marzano, Waters and McNulty, (2005, p.65) pointed out it seems logical that the responsibility of relationships might be related to communication, which might be related to culture and so on. Mutual relationships and multi-dimensional connections among the concepts and processes in any organization are important considerations of research. In this sense, below first the arguments and related literature about organizational/school culture and organizational communication were presented and later on, the mutual relationship of culture and communication were discussed.

### Organizational/School Culture

As Deal and Peterson (1990, p.7) stated well it is clearly time to reconsider and rethink the importance of school culture in today's educational environment. They stated that school cultures are complex webs of traditions and rituals built up over time as teachers, students, parents and administrators work together and deal with crises and accomplishments.

There are several features common to the definitions of organizational culture in the literature. First, organizational culture must be shared by a collective. Organizational members who share cultural elements are drawn together by their meaningful and shared interpretation. Second, organizational culture is a multilevel construct comprising many elements-primarily artifacts, values, and assumptions. As a set, these elements guide our organizational behavior, help us make sense of the organizational world in which we operate, and create a mechanism for identifying with others at work. At the core are the assumptions, beliefs, and values regarding work or non-work interests that manifest in individuals' and groups' behaviour that in turn affect or are affected by organizational systems, procedures and norms and the underlying philosophy, strategy and so on. Most authors will probably agree on the following characteristics of the organizational/corporate culture construct: it is 1) holistic, 2) historically determined, 3) related to anthropological concepts, 4) socially constructed, 5) soft, and 6) difficult to change, 7) terms such as 'myth', 'ritual', 'symbols' 'heroes' and similar anthropological terms are commonly used to characterize culture, 8) culture most commonly refers to ways of thinking, values and ideas of things rather than the concrete, objective and more visible part of an organization (Alvesson, & Sveningsson, 2008 p.36; Alvesson, 2011, p.14; Hellriegel & Slocum, 2011, p.479; Hofstede, Bram, Daval, & Geert, 1990, p.2; Hofstede, Neuijen, Ohayv & Sanders, 1990; Hofstede, Hofstede & Minkov, 2010, p.344; Keyton, 2005, p.22; Schermerhorn, Hunt, & Osborn, 2002, p.43; Schein, 2010, p.18, Sinha, 2008, p.299).

Schein (2010, p.18) proposed three levels of culture. They were 1) Artifacts (visible and feelable structures and processes, observed behaviour, difficult to decipher). 2) Espoused beliefs and values (ideals, goals, values, aspirations, ideologies, rationalizations). 3.) Basic underlying assumptions (unconscious, taken - for - granted beliefs and values). According to Keyton (2005, p.23) artifacts are visible or tangible-anything that one can see, hear, or feel in the organizational experience, and often the first things we notice about an organization when we enter it. Norms, standards, and customs are artifacts just like the more physical attributes of organizational life. Values are strategies, goals, principles, or qualities that are considered ideal, worthwhile, or desirable, and, as a result, create guidelines for organizational behaviour. Assumptions are beliefs that are taken for granted. An organizational culture emerges when members share knowledge and assumptions as they discover or develop ways of coping with issues of external adaptation and internal integration (Hellriegel & Slocum, 2011, p.482). The level of analysis in cultural assessments is therefore always that of collective groups. Attempts to measure culture also focus on deep elements of analysis, such as the shared meanings, assumptions and values (Sparrow, 2001, p.88).

Culture is ultimately created, embedded, evolved, and ultimately manipulated by leaders. If elements of a given culture become dysfunctional leaders have to surmount their own culture and speed up the normal evolution processes with forced managed culture change programs. These dynamic processes of culture creation and management are the essence of leadership and make you

realize that leadership and culture are two sides of the same coin (Schein, 2010, p.4). Although leaders are aware of their organization's culture(s), they are often unsure about how to influence it (Hellriegel, & Slocum, 2011, p.478). Good managers are able to reinforce and support an existing strong culture; good managers are also able to help build resilient cultures in situations where they are absent (Schermerhorn, et al., 2002, p.52). Principals know from experience that piecemeal reforms, reforms which ignore the inner realities of schools, will have limited effect. They understand by instinct that to build a successful school one must work simultaneously on staff needs and skills, the organization's goals and roles, and the dynamics of political power and conflict (Deal & Peterson, 1990, p.7). Evidence suggests that the typical school culture and its organizational structures may be responsible, in part, for stifling teacher development (Leithwood, 1990, p.82). Deal and Peterson (1990, p.20), in order to identify the cultural dimensions of their job and do concrete things, suggested 1) to affirm values through dress, behavior, attention, routines (the principal as symbol), 2) to shape and be shaped by the school's heroes, rituals, ceremonies, symbols (the principal as potter), 3) to use language to reinforce values and sustain the school's best image of itself (the principal as poet), 4) improvise in the school's inevitable dramas (the principal as actor), 5) oversee transitions and change in the life of the school (the principal as healer).

There are various opinions about how culture can be studied. Some writers stated that culture can be studied from the perspective of the functions it performs and how it is structured; some writers proposed three levels of cultural analysis: observable culture, (includes the unique stories, ceremonies, and corporate rituals) shared values (implies that the group is a whole) and common assumptions (truths); some writers spoke of subcultures and countercultures. Subcultures are unique patterns of values and philosophies within a group that are consistent with the dominant culture of the larger organization or social system. Countercultures are the patterns of values and philosophies that outwardly reject those of the larger organization or social system. In another conceptualization culture was analysed as productive and counterproductive cultures. Productive cultures focus on feedback, continued cultural change and learning, flexibility, reward risk-taking, encouraging assignments, strengthening of trust and cooperation. Counterproductive cultures on the other hand, are bureaucratic and resistant to accept responsibility, fear getting into trouble by taking initiatives, lack appropriate organizational rewards, develop a victim mentality, lack genuine and enthusiastic commitment, lack persistent champions for persistent change, fear taking initiatives that are too risky (Argyris, 2010, pp.119-120; Schabracq, 2007, p.7; Schein, 2010, p.4; Schermerhorn, et al., 2002, pp.45-47).

Maslowski (2001, p.131) discussed that schools' cultural traits were human relations, open systems, rational goal and internal process orientations. To Deal and Peterson (1990, p.7) the concept of culture is meant to describe the character of a school as it reflects deep patterns of values, beliefs and traditions that have been formed over the course of its history. In this sense, each school must identify its core beliefs, develop a shared vision, measure the congruence between the current reality and the vision, determine the changes that will close any gaps, support teachers during the change process, and foster a culture of collective autonomy and accountability (Zmuda, Kuklis, & Kline, 2004, p.179).

The traditional school culture rewards competition, autonomy and individualism within a faculty, so the journey toward achievement and recognition is sometimes frustrating for both leaders and teachers. This environment is an inevitable result of the competitive and individualistic nature of teaching (Combs, Miser & Whitaker, 1999, p.75; Eryaman, 2007). Research tells us that some kinds of school cultures support students' learning much more strongly than others. This applies not only to whole school cultures but also to cultures within schools (Fleming & Kleinhenz, 2007, P.5). Although a culture is a natural by-product of people working in close proximity, it can be a positive or negative influence on a school's effectiveness. An effective leader builds a culture that positively influences teachers, who, in turn, positively influence students (Marzano, Waters, & McNulty, 2005, p.47). To the extent that all managers share relatively consistent values, then performance follows (Sparrow, 2001, p.95).

Cultures almost always endorse the values and beliefs of some subgroups while ignoring the values and beliefs of other subgroups. The devalued subgroups thus gain incentive to protest or oppose. As

cultures clarify some beliefs and rituals, they also create ambiguity about the beliefs and rituals that they ignore (Baumard & Starbuck, 2001, p.522). Likewise, the individual who does not agree with the group behavioral norms or with the values found within the corporate culture will be in conflict with the work group or with the entire organization (Montana & Charnov, 2000, p.385). Combs et al. (1999, pp.67,92) stated also that traditionally, school cultures do not value and address people's needs. Most school cultures do not even expect or encourage strong feelings and emotions-or even passion. The culture of schools often fosters isolation and individualism, not cooperation and collaboration. Dimmock and O'Donoghue (2005, p.101) discussed that in order to provide a firm foundation on which to build a healthy school culture in the pursuit of effective teaching and learning the 'appropriate foundations' included the establishment an institutionalization of school practices built on social justice, an 'inclusive' curriculum and equity for all members of the school community. Gelsthorpe and West-Burnham (2003, p.183) assumed the new school culture to be built on mutual trust and common purpose. They added that the foundations include passion, emotion, hope, alliances, tapping of expertise within and beyond the school, responsive leadership and celebration.

Pheysey (1993, pp.17-19) referring to the other writers such as Harrison (1972) describes four types of organizational culture. They are role culture, achievement culture, power culture and support culture. A role culture is one which emphasises conformity to expectations. The word 'role', refers to the way in which the occupant of each position in the firm is expected to act. There are usually job descriptions, rules and procedures to govern behaviour, and principles for fixing remuneration. The Role orientation assumes that people work most effectively and efficiently when they have relatively simple, clearly defined, circumscribed and measurable tasks. Clarity and precision of roles and procedures are striven for in order to fit the parts of the organization together like a machine. In an achievement culture people are interested in the work itself, and have a personal stake in seeing that it is done. The achievement-oriented organization makes high demands on its people's energy and time, assuming that people actually enjoy working at tasks which are intrinsically satisfying. In a power culture certain persons are dominant and others subservient. There is 'a relatively bounded and stable occurrence of social order based on habits of deference to authority'. In the power organization at its best, leadership is based on strength, justice and paternalistic benevolence. The support-oriented organization offers its members satisfactions which come from relationships; mutuality, belonging, and connection. The assumption is that people will contribute out of a sense of commitment to a group or organization of which they feel themselves truly to be members, and in which they believe they have a personal stake. This study was also based on the types of organizational culture explained by Pheysey (1993).

### **Organizational Communication**

Communication is one of the most important interpersonal processes in organizations. The often posed philosophical question "Is there a noise in the forest if a tree crashes to the ground but no one is there to hear it?" demonstrates some of the important aspects of interpersonal communication (Luthans, 2011, p.254). The primary role of communicative action is to foster mutual understanding, whereas that of strategic activity is to pursue and attain goals. Both are required to maintain individual lives, families, communities, organisations, and societies, and are dialogically related (Milley, 2008, p.61). Effective communication allows employees, groups and organizations to achieve their goals and perform at a high level (George & Jones, 2012, p.428). Interpersonal communication is fundamental to obtaining employment, succeeding on the job, and being an effective colleague, subordinate, or manager (Harris & Nelson, 2008). Interpersonal communication involves the exchange of a message across a communication channel from one person to another (Aamodt, 2010, p.414). In interpersonal communication, the major emphasis is on transferring information from one person to another. Communication is looked on as a basic method of effecting behavioural change and it incorporates the psychological processes (perception, learning, and motivation) on the one hand and language on the other (Luthans, 2011, p.253). Communication among individuals and groups is vital in all organizations. Communication is probably the most visible of all group activities and it is critical to effective group functioning (Stroh, Northcraft & Neale, 2002, p.174). Without communication, an organization would be merely a collection of individual workers doing separate tasks. Organizational action would lack coordination and would be oriented toward individual rather

than organizational goals (Griffin & Moorhead, 2013, p.295). Communication fosters motivation by clarifying for employees what is to be done, how well they are doing, what can be done to improve performance if it's subpar (Robbins, 2002, p.114). Communication creates the foundation for successful actions; it opens pathways to a more collaborative workplace. Collaboration requires effective communication. It is the way we share information, ideas, goals, directions, expectations, feelings, and emotions in the context of coordinated action. Successful organizations value and promote effective communication both at the interpersonal level and across organizational boundaries (Schermerhorn, Hunt, Osborn, & Uhl-Bien, 2010, p. 256).

Organizational communication has several functions and dysfunctions. Keyton (2005) asserted that some organizational communication functions for socializing new members or negotiating one's position in the organization. Some organizational communication is a mediator for management in order to structure or control the organization. Some organizational communication is devoted to negotiating and coordinating work activities. Finally, some organizational communication functions for positioning the organization within the marketplace and society. Robbins (2002, p.114) claimed that communication serves four major functions within a group or organization: control, motivation, emotional expression, and information. Champoux (2011, p.338) stated that the functions include letting people share information and helping managers integrate or coordinate different parts of the organization. Champoux (2011, p.338) listed the dysfunctions as selective perception, semantic problems and information overload. (Schermerhorn et al., 2010, p. 256) used glue to explain the tie between communication and organization. They stated that communication is the glue that holds organizations together. Similarly, Griffin and Moorhead (2013, p.295) to explain the function of communication in an organization used the human nervous system as a metaphor well. They stated that the primary purpose is to achieve coordinated action. Just as the human nervous system responds to stimuli and coordinates responses by sending messages to the various parts of the body, communication coordinates the actions of the parts of an organization.

Communication is one of the management functions and it is one of the most crucial aspects of effective leadership, planning control, coordinating, training, conflict management, decision making and all other management functions (Wexley & Yukl, 1984, p.74; Miller, 2000, p.25; Shochley-Zalabak, 2006, p.244). Organizations are always looking for employees with excellent communication skills and listening is probably the most important communication skill that a supervisor should master (Aamodt, 2010, p.425-8). When organizations experience problems such as unmotivated employees or excessively high turnover, poor communication is often partially to blame (George & Jones, 2012, p.403). Research indicates that it is essential that managers not only communicate well but that their success is, in large measure, determined by their communication skills (Stroh, et al., 2002, p.175). Interpersonal communication is the primary means of managerial communication; on a typical day, over three-fourths of a manager's communications occur in face-to-face interactions. The day-to-day activities of managers are closely tied to effective interpersonal communications. Managers provide information (which must be understood), they give commands and instructions (which must be obeyed and learned) and they make efforts to influence and persuade (which must be accepted and acted on) (Gibson, Ivancevich, Donnelly, Konopaske, 2011, p.446). Effective managers and leaders are skilled at human relations, develop others, make decisions, provide role models, use humor, understand language, use positive nonverbal behavior, develop networks and encourage upward and downward communication, listen effectively, develop strong symbolic messages, and apply power effectively. This is a prodigious set of expectations for any manager (Harris & Nelson, 2008). Characteristics and qualities of the principals identified showed a common and consistent set of personal traits, behaviours, values and beliefs, such as honesty and openness, highly developed communication skills, flexibility, commitment, passion, empathy with others, a sense of 'innate goodness', support of equity and social justice, a belief that all children are important and can succeed, being other-centred, high expectations and a belief that schools can make a difference (Gurr, Drysdale, & Mulford, 2006, p.371).

Luthans (2011, p.247) asserted that "Real Managers" in their day-to-day behaviors, devoted about a third of their activities to exchanging and processing routine information. Research has

repeatedly shown that groups and organizations spend enormous amounts of time communicating. The centrality of communication to the overall job of the administrator is evident when we consider how much time administrators spend communicating in organizations (Lunenburg & Ornstein, 2012, p.158; Schermerhorn, 1996, p.209; Wexley & Yukl, 1984, p.74). Research findings proved that managers spend most of their time for organizational communication. In some occupations, more than half of all time on the job is spent communicating (Lunenburg & Ornstein, 1991; Stroh, et al., 2002, p.175, Schermerhorn, 1996; Wexley & Yukl, 1984). Baird, Post and Mahon, (1990 p.352) stated that top level managers spent 87 % of their work day for communication (62 percent for listening and speaking, 8 percent for telephone, 13 percent for writing and 12 percent for reading). Lunenburg & Ornstein (1991, p.185) reported that the results of two separate studies of executives also indicated that administrators spend 80 percent of their time in interpersonal communication.' Similar findings, ranging from 70 to 80 percent, have been reported for elementary and high school principals. School administrators, therefore, need a clear understanding of the process of communication (Lunenburg & Ornstein, 2012, p.158).

Literature review showed that studies in interpersonal communication skills concentrated mainly on the dimensions of empathy, comprehension, active listening, feedback, effectiveness (openness, clarity, transparency, brevity, kindness, concreteness, consideration), persuasion, trusting and being an effective sender (effective body language, effectiveness in verbal and non-verbal communication) (Cohen, Fink, Gadon, Willits & Josefowitz, 2001, p.240; Daft, 2002, p.589; Devito, 2001; Dubrin, 1997; Gordon, 1998, p.191; Hartley & Bruckmann, 2002, p.247-248; Ivancevich & Matteson, 1996, p.503; Lunenburg & Ornstein, 1991, pp.189-209; Murphy, Hildeprant & Thomas, 1997; p.31 Robbins, 2000, pp.129; 150-151; Schermerhorn, 2001; Sims, 2002; Steers, 1981, p.214; Timm, Peterson & Stevens, 1990, p.246).

### **The correlation between organizational communication and culture**

Connections between organizational culture and communication are well established in communication studies. It can be assumed that as more communicative studies of organizational culture have been completed, the contribution of communication scholars has become clearer. Eisenberg and Riley (2001) pointed to five of these. First, a communication perspective has highlighted the symbolic nature of day to day conversations and routine practices. Communication research emphasizes that culture is present in all acts of communication behaviour. Second, a communication perspective emphasizes both action and interpretation; not just what is done, but how is done is interpreted by others. Third, a communication perspective acknowledges the role of societal patterns and norms in facilitating or constraining individuals within an organizational culture. That is, organizational culture exists within a larger societal culture. Fourth, a communication perspective honours a wide range of researcher-organization relationships from intimate to more distant. Fifth, a communication perspective on organizational culture legitimizes all motives for its study. In other words, motives for studies can be found in the practical concerns of management or employees, or in the desire to inform and empower multiple organizational stakeholders. According to Keyton (2014, pp.118-135) the most frequent perspective for studying communication and organizational culture is the interpretive perspective, which examines organizing as emerging from patterns of meaning-making and culturing from patterns of expectations implicated by that meaning-making. Studying organizational culture in this way embeds the communication of the organization within the context that both informs and reveals an organization's historical, social, and economic background and foreground. Alvesson (2011, p.14) asserted that culture is closely related to communication and language use. Culture is not primarily inside people's heads, but somewhere between the heads of a group of people where symbols and meanings are publicly expressed, for example, in work group interactions, in board meetings, and in material objects. Since communication is observable, it provides a window for understanding the deeper levels of institutional culture and for determining how basic assumptions and beliefs shape behaviour (Kowalski, (2000. p.9).

The purpose of this study was to explore the correlation between school managers' communication skills and school culture. As a result the following question was addressed: Is there correlation between school managers' communication skills and school culture?

### Method

This research was conducted as a survey using a descriptive method in order to ascertain the views of school managers and teachers about the correlation between school managers' communication skills and school culture in Turkey.

#### Population and Sample

In this research, the data were collected from Kindergartens, Primary Schools (1-8 grades), Anatolian High Schools, and Vocational and Technical High Schools in the province of Antalya, Turkey. So, the population of the research consisted of 11690 teachers and managers working in these schools. The sample size to represent the universe of 11690 teachers and managers with 5% margin of error and 95% confidence level is at least 372 persons (Krejcie & Morgan, 1970, s.608; Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2010, p.94). Out of 1600 questionnaires sent to managers and teachers, a total of 1441 questionnaires were responded. After the invalid questionnaires were eliminated, 1037 questionnaires were included in the analysis. Respondents' profiles were presented in Table 1.

**Table 1.** Respondents' profiles

		Kindergarten		Primary School		Anatolian High School		Vocational and Technical High School		Total (N=1037)	
		N	%	N	%	N	%	N	%	N	%
Position	Teacher	50	64.1	342	63.6	165	78.2	140	66.7	697	67.2
	Manager	28	35.9	196	36.4	46	21.8	70	33.3	340	32.8
Gender	Female	70	89.7	261	48.5	98	46.4	81	38.6	510	49.2
	Male	8	10.3	277	51.5	113	53.6	129	61.4	527	50.8
Education Background	Pre-licence	9	11.5	96	17.8	2	0.9	3	1.4	110	10.6
	Undergraduate	66	84.6	417	77.5	182	86.3	183	87.1	848	81.8
	Graduate	3	3.8	25	4.6	27	12.8	24	11.4	79	7.6
Seniority In the position	1-5 years	36	46.2	48	8.9	27	12.8	40	19.0	151	14.6
	6-10 years	19	24.4	103	19.1	27	12.8	26	12.4	175	16.9
	11-15 years	13	16.7	126	23.4	56	26.5	70	33.3	265	25.6
	16-20 years	4	5.1	90	16.7	55	26.1	42	20	191	18.4
	21years and more	6	7.7	171	31.8	46	21.8	32	15.2	255	24.6

As indicated in Table 1, out of 1037 participants, 697 (67.2%) were teachers and 340 (32.8%) were school managers. The proportion of female to male employees was similar across the schools with more male representation (61.4%) at vocational high schools and small representation (10.3%) at kindergartens. A total of 527 (50.8%) were male while 510 (49.2%) were female participants. The participants' educational backgrounds varied considerably. About 7.6% of the participants had graduate (master's and doctoral) degrees, 81.8% had under graduate (bachelor's) degrees, and 10.6% had pre-licence degrees (two years of higher education). 25.6% of the participants had 11-15 years seniority, 24.6% had 21 years and above seniority, 16.9% had 6-10 years seniority, and 14.6% had 1-5 years seniority.

#### Instruments

**Interpersonal Communication Skills of School Managers:** In this research the data was collected by Interpersonal Communication Skills Questionnaire which consisted of 33 items. The questionnaire was, first, developed by Şahin (2007) to measure primary school managers' communication skills: emphatic listening (Cronbach's Alpha=.95), effectiveness (Cronbach's Alpha=.92), feedback (Cronbach's Alpha=.93) and trusting (Cronbach's Alpha=.79). The

questionnaire was adopted for this study to gather data from teachers and managers. The questionnaire designed as a five-point Likert scale ranging from strongly disagree (coded as 1) to strongly agree (coded as 5) was used.

To provide validity of the questionnaire, principal components factor analysis was conducted with the data of 229 questionnaires. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .977 and Bartlett's Test of Sphericity was .00. As a result of the analysis, we had a single factor and a 33 item the questionnaire. All the items had factor loadings greater than .72 and explained 65,27% of the total variance. To provide reliability, within-items reliability test was done using Cronbach reliability correlation analysis. The alpha coefficient of reliability was .98.

**Organizational Culture:** To gather data about organizational cultures of schools, the "Organizational Culture Questionnaire" which was, first, developed by İpek (1999) was used. It consisted of 37 items designed with five-point Likert scales, ranging from strongly disagree (coded as 1) to strongly agree (coded as 5). The original questionnaire consisted of four dimensions; role culture (explained %30 of the total variance and Cronbach's Alpha=.69), success culture (explained %35 of the total variance and Cronbach's Alpha=.78), power culture (explained %31 of the total variance and Cronbach's Alpha=.60) and support culture (explained %53 of the total variance and Cronbach's Alpha=.90).

In this study, principal components factor analysis was conducted for the data gathered from 359 questionnaires. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .909 Bartlett's Test of Sphericity was .00. As a result of the analysis, the questionnaire consisted of 20-items in four dimensions. These are role culture (5 items), success culture (5 items), power culture (3 items) and support culture (7 items). All of the items dispersed in four dimension had greater than .56 factor loadings. Four dimension explained 63.25% of the total variance. In order to test reliability, "within-items reliability test" was conducted using Cronbach reliability correlation analysis. The alpha coefficient of reliability was found .85 for the whole scale. The alpha coefficient of reliability was .69 for the factor of role culture .84 for the factor of success culture .65 for the factor of power culture and .91 for the factor of support culture.

### **Data analysis**

In the analyses of the study, Pearson correlations coefficient and Hierarchical regression was conducted to examine the extent to which communication skills of school managers predict school culture. The predictors were entered step by step (first empathic sensitivity, then reflective listening, and last creating positive communication). In order to validate the model, the Durbin Watson coefficient was calculated and the results showed that there were no autocorrelations among any factors (D-W coefficient=1.04). The multicollinearity problem was eliminated because correlation coefficients were lower than .68, and VIF values were acceptable (Akgül & Cevik, 2003; Bryman & Cramer, 2001; Büyüköztürk, 2001; Hair, Anderson, Tahtam & Black, 1998; Leech, Barrett & George, 2005; Muijs, 2004).

### **Findings**

In this section the findings about correlations between school managers' communication skills and school culture were presented.

**Table 2.** Correlations among the interpersonal communication skills of school managers and school culture

	N=1284	Power culture	Role culture	Success culture	Support culture
Empathic sensitivity	Pearson Correlation	.334**	-.087**	.570**	.532**
	Sig. (2-tailed)	.000	.002	.000	.000
Reflective listening	Pearson Correlation	.344**	-.088**	.571**	.518**
	Sig. (2-tailed)	.000	.002	.000	.000
Creating positive communication	Pearson Correlation	.308**	-.164**	.490**	.481**
	Sig. (2-tailed)	.000	.000	.000	.000

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

Table 2 shows the correlations among the variables of organizational culture and interpersonal communication skills of school managers. All Correlations between organizational culture (role culture, power culture, success culture, and support culture) and interpersonal communication skills (empathic sensitivity, reflective listening, and creating positive communication) were statistically significant. Positive correlations were found between organizational culture and interpersonal communication skills except role culture.

There were low positive linear correlation ( $r=.31$ ) between power culture and communication skills; very low negative linear correlation ( $r=-.20$ ) between role culture and communication skills; moderate positive linear correlation ( $r=.62$ ) between support culture and communication skills and finally there were moderate positive linear correlation ( $r=.67$ ) between success culture and communication skills.

**Table 3.** Hierarchical regression analyses regarding the effects of communication skills on power culture

	Variable	B	Std. Error	$\beta$	T	p	R zero-order	r partial
Model 1	Constant	2.384	.108		22.148	.000		
	Empathic sensitivity	.343	.027	.334	12.703	.000	.334	.334
	$\Delta R^2=.112$	p=.000						
	$F_{(1-1282)}=161.355$	p=.000		R=.334	$R^2=.112$			
Model 2	Constant	2.274	.110		20.684	.000		
	Empathic sensitivity	.156	.051	.152	3.051	.002	.334	.085
	Reflective listening	.213	.050	.214	4.297	.000	.344	.119
	$\Delta R^2=.013$	p=.000						
	$F_{(2-1281)}=91.007$	p=.000		R=.353	$R^2=.124$			
Model 3	Constant	2.140	.127		16.821	.000		
	Empathic sensitivity	.103	.057	.101	1.812	.070	.334	.051
	Reflective listening	.192	.051	.193	3.801	.000	.344	.106
	Creating positive communication	.100	.048	.089	2.082	.038	.308	.058
	$\Delta R^2=.003$	p=.038						
	$F_{(3-1280)}=62.275$	p=.000		R=.357	$R^2=.127$			

Table 3 shows the hierarchical regression for the prediction of power culture. In the first step, empathic sensitivity variable was entered into the equation. This produced a statistically significant increase in  $R^2$  ( $\Delta R^2=.112$ ;  $p<.01$ ). In the second step, reflective listening variable was entered into the equation. In step 2 (model 2) empathic sensitivity and reflective listening variables together produces a statistically significant increase in  $R^2$  ( $\Delta R^2=.013$ ;  $p<.01$ ). In the last step (model 3) creating positive

communication variable was entered into the equation. This resulted in a small, but statistically significant increase in  $R^2$  ( $\Delta R^2=.003$ ;  $p<.05$ ). The final model shows that empathic sensitivity, reflective listening, and creating positive communication variables together predict power culture significantly ( $R=.357$ ;  $R^2=.127$ ;  $F_{(3-1280)}=62.275$ ;  $p<.01$ ). 12.7% of the variance in power culture was accounted for by the three predictors used in Model 3.

Regarding the predictor variables, a statistically significant effect of reflective listening on power culture can be seen ( $\beta=.193$ ;  $p<.01$ ). There was also a statistically significant positive effect of creating positive communication on power culture ( $\beta=.089$ ;  $p<.05$ ). However, empathic sensitivity does not have a significant effect on power culture ( $\beta=.101$ ;  $p>.05$ ). Consequently, the final model shows statistically significant positive effects for reflective listening and creating positive communication variables on power culture.

**Table 4.** Hierarchical regression analyses results regarding the effects of communication skills on role culture

	Variable	B	Std. Error	$\beta$	t	p	r zero-order	r partial
Model 1	Constant	3.445	.121		28.534	.000		
	Empathic sensitivity	-.094	.030	-.087	-3.116	.002	-.087	-.087
	$\Delta R^2=.008$							
	$p=.002$ $F(1-1282)=9.709$ $p=.002$			$R=.087$				$R^2=.008$
Model 2	Constant	3.473	.124		27.967	.000		
	Empathic sensitivity	-.048	.058	-.044	-.831	.406	-.087	-.023
	Reflective listening	-.053	.056	-.050	-.943	.346	-.088	-.026
	$\Delta R^2=.001$							
$p=.346$ $F(2-1281)=5.299$ $p=.005$			$R=.091$				$R^2=.008$	
Model 3	Constant	3.869	.142		27.200	.000		
	Empathic sensitivity	.108	.064	.099	1.699	.090	-.087	.047
	Reflective listening	.009	.056	.009	.164	.870	-.088	.005
	Creating positive communication	-.296	.054	-.248	-5.519	.000	-.164	-.152
	$\Delta R^2=.023$							
$p=.000$ $F_{(3-1280)}=13.768$ $p=.000$			$R=.177$				$R^2=.031$	

Table 4 shows the hierarchical regression for the prediction of role culture. In the first step, empathic sensitivity variable was entered into the equation. This produced a statistically significant increase in  $R^2$  ( $\Delta R^2=.002$ ;  $p<.01$ ). In the second step, reflective listening variable was entered into the equation. In step 2 (model 2) empathic sensitivity and reflective listening variables together do not produce a statistically significant increase in  $R^2$  ( $\Delta R^2=.001$ ;  $p>.05$ ). In the last step (model 3) creating positive communication variable was entered into the equation. This resulted in a statistically significant increase in  $R^2$  ( $\Delta R^2=.023$ ;  $p<.01$ ). The final model shows that empathic sensitivity, reflective listening, and creating positive communication variables together predict role culture significantly ( $R=.177$ ;  $R^2=.031$ ;  $F_{(3-1280)}=13.768$ ;  $p<.01$ ). 3.1% of the variance in role culture was accounted for by the three predictors used in Model 3. Regarding the predictor variables, only a statistically negative significant effect of creating positive communication on role culture can be seen ( $\beta=-.248$ ;  $p<.01$ ). Empathic sensitivity ( $\beta=.099$ ;  $p>.05$ ) and reflective listening ( $\beta=.009$ ;  $p>.05$ ) do not have significant effects on power culture.

**Table 5.** Hierarchical regression analyses results regarding the effects of communication skills on success culture

Variable		B	Std. Error	$\beta$	t	p	r zero-order	r partial
Model 1	Constant	.970	.108		8.944	.000		
	Empathic sensitivity	.676	.027	.570	24.836	.000	.570	.570
	$\Delta R^2=.325$	p=.000						
	F(1-1282)=616.608	p=.000	R=.570	R <sup>2</sup> =.325				
Model 2	Constant	.786	.109		7.186	.000		
	Empathic sensitivity	.362	.051	.306	7.130	.000	.570	.195
	Reflective listening	.357	.049	.310	7.233	.000	.571	.198
	$\Delta R^2=.026$	p=.000						
	F(2-1281)=346.900	p=.000	R=.593	R <sup>2</sup> =.351				
Model 3	Constant	.670	.127		5.294	.000		
	Empathic sensitivity	.317	.057	.267	5.591	.000	.570	.154
	Reflective listening	.339	.050	.295	6.734	.000	.571	.185
	Creating positive communication	.086	.048	.066	1.806	.071	.490	.050
	$\Delta R^2=.002$	p=.071						
	F(3-1280)=232.762	p=.000	R=.594	R <sup>2</sup> =.353				

Table 5 shows the hierarchical regression for the prediction of success culture. In the first step, empathic sensitivity variable was entered into the equation. This produced a statistically significant increase in R<sup>2</sup> ( $\Delta R^2=.325$ ;  $p<.01$ ). In the second step, reflective listening variable was entered into the equation. In step 2 (model 2) empathic sensitivity and reflective listening variables together produce a statistically significant increase in R<sup>2</sup> ( $\Delta R^2=.026$   $p<.01$ ). In the last step (model 3) creating positive communication variable was entered into the equation. This did not result in a statistically significant increase in R<sup>2</sup> ( $\Delta R^2=.002$ ;  $p>.05$ ). However, the model shows that empathic sensitivity, reflective listening, and creating positive communication variables together predict success culture significantly (R=.594; R<sup>2</sup>=.353;  $F_{(3-1280)}=232.762$ ;  $p<.01$ ). 35.3% of the variance in success culture was accounted for by the three predictors used in Model 3. Regarding the predictor variables, a statistically significant effect of empathic sensitivity on success culture can be seen ( $\beta=.267$ ;  $p<.01$ ). There was also a statistically significant positive effect of reflective listening on success culture ( $\beta=.295$ ;  $p<.01$ ). However, creating positive communication does not have a significant effect on success culture ( $\beta=.066$ ;  $p>.05$ ).

**Table 6.** Hierarchical regression analyses results regarding the effects of communication skills on support culture

Variable		B	Std. Error	$\beta$	T	p	r zero-order	r partial
Model 1	Constant	1.572	.104		15.059	.000		
	Empathic sensitivity	.589	.026	.532	22.508	.000	.532	.532
	$\Delta R^2=.283$	p=.000						
	F(1-1282)=506.630	p=.000	R=.532	R <sup>2</sup> =.283				
Model 2	Constant	1.441	.106		13.571	.000		
	Empathic sensitivity	.368	.049	.332	7.453	.000	.532	.204
	Reflective listening	.252	.048	.235	5.259	.000	.518	.145
	$\Delta R^2=.015$	p=.000						
	F(2-1281)=272.409	p=.000	R=.546	R <sup>2</sup> =.298				
Model 3	Constant	1.225	.123		10.000	.000		
	Empathic sensitivity	.283	.055	.256	5.156	.000	.532	.143
	Reflective listening	.218	.049	.203	4.481	.000	.518	.124
	Creating positive communication	.161	.046	.133	3.490	.000	.481	.097
	$\Delta R^2=.007$	p=.000						
	F(3-1280)=187.250	p=.000	R=.552	R <sup>2</sup> =.305				

Table 6 shows the hierarchical regression for the prediction of support culture. In the first step, empathic sensitivity variable was entered into the equation. This produced a statistically significant increase in R<sup>2</sup> ( $\Delta R^2=.283$ ;  $p<.01$ ). In the second step, reflective listening variable was entered into the equation. In step 2 (model 2) empathic sensitivity and reflective listening variables together produce a statistically significant increase in R<sup>2</sup> ( $\Delta R^2=.015$ ;  $p<.01$ ). In the last step (model 3) creating positive communication variable was entered into the equation. This resulted in a statistically significant increase in R<sup>2</sup> ( $\Delta R^2=.007$ ;  $p<.01$ ). The model shows that empathic sensitivity, reflective listening, and creating positive communication variables together predict support culture significantly ( $R=.552$ ;  $R^2=.305$ ;  $F_{(3-1280)}=187.250$ ;  $p<.01$ ). 30.5% of the variance in support culture was accounted for by the three predictors used in Model 3. Regarding the predictor variables, empathic sensitivity ( $\beta=.256$ ;  $p<.01$ ), reflective listening ( $\beta=.203$ ;  $p<.01$ ), and creating positive communication ( $\beta=.133$ ;  $p<.01$ ) have positive significant effects on support culture. Shortly, results of the t test indicate that all of the interpersonal communication skills variables significantly contribute to predicting support culture.

### Discussion and Conclusions

The purpose of this study was to find out the correlation between school managers' communication skills and school culture. The issue of communication has not been much studied in the climate literature but in the world of organizational culture it has played an important role (Schneider & Barbera 2014, p.22). Keyton stresses that organization discourse and organizational culture are mutually constitutive. Organizational culture transmission occurs at many levels, as organizational members communicate within and across task, hierarchical, and functional relationships and networks (Keyton, 2014, pp.123-124).

Our research findings conclude that interpersonal communication skills of school managers and organizational culture were correlated moderately. This finding is consistent with the findings of the research conducted by Lal in (2012). He also found moderate correlation between interpersonal communication skills school principals and school culture. Further analyses of our study show that first, empathic sensitivity, reflective listening, and creating positive communication variables together predict power culture significantly. 12.7% of the variance in power culture was accounted for by the

three predictors. The final model shows statistically significant positive effects for reflective listening and creating positive communication variables on power culture. Secondly, the final analyses show that empathic sensitivity, reflective listening and creating positive communication variables together predict role culture significantly. 3.1% of the variance in role culture was accounted for by the three predictors. Regarding the predictor variables, only a statistically negative significant effect of creating positive communication on role culture can be seen. Third, the model shows that empathic sensitivity, reflective listening, and creating positive communication variables together predict success culture significantly. 35.3% of the variance in success culture was accounted for by the three predictors. Regarding the predictor variables, a statistically significant effect of empathic sensitivity and reflective listening on success can be seen. Fourth, the model shows that empathic sensitivity, reflective listening, and creating positive communication variables together predict support culture significantly. 30.5% of the variance in support culture was accounted for by the three predictors. Regarding the predictor variables, empathic sensitivity, reflective listening, and creating positive communication have positive significant effects on support culture. Last of all, all correlations between organizational culture and interpersonal communication skills were statistically significant. There were low positive linear correlation between power culture and communication skills; very low negative linear correlation between role culture and communication skills; moderate positive linear correlation between success culture and communication skills and finally there were moderate positive linear correlation between support culture and communication skills.

These findings are consistent in general with what Latané (1996, p.13.) asserted. Latané wrote that there is a tendency for people to be more influenced by nearby, rather than faraway people, which gives rise to local patterns of consensus in attitudes, values, practices, identities, and meanings that can be interpreted as subcultures. Brown and Starkey (1994, p.824) also found that the organizations' culture may be one of the factors which determine the nature, extent and form of its information/communication dimensions and its associated problems. The cultural traits are all inter related in a seamless web of cognitive effect, which influences and shapes the information and communication structures and processes evident in the organization. Jiang (2000, p.332) concluded that the referents of language are the entities, events, states, processes, characteristics, and relations that exist in the culture, whether these are referred to by single words or by phrases. Between language and culture there is always an interactive influence: the two cannot exist without each other. Consequently, the findings lead us to think that there is a significant moderate relationship between the type of communication and cultural characteristics of an organization which should be searched deeper using qualitative methods. In this sense, the findings imply first that empathic sensitivity is likely to contribute to success and support cultures. Secondly, role culture seems to occur in the absence of reflective listening and empathic sensitivity, third power culture seems to have a negative relationship with empathic sensitivity and finally success culture seems again to have a negative relationship with creating positive communication. In this sense, principals should seek to build a better rapport with teachers and staff members by developing and implementing such as developing cooperative relationships among teachers, actively listening to teachers, treating teachers and staff members with respect and dignity, supporting progressive decisions made by teachers, and growing staff members through professional development (McKinney, Labat & Labat, 2015, p.164). Finally as Kowalski (2005, p.112) proposed well more research is needed to understand school culture, school managers' communication skills and the mutual relationship between them.

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## **Complexity, Diversity and Ambiguity in Teaching and Teacher Education: Practical Wisdom, Pedagogical Fitness and Tact of Teaching**

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### **Abstract**

There is consensus in the literature that teacher education programs exhibit the characteristics of complex systems. These characteristics of teacher education programs as complex systems challenges the conventional, teacher-directed/ textbook-based positivist approaches in teacher education literature which has tried to reduce the complexities and ambiguities of the life in teacher education programs to something knowable, measurable and controllable. The increasing interest towards complexity in teacher education has brought with it some challenging questions which this narrative research study aims to address: what is complexity and ambiguity in teaching and teacher education? Do preservice teachers identify or do they experience complexity in classrooms? How do preservice teachers deal with diversity, complexity and ambiguity in their teaching practices? What kind of strategies do preservice teachers develop to deal with complexity and ambiguity in diverse school settings? How do preservice teachers define and interpret Practical Wisdom, Pedagogical Fitness and Tact of Teaching to deal with complexity and ambiguity in culturally diverse classrooms?

**Keywords:** Practical Wisdom, Pedagogical Fitness, Tact of Teaching, Complexity, Diversity, Ambiguity, Teacher Education, Narrative Inquiry

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## Introduction

The students we teach are larger than life and even more complex. To see them clearly and see them whole, and respond to them wisely in the moment, requires a fusion of Freud and Solomon that few of us achieve.

Parker Palmer (2007), *The Courage to Teach*

Life in schools as it is experienced, even in the most ordinary of circumstances, is contextual, ambiguous and complex. Each momentary action characterizes a punctuation point in a constant transformation of school and classroom activities, creating a complex course of patterns that explicates our experiences in educational settings (Carr, 1995; Collins & Ting, 2014; Eryaman, 2007, 2008; Kiss, 2012). To understand teaching practice is to discover meaningful patterns in the flow of experience in the classrooms, while recognizing the possibility of transformation of these patterns in complex classroom circumstances due to the particular convergence of events at any point in time. Preservice teachers' teaching experiences in the actual classrooms often reveal a recognition of the vulnerability and turmoil because of their unfamiliar with the new teaching environment and expected practices.

One of the most important arguments of the positivist paradigm in teacher education is that scientific knowledge provides preservice teachers with an objective and better description of the life in schools so that the preservice teachers can develop a mastery of technical components that are applicable to all student populations and teaching contexts. Yet, the 'real-life' of teaching and learning in diverse classroom settings is different than the world simplified by the positivist paradigm in teacher education - teachers experience it as dynamic and complex, or more complex than the school life that are commonly described by the positivist paradigm and its techniques (Clarke & Collins, 2007; Cochran-Smith, 2003; Collings & Ting, 2014; Crowell & Reid-Marr, 2010; Davis, 2003; Davis & Sumara, 1997, 2001; Eryaman, 2008; Eryaman & Riedler, 2009; Jay & Jonson, 2002). For a long time complexity has been ignored by teacher education literature, in which traditional paradigm prescribed an objective and universal teacher education following deterministic and instrumental rules (Clandinin & Connelly, 1986; Collins & Ting, 2014; Davis, 2003; Davis & Sumara, 2005, 2007; Mamchur & Apps, 2009). But teachers live in 'situations of complexity' in culturally and linguistically diverse school settings. Consequently teacher educators gradually realize the constant transformation and change occurring in educational phenomena for which traditional paradigms based on mechanistic accounts are no longer valid. Rather than seeing complexity and ambiguity in diverse classroom settings as a provisional deficiency arising from preservice teachers' inadequate or partial understanding of classroom reality, or as something that has to be eradicated in order for objective teaching and learning progress to proceed, complexity and change have now been acknowledged as an emergence in the diverse educational settings teacher and preservice teachers help to co-create and in which they live (Collins, 2004; Eryaman, 2006; Florio-Ruane, 2002). Even though, we frequently hear the argument that teachers and preservice teachers live in an age of 'expanding complexity,' the issue of complexity and change in diverse educational settings is still peripheral in methodical and theoretical thinking in teacher education.

The increasing interest towards complexity in teacher education has brought with it some challenging questions which this narrative research study aims to address: what is complexity and ambiguity in teaching and teacher education? Do preservice teachers identify or do they experience complexity in classrooms? How do preservice teachers deal with diversity, complexity and ambiguity in their teaching practices? What kind of strategies do preservice teachers develop to deal with complexity and ambiguity in diverse school settings? How do preservice teachers define and interpret Practical Wisdom, Pedagogical Fitness and Tact of Teaching to deal with complexity and ambiguity in culturally diverse classrooms?

### **Teacher Education as a Complex System**

A complex phenomena is irreducible. It transcends its parts, and so cannot be studied strictly in term of a compilation of those parts. It must be studied at the level of emergence (Davis, 2003, p. 43).

There is consensus in the literature that teacher education programs exhibit the characteristics of complex systems (Bruce & Eryaman, 2015; Cochran-Smith, 2003; Collins & Ting, 2010; Davis & Sumara, 2006; Eryaman, 2008; Florio-Ruane, 2002; Jay & Jonson, 2002). In the literature, the main characteristics of teacher education programs as complex systems are identified as follows: (i) sensitivity to initial condition; (ii) disequilibrium; (iii) unpredictability; (iv) a non-hierarchic network structure; (v) feedback loops; (vi) a capacity for self-organization or self-regulation; (vii) a nested structure; (viii) diversity; and (iv) decentralized control (Darling, Clarke & Erickson, 2007; Gleick, 1987; Kiss, 2012; Mamchur & Apps, 2009).

These characteristics of teacher education programs as complex systems challenges the conventional, teacher-directed/textbook-based positivist approaches in teacher education literature which has tried to reduce the complexities and ambiguities of the life in teacher education programs to something knowable, measurable and controllable (Collins & Clark, 2008; Eryaman, 2007; Jay & Jonson, 2002; Kiss, 2012). Complexity theory, on the other hand, suggests that teachers and preservice teachers ought to be less instrumental and narrow; rather than thinking of teaching and learning as prescriptive and sequential, they could understand it as a web of progressive and transformative possibilities, where their responsibility is to allow learners to develop their own connections and insights through shared complex learning activities. When teaching and learning process is constructed in this way, it is the interactions among teachers, learners and ideas that drive learning forward, what complexity theory identifies as the principle of networked complex interactions (Collins & Ting, 2014; Davis, Sumara & Luce-Kapler, 2000; Eryaman, 2008).

### **Practical Wisdom, Pedagogical Fitness and Tact of Teaching in Teacher Education**

Preservice teachers go through a long apprenticeship of observation. They spend their entire elementary and secondary school education observing teachers teach. Zeichner and Liston (1996) argue that the stamina of traditional teaching practice originates in part from the fact that teachers are quite possibly to teach as they themselves were educated. Their past classroom experiences provide them with thoughts about what teaching subjects in real classrooms is like, how teachers and students should behave in schools. So, when teachers start teaching, they implement the practices and habits of their former teachers.

In fact, the kind of teaching that is based on the notions of Practical Wisdom, Pedagogical Fitness and Tact of Teaching requires preservice teachers to reflect critically on their practices and transform their prior beliefs to have practically wise and tactful ideas about what they should be trying to accomplish in complex teaching environments. Van Manen (1991) describes tact as an ability to be oriented and sensitive to learners in a way that enables teachers to take mindful actions in specific situations. "A tactful person seems to sense what is the right thing to do" (Van Manen, 1991, p. 126). The ability for wise action is developed through a process of thoughtful and critical reflection on past teaching experiences in order to enrich future experiences and develop a "pedagogical fitness" (Van Manen, 1991, p. 205). Pedagogical fitness is defined as "a cognitive and emotional and moral and sympathetic and physical preparedness" that manifests itself as a mindful orientation to learners (Van Manen, 1991, p. 205). Thus tactful teachers have the sensitivity, resiliency, and intellectual knowledge to understand situations, interpret their significant meanings, and sense what their role should be in terms of entering in or distancing themselves from the situations. In this study, tact is an important concept to analyze how preservice teachers critically reflect on their safe transition into their student teaching environment and transform their practices based on that reflection. Such a reflection and transformation process for both thinking and action might be similar to Kuhn's (1970) depiction of paradigm shifts in scientific societies. Preservice teachers have ideas that are not nearly

as elaborate as those of scientists; however, preservice teachers also function within frames of reference as scientists do, and they employ these frameworks to articulate their teaching plans, construe their experiences, and respond to classroom events. So when teacher educators ask for a completely different style of teaching, they are demanding preservice teachers to analyze and transform their own understanding in a totally different frame of reference. This task is not a simple one. Transformation might be easier if teacher educators could describe—indeed prescribe—the practices they wanted, but they cannot do so.

The kind of teaching based on the notions of Pedagogical Fitness and Tact of Teaching requires preservice teachers to encourage students to develop their own ideas, respond wisely and critically to those ideas, and then translate those ideas to a better understanding of the larger social and political issues of social justice and equality. This kind of teaching requires many tactful social and moral-practical judgments. Evidence of student learning is obscure at best, and it is hard for teachers to judge their own success in the classroom. Sometimes a carefully wrought lesson misfires, and sometimes a lesson hastily thrown together is wildly successful. This ambiguity makes the frames of references of teachers and preservice teachers especially important. Teachers and preservice need to be able to draw on these frames of reference to interpret the situations they face, make sense of what happens in their classrooms, and make decisions about what to do next. These frames are likely to derive from the childhood experiences that these teachers had in their classrooms with their teachers.

An essential goal for preservice teacher education is to alter or modify these prior frames of reference. Preservice teacher education can be ideally positioned to nurture such an examination of earlier thinking and action (Loughran, 2002). It is located dialectically between the preservice teachers' previous experiences as student and their future practices as teachers in their own classroom settings. From these experiences, preservice teachers construct the principles that will guide their future experiences. If these principles are not transformed or changed during preservice teacher education, their own continuing practices as preservice teachers will reinforce the experiences, pushing them even more robustly into their prior conceptions of teaching and eliminating the possibility that these principles might ever change.

In this study, we aimed to explore the meanings, essences, practices and processes of educational “change” and “growth” in preservice teacher understanding over time through deliberation, dialogue, and performance in complex, ambiguous and diverse teaching and learning environments. Using narrative inquiry as the methodology of this study let us explore how preservice teachers conceptualized teaching in complex and ambiguous situations through their personal experiences while locating the preservice teachers and our own pre-understanding and preconceptions about notions of “complexity” and “good teaching” in diverse classroom settings within the theoretical discussion. There is a constant dialectical interplay between what the literature theorizes about “complexity” and “good teaching,” what research participants have as a prior understanding, and what the realities of the actual classroom are. This dialectical interplay between theory and practice through the narrative inquiry provided us with a frame to recognize how the preservice teachers were thinking about teaching, and the connections they were constructing between their actual classroom experiences and their course work.

### **Research Method: Narrative Inquiry**

Our decision to explore the experience of preservice teachers has directed us toward the concept of human science research which, according to Van Manen (1990), “studies ‘persons,’ or beings that have ‘consciousness’ and that ‘act purposefully’ in and on the world by creating objects of ‘meaning’ that are ‘expressions’ of how human beings exist in the world” (p. 4). In narrative inquiry, the focus of attention is on the narration of human experience and the immediate resulting feelings through “collaboration between researcher and participants, over time, in a place or series of places, and in social interaction with milieus” (Clandinin & Connelly, 2000, p. 20). Being that it is a

communication and understanding of action and experience, it could be considered to be metaphorical.

Connelly and Clandinin, (2006) define narrative inquiry as follows:

People shape their daily lives by stories of who they and others are and as they interpret their past in terms of these stories. Story, in the current idiom, is a portal through which a person enters the world and by which their experience of the world is interpreted and made personally meaningful. Narrative inquiry, the study of experience as story, then, is first and foremost a way of thinking about experience. Narrative inquiry as a methodology entails a view of the phenomenon. To use narrative inquiry methodology is to adopt a particular view of experience as phenomenon under study. (p. 375)

In this study, narrative inquiry is employed as research method in order to explore how preservice teachers conceptualized teaching in complex and ambiguous situations through their personal experiences.

### **Research Setting and Participants**

#### ***Setting***

This study was conducted in a middle school English methods course at a Midwestern university in the United States of America. We interviewed the preservice teachers (participants) about their field experience related activities in this course. We further focused on participants' experiences in solving educational complex problems at the field experience component of the course.

#### ***Participants***

This middle school English methods course consisted of six male and nineteen female students. The twenty-one preservice teachers in the course match the profile cited by Gomez (1996) in terms of who typically becomes elementary teachers—white, middle-class, English-only speaking females. Five male and sixteen female students were white-European American, and one male student and one female student were Asian American, one female student was an African American, and one female student was Latina. Five preservice teachers in the class participated in our study (see Table 1)

**Table 1. Preservice Teachers and Their Backgrounds**

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Preservice teacher	Level of education	Gender	Ethnicity
Julia	Graduate	Female	Caucasian American
Jane	Undergraduate	Female	African American
Maria	Undergraduate	Female	Latina American
Helen-Young	Undergraduate	Female	Asian American
George	Undergraduate	Male	Caucasian American

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All participants were “twenty something,” ranging in age from 20 to 26 years old. Only one student identified herself as a lower middle or working class student, and the others identified as a middle class student. We conducted a purposeful sampling strategy to choose the case participants for this study.

### **Data Collection and Generation**

Consistent with narrative research methodology, we generated data from multiple sources including open-ended individual and group interviews, and the documents and writings that the preservice teachers and course instructor produced.

### **Data Analysis**

Beginning data analysis was directly influenced by my research questions, since the narrative inquiry tends to respond to the research questions and data at hand. Data were thematized through the qualitative coding technique in order to ascribe related labels to sections of the data sources (Van Manen, 1990).

Both inductive and deductive coding ensued as transcripts of the interviews and documents were analyzed and categorized with both codes relating to the focus of the research questions and codes that emerged from data. When data collection was completed with each participant, we read his or her data file several times in order to develop the internal codes mentioned above. We then went through all the materials, sorting them according to the initial codes that emerged in our dialogues. The initial sorting was similar to the one described in Lincoln and Guba (1985). We cut and pasted a copy of the data file on my computer, so that, for example, we would have all the comments Maria had ever made about field placements on one Microsoft Word file, and all his comments on lesson planning on another Microsoft Word file, and so on. Some initial codes were common across the participants; others were particular to each person. 20 to 25 initial codes were generally sufficient to categorize all the data for each person.

In order to make sense of and reduce these categories, initial codes were turned into theme codes, which represented concepts that came from the interviews, and documents of the five preservice teachers. Narrative text, which came from the interviews of participants, was attached to each theme code by displaying color-coded pieces on index cards that could be physically manipulated. Such physical manipulation allowed for hunches about themes to be checked by being able to array data in different configurations and reorganize data across types of data sources and time in the semester during which the data was collected. This procedure for displaying data also allowed for quick and easy sorting in order to determine frequencies of occurrence. By way of example, theme codes were organized to look for the presence or absence of themes as the semester progressed across different data sources.

At this point in the analysis, there were three general themes developed. These three themes are: a) the transition of preservice teachers into an actual teaching environment, (b) learning how to deal with ambiguity and developing a sense of authority and care, and (c) understanding teaching as a student-centered and culturally relevant practice.

### **Findings**

Our narrative exploration in this study helped us realize that preservice teachers learn differently and in various ways, and they gain different insights from the experiences provided to them. The five preservice teachers in the study came into the teacher education program with their own insights and viewpoints. They discussed how they defined being a good teacher in diverse settings and how they learned how to be a good teacher. They furthered the different ways they approached teaching and teacher education. Their practices gave a picture of how they were learning to transform or modify their teaching, as well as translating the pedagogical aims of the program into their teaching. As we began to document the students' experiences in the course and in the field

systematically, we recognized that these preservice teachers had much to teach us about their identities and their perspectives on the issues discussed in the teacher education program.

When we analyzed the preservice teachers' arguments on these issues, we noticed that most of them had extreme difficulty connecting their coursework to their field experience and thus found their teacher education program fragmented. This issue looked like most ubiquitous with the preservice teachers who did not have any teaching practice. They looked for genuine and realistic stories and practical strategies of teaching that could provide change in the culturally and linguistically diverse classroom settings. They did not want to be forced into an overwhelming endeavor where they had to try to save the world all by themselves. The preservice teachers tried to bring their prior experiences and stories to life by revealing the nuances of time, place, and interactions with the different characters, including themselves, who were part of the stories.

Our inquiry of these tensions and engagements helped us summarize the following conclusions and associated themes that define the partial characteristics of practical wisdom or what Van Manen (1991) called the 'tact of teaching' which the preservice teachers developed throughout their semester. These included (a) the transition of preservice teachers into an actual teaching environment, (b) learning how to deal with ambiguity and developing a sense of authority and care, and (c) understanding teaching as a student-centered and culturally relevant practice.

### **Preservice Teachers' Transition into an Actual Teaching Environment**

Our analysis of the narratives of the preservice teachers' teaching experiences in the actual classrooms revealed a recognition of the vulnerability and turmoil that characterized the practice of preservice teachers in their first student teaching where they were unfamiliar with the new teaching environment and expected practices. Understanding what preservice teachers were experiencing was important for us to understand their frame of reference for their actions. Understanding the nature of being new was also important for preservice teachers who have been described as frightened, anxious, and vulnerable. Although their feelings were internal and could only be fully realized by themselves, the preservice teachers were not alone in terms of being understood and supported.

Throughout our conversations, the preservice teachers revealed how they acquired insight into their vulnerability in relation to their being new and inexperienced. For example, in our conversations, George stated that "I just feel scared that I'm going to do the wrong thing and that my students will not be engaged" and Julia mentioned that "to be honest, I was extremely nervous and scared that our lesson plan would fail and that the students wouldn't get involved with the activity. In addition, I had a difficult time addressing the class at first, and Marsha introduced the lesson plan for both of the class periods." Both described their feelings and experiences about their first student teaching.

Many preservice teachers further acknowledged capability differences between themselves and their cooperating teachers and understood and described what it meant to be new while still developing practical knowledge. Their perspectives were gained from many sources, including memories of their own past experiences of being students and insights gained through past field experiences and experiences in their teacher education courses.

Preservice teachers also recognized what it meant to be new by placing meaning on the information they processed as they watched, listened to, and worked with their cooperating teachers. They described being constantly tuned in to their cooperating teachers and reflected on what they saw and how they handled the uncertainty of classroom situations. It was in response to the messages received from cooperating teachers and teacher educators that the preservice teachers directed their courses of action. As described by Jane, "What I'm trying to do is get a feel for this early stage of how a classroom teacher behaves and what kind of teaching they practice or what kind of classroom learning they require" (Third open-ended Interview).

While most of the preservice teachers appreciated what they had learned in the teacher education program and the models of their cooperating teachers, they realized that they could not merely replicate the strategies, methods, and practices of their teacher educators or their classroom teachers. They learned from their teaching experiences that speaking with their own voices and finding practically wise and tactful strategies to let them fit into their unique classroom experiences were essential pathways to their own successes. Julia's statement about her growth in understanding teaching demonstrated how she began to see the importance of practical and tactful decision-making in her classroom teaching:

What worked for one group of students may not for another group and in that sense in each classroom all the students you have keep reshaping your beliefs, skills and theories as a teacher. At the beginning, I want to gain skills and move on, but you never get it right always in teaching. I learned that I have to get used to seeing my growth as a work in progress. (Julia, from the Field Notes)

As a result of the unpredictable teaching environment, most of the preservice teachers understood that they had to be attentive and exercise choices of what actions to take to facilitate learning. They also had to not to worry too much about failure in their first time of teaching the progressive and performance-oriented strategies which they learned in Professor Wesley's class in their teacher education program. For example, after his first student teaching experience, George stated that

I think I learned an important lesson through my experience in that class. When I become a teacher, it's important not to discard a lesson just because you tried it once and it didn't turn out so well. Sometimes the class just might be nervous or quiet because they aren't used to teachers stepping outside the box. Although you might be tempted to say that the lesson failed and throw it away forever in your disappointment, not only might it be successful in a different class, it might be successful in that same class if you try it again after the class has gained some experience with what you're trying to do. (George, Group Conversation)

George's reflection on his first and second teaching experiences demonstrates that he could have decided that since the progressive and performance-oriented strategies in his first situation did not work; he could have turned to the traditional-test oriented teaching methods for the rest of his teaching career. However, he realized that his failure actually turned out to be a success when he successfully taught the same strategies and lessons in his second and third teaching experiences. George understood that he had to see his growth as a work in progress. Many situations that the preservice teachers faced, were intimidating and caused them to be hesitant in assuming the responsibility to take risk. As they gained experience, they involved and engaged themselves further and gradually gained the confidence and ability to assume responsibility for their own teaching situations.

Professor Wesley, on the other hand, remained strong in his affirmation of what needed to be done and where attention needed to be directed throughout the semester. "A tactful person must be strong, since tact may require frankness, directness, and candor when the situation calls for it" (Van Manen, 1991, p.125). When the preservice teachers directed their attention away from the progressive and performance-oriented strategies and process-based lesson planning in his course, Dr. Wesley firmly challenged the preservice teachers about their traditional frame of reference in their class activities and assignments. Although Dr. Wesley was aware of the importance of understanding and being patient and sensitive to the feelings of preservice teachers, he also realized he had a limited period of time to transition the preservice teachers into their new actual teaching environment. Therefore, he needed to develop strategies constantly to move the preservice teachers forward in learning at a comfortable, yet steady pace. Dr. Wesley strategized new ideas and methods for learning by assessing where the preservice teachers were, where they should be, and where they needed to go. Knowing where the preservice teachers were involved understanding what responsibilities they were becoming safe and comfortable with, what responsibilities and strategies they were unsafe or struggling with, and how they were progressing overall. Having this sense of knowing directed Dr.

Wesley in what topics or areas he selected for teaching, how hard he pushed or pulled the preservice teachers into situations, how he dictated the level of independence they could afford their practice, and how he should guide them in choosing what role they needed to provide to their students.

Most of the preservice teachers stated that they did not realize the relevance of Dr. Wesley's instruction of theories, methods and strategies and his challenge of their ideas and assignments until they started teaching in the actual classrooms. They further complained that they did not have enough opportunities to teach in the actual classrooms. Nor did they have enough time to discuss and reflect on the problems and issues they faced during their field placements in the teacher education course, thus overcome the challenges of linking theory and method to their classroom practice. For them, having student teaching earlier in the program would have helped them overcome their fear of failure.

### **Dealing With Ambiguity and Developing a Sense of Authority**

Despite the tolerance for ambiguity and the recognition that each particular class can bring about transformation, most of the preservice teachers demonstrated that they acted by claiming their authority. They were conscious of set curricular and bureaucratic demands and of societal and institutional expectations. They knew they should set standards both in teaching and in behavior. In our group conversation, when I asked what made the key participants feel least like a good teacher, Helen-Young commented that she felt least like a good teacher, "when faced with an out of control student who cannot or will not respond to all approaches thereby placing themselves and other students at risk." During the following discussion she explained her point of view further:

I feared really anything that would put the rest of the class in jeopardy. I'm sure it would happen any time during my student teaching with a child and the other students in my care. For me, it's very frightening. It's not the repercussions, you know, and holding the teachers accountable and all that. It was that those kids are in my care. (Helen-Young, Third Interview)

Arendt (1961) describes the authority that exists when one takes on the responsibilities inherent in the care of others' children. She claims that the assumption of this authority and its inherent responsibility is essential in education. The fear of the potential for destruction to which Gordon (2001) refers, perhaps, lies behind many teachers' distress over the possible "jeopardy" of a loss of control in the classroom.

Developing a sense of authority requires the ability to hold one's needs in abeyance while heeding the other considerations that are important factors in the process of developing chance in practice and thinking and thus acting with phronesis. In consideration of this balance, and the balance between continuity and change, Gordon describes the dilemma as follows: "Perhaps the most important and difficult problem in education is how to preserve the new and revolutionary in the child while simultaneously conserving the world as a permanent home for human beings" (p. 47).

The equilibrium between traditional and progressive emerges in Maria's insistence on maintaining "things we all always do" while accepting the "wild and original" ideas that children might originate. Maria claimed, "Everybody suffers when the control is destabilized. It has to do with organization. It underpins the whole experience for students, if you have things down as routine, then the focus is on the [activity] itself" (Interview 3). At the same time, the boundaries that are set create the spaces for children to follow their individual paths, "As Dr. Wesley always tells us: it has to be [...] it has to be your students' agenda, not yours. You set the framework, and then you start the process of responding to them" (Maria, interview 3). Most of the preservice teachers stated that they encouraged individual responses but emphasized the initial establishment of boundaries and familiarity with routines as essential at the beginning of the teaching. For them, this boundary formation would later be able to withstand change without chaos.

Perhaps it is the fear of descent into chaos that makes control an important issue with many preservice teachers. While George, Julia, and Maria placed individual needs and experience at the

heart of their teaching, which allowed and encouraged both their creativity and that of their students, the schools they had teachers reading from scripts and demanding standardized answers from children. As Julia's reflection on her teaching in our interviews experiences revealed, content of teaching was broken and presented in small, incremental, measurable steps and conformity was rewarded. The urge to instill "one aspect" through schooling as a way of attempting to control change and ambiguity reflects Aries' (1962) description of expectation where "each person had to resemble a conventional model, an ideal type, and never depart from it under pain of excommunication" (p. 415).

Where there is a "zero tolerance" for breaking expectations of conformity, it is difficult to see where the opportunity for learning to work through conflicts and for the development of phronesis (practical wisdom) will arise. The administrators and teachers told Julia and other preservice teachers that the state and parents expected predictability and measurable outcomes and these expectations dictated much of what counted as education in this conception of school. This attitude was reminiscent of the Cartesian idea that whatever the problem, it could be solved if rendered into small and measurable pieces. That modernist viewpoint contrasts starkly with the view that attempts to explore life in its moral-political difficulty and complexity. The latter view urges preservice teachers to inquire into the complexities of pedagogy, taking into account those combinations of a concrete situation that make it a particular situation with its own setting of foreground detail within a socio-cultural background history.

### **Understanding Teaching as a Student-Centered and Culturally Relevant Practice**

Culturally diverse classroom settings in which the teachers apply what they know in particular also has its influence and provides the parameters within which many teachers' live. These parameters both enable and constrain a teacher's impulse to act tactfully. State standards, mandated curriculum, and techniques provide horizontal knowledge, and policy defines boundaries. These technical, theoretical, and philosophical preconceptions both map out the territory in which teachers are able to move and place limits, but in some cases, these preconceptions interfere with that which the teachers identify as worthwhile. Julia explained, "because there's this standardized test push [...] What do you give up? You know, you can't let go of the needs and expectations of students that have to be considered for their success" (Interview 3). She expanded the thought, expressing her frustration with the feeling that "the weight of standardized tests" (Julia, interview 3) can prevent in-depth exploration and the quality to which she aspires. For her, there is something more to consider: "You know, it's not always the standards and mandated curriculum as Dr. Wesley told us several times. We need to encourage, care and give support to our students, and pay attention to their interests and cultural background" (Interview 3). For Julia, Maria and many other preservice teachers, there was an important background to be addressed against which learning is set and against which the individual student figures prominently:

*Maria:* But aren't you always translating your own expectations for a child based upon the knowledge you have of them? You present something global and you'll know that some children will take it to the nth degree and some of them won't, you know, meet the expectation. It's different for every kid. I mean there's a reason for them not to meet the expectation. They're not there yet, but there's something in the shared experience they will get. They will get something out of it. But it might not be those "objectives."

*Julia:* It's not the certain activities. It's the response you get from the children and what they're learning. (Group Conversations)

The children's responses indeed fuel the passion that these preservice teachers have for their profession:

*George:* And then there's the excitement of what we have been doing in our university class [...] It's got to be fun to teach the performance strategies. I saw kids got excited and found the strategies fun and you can really do some fantastic projects with these strategies.

*Jane:* Yes, it really is. But, it's hard to use them, it takes a lot of energy and I don't know, but I wouldn't give it up for anything. (Group Conversation)

The times in which the preservice teachers identified feeling most like good teachers were also linked with children's responses and taking energy while also energizing. George stated, "I feel capable when all the children engage, offer reflective responses about the topic at hand and then complete the expectations given or go beyond and take the dialogue beyond the classroom" (George, third interview). Helen-Young mentioned about a recent literacy activity:

The books and activities were very challenging and stretched the children. I was so pleased to see what they could do with the "push" and it was a point of celebration as it showed that whatever was happening with their reading activities seemed to be working very well. The children were all risk-takers and very eager to participate [...] When children are eager to stretch themselves, and feel safe doing so, it is a good reflection of good things happening [...] The children all worked together in groups, and felt capable of success. I always want to be a teacher that helps children meet with success, build on prior skills, desire to be learners, and take ownership for their tasks, etc. (Helen-Young, Third Interview)

For these preservice teachers then, the good in teaching to which they aspire is oriented toward what they consider is good for the children. This is a good at which they have arrived through their experience of children and the juxtaposition of the individual child against their understanding of children, curriculum and education in general. What counts as good is judged through how they see the children act within the classroom, both academically and in terms of characteristics that influence the ways in which they live with others. The engagement, play, performance, independence, and shared experiences are activities that are ends in themselves. They are pursued for the good found within them and are necessarily particular and thus in the realm of practical wisdom.

Most of the preservice teachers stated that they realized in their field placements that they would teach students who come from diverse backgrounds in urban as well suburban schools. They believed that they must be provided with practical opportunities to learn how to relate their instruction to the students' interests and backgrounds, and still promote social justice and a democratic vision of education in their classrooms.

It is evident that if teacher education programs are to prepare teachers to teach all students, to value different ways of knowing, and to develop pedagogical practices that result in the high achievement of all students, then the programs must afford them the opportunity to interrogate the beliefs and attitudes that they hold about themselves and the students that they anticipate teaching. Preservice teachers must be given the chance to examine how their beliefs and attitudes about students shape their understanding of teaching and learning. This being the case, then teacher preparation programs are, as Ladson-Billings (2001) wrote, obligated to

deal with social justice issues of race, class, and gender and not just in superficial, vicarious ways. Rather, an important component of preparing to be a teacher is interrogating the way status characteristics like race, class, and gender configure every aspect of our lives. (p. 6)

As the actual classrooms continue to become more economically, culturally, ethnically, and linguistically diverse, the need for teacher educators to prepare teachers for the diverse student population becomes more vital. The nature of this transformation is critically essential particularly considering that most prospective teachers will teach students whose ethnic, racial, language and economic background will be diverse, regardless whether they teach in classrooms located in suburban communities or in urban communities. Educating practically wise teachers with critical reflexivity may be a way to move beyond the superficial approach to dealing with issues of ethnicity, race, class, and gender. Providing preservice teachers with progressive strategies and practical opportunities to examine their beliefs and attitudes (some of which may be hidden) may offer them a clearer look at the expectations that they hold for their students.

### Summary and Final Thoughts

One of the main questions for this study concerned how practical wisdom plays within the overall picture of teaching that engenders teaching literacy and how useful it may be for preservice teachers within their practice. An emerging question also revolved around how phronesis affects a teacher's responsibility to the good as viewed by many participants in the education of children. With such responsibilities often leading to a feeling of being overwhelmed, some preservice teachers raised a concern that a call for phronetic deliberation and progressive teaching might be just one more stress for the already overburdened educator. To the contrary, most of the preservice teachers indicated that it is worthwhile to spend their energy and deal with the stress of developing progressive, play-oriented tactful strategies.

If phronetic ways of knowing and acting are valued in educational circles as much as technical knowledge, teachers might be encouraged to exercise this more particular way of acting in accordance with their principles, values and personal philosophies regarding teaching. Schubert (1986) wrote that instrumental action governed by *techne* can be a limited reference in making decisions concerning education: "What is and what works do not provide adequate warrant for deducing conclusions of ought. Curriculum by its very nature is a matter of asserting 'ought'" (p. 126). Granted the authority to perform such curricular decisions and actions, to deliberate about their responsibility and to give weight to what they consider is worthwhile for the particular children and circumstances of their classroom, the burden of teachers' responsibilities might become less stressful. Besides this consideration, phronetic deliberation in the conceptualization presented in this paper is a way of living and becoming, not a strategy to be added on to a list of teaching techniques.

Today, overwhelming multiple responsibilities exist, but teachers in some schools are not permitted the authority to allow a way of living in classrooms that leads to actions that can fulfill their responsibilities in ways that are most beneficial to children. It is perhaps the frustration of the ability to live and act in a practically and critically wise way with children that contributes to the feeling teachers have of being overwhelmed.

Of course, within a situation that permits personal authority to the extent that there is a possibility that such authority could be abused, the question arises concerning who decides what counts as good. Here Gadamer (1975) emphasized that practical wisdom is dependent on the existence of the deliberation where private decisions are held up to the light of public scrutiny. The danger of personal judgment being in error decreases through a dialogic conversation within the community. Habermas argued (1988), though, that a "like-minded community" might intensify the possibility of "moral blindness," where the community is unable to recognize the existence of an ethical dilemma. A strong community, according to Habermas, encourages critical knowledge and dialogical conversation that lessens the possibility of such blindness and enriches the background upon which phronesis draws, thus increasing the possibility of it being a useful concept. In this light, teacher education programs and inservice teacher preparation programs organized by universities can provide critical knowledge and deliberative spaces for teachers, preservice teachers, and local communities, and thus minimize the possibility of such "moral blindness" in schools.

The usefulness of practical wisdom as a concept that embraces what is good to do within a community practice such as teaching depends, to a certain extent, on how those that are practically wise teachers can influence those that have not yet developed this way of knowing and deliberating. Gadamer postulated that phronesis is acquired through experience. Gadamer and others who have discussed the notion agree that it cannot be taught; it can only be learned.

Felman (1987) purported that while teaching is "impossible" conditions can be arranged in order to maximize the possibility that learning might take place. Eisner (2002) discussed the importance of pointing out salient features that might be conducive to such a possibility. Nussbaum

(1990) went further by positing that such learning can emerge through literature, which can highlight both the conditions and salient features of those conditions in concrete and complex ways to create vicarious experiences. If that is possible, then it might also be learned through the narratives of preservice teachers and teacher educators who act from this perspective. This study has sought, to some degree, to provide such teacher narratives, accompanied by interpretive inquiry that highlights some of the conditions, events, and dialogues that foreground the concept and its influence on teacher education and teaching practice.

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# Miscellany

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