THEORY AND RESEARCH IN EDUCATIONAL SCIENCES II

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ASSIST. PROF. DR. KENAN BAŞ

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CONTENTS

Chapter 1

AN OUTLOOK: THE BOOK OF DEDE KORKUT IN TERMS OF EDUCATION AND PEDAGOGY

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Introduction

Every society has masterpieces that are integrated with it and reflect its cultural and national pattern. In these masterpieces, one can find information, reflections and samples about different areas from folklore to history, sociology, ethnography, language and geography. In this sense, the main masterpiece of Turkish cultural world including all these characteristics described above is the Book of Dede Korkut. This magnificent masterpiece, which spread by word of mouth during the era of oral culture and transmitted into written language, was made important by two factors - content and language. Although Dede Korkut, whose name was given to the book, was a shadowy figure, he has been claimed to be a legendary Turkish ancestor having lived among Oghuzs. He was a scholar, an oracle, a reliable commentator, a saint having taken inspiration from God, and a man of the people finding solutions for every problems. He was a representor of "respect ideology".

Literary style of stories are generally symbolic. In other words, the art of portraying the scene with words, symbolical description dominanat in the stories and extraordinary events are among the most attracting features of stories. A great number of extraordinary phenomenon such as Deli Dumrul's struggle for life against Azrael (the grim reaper) and his fighting against him by drawing a sword against him… birth of Cyclops and its murder… etc. can be found in the stories (Gökyay, 1987: 309).

There are extant versions of Dede Korkut Epic in addition to the written transcripts (Gökyay, 1973: 48). Tribe of Deli Dumrul, Tribe of Banı Çiçek and Bamsı Beyrek, who is colloquially known as Bey Böyrek, are some of the oral versions of Dede Korkut Epic.

This valuable work consists of 12 tribes. These 12 year tribes begin with an introduction:

- Introduction
- Tribe of Boghach Khan - Dirse Khan's son
- Tribe where Salur Kazan's House was Pillaged
- Tribe of Bamsı Beyrek - Kam Pure Bey's son
- Tribe where Prince Uruz - Prince Kazan's son - was captured
- Tribe of Deli Dumrul - Duha Koca's son
- Kan Turalı - Kanlı Koca's son
- Tribe of Yigenek - Kağlı Koca's son
- Tribe where Basat killed Cyclops

- Tribe of Emrem - Begil's son
- Tribe of Segrek - Uşun Koca's son
- Tribe where Salur Kazan was captured and his son Uruz freed him
- Tribe where the Outer Oghuz rebelled against the Inner Oghuz and Beyrek died

In the first story, men of Dirse Khan try to make his father kill Boghach Khan through a slander, but when they fail, they bring Dirse Khan to the heretics.

In the second story, Kazan Khan spends time with his Beys, and his tent is raided by the heretics while they are hunting. Afterwards, his wife and his son are imprisoned. Then, Kazan Khan and his friends try to save the captives.

In the third story, the heretics abduct Beyrek during a wedding.

In the fourth story, Uruz gets imprisoned while his father Kazan Khan is showing him how to struggle.

In the fifth story, Deli Dumrul confronts with Azrael and is defeated.

In the sixth story, Kan Turalı wrestles with three beasts to take the daughter of Landlord of Trabzon. He gets attacked by the heretics while he is on the way to his large nomad tent with the girl.

In the seventh story, Yigenek fights against the heretics to save his captive father.

In the eighth story, Basat fights with Cyclops, who is a beast-human.

In the ninth story, Begil gets angry at Kazan Khan because of an honor issue, and plans to rise against him. He falls off of his horse during a hunt, and his enemies attack to his village after hearing about it. His son fights against the heretics and becomes glorious.

In the tenth story, Segrek gives a struggle to save his captive brother.

In the eleventh story, Kazan Khan is captured by the enemies in his sleep. Then, he is saved by his son.

In the twelfth story, the Outer Oghuz rises up against the Inner Oghuz for a dignity issue (Kaplan, 1997: 14-15).

Perception of Education in the Book of Dede Korkut

Education is regarded as an engineering of bringing manner to an individual from birth to death, and it is a process in which intended changes are made on individuals in the process of culturalization and socialization. These are the changes desired by the society. In all of the rituals, it is

aimed that an individual merges into the society and has an influencing personality. In this culturalization phase, the individual experiences the process consciously or via incidental learnings in family or social environment. Briefly, intentional part of culturalization is education and it is a process of raising and developing the individuals and equipping them with the necessary mental and physical requirements (Fidan, 2012: 6).

The Book of Dede Korkut is a work of common ground and pleasure of Turkish nation's history and culture. According to Ergin (1989: 25), the Book of Dede Korkut is a masterpiece that can enrich spiritual and mental world of Turkish kids alone.

With these stories, it is possible to get an idea about the Turkish people's life-style, their traditions and social perceptions. The Turks lived as nomads in Central Asia for hundreds of years. They had a warrior, contentious, stern-humored, physically strong and mobile character by having such a life-style and by fighting against the surrounding nations. Fighting constantly against the surrounding nations, spreading (denying to be subdued by other nations because of having an independent spirit), having battles to move the lands around made them raiders. Although they had a spirit of warrior, the Turks did not ignore to possess the gentlest feelings. Righteousness, generousness, helping the poor, gaining fame, being nice and honest, giving importance to love, amity and friendship were among the moral values that were formed in the spiritual world of the Turks in the name of their world view. As clearly seen in such issues, a strong bond based on love and respect was observed among individuals.

The most delightful examples of the behavioral patterns mentioned above can be seen in the Book of Dede Korkut. One of the most important features of the book is that it shows the ideal, the beautiful and the right by "*model demonstration*" or "*model creation*". On the other hand, it materializes the things needs to be avoided by demonstrating the evil figures. Yalancioglu Yaltacuk in the tribe of Bamsı Beyrek is a decent example in this sense. The Oghuz Turks used to look down upon someone lying and such people were sentenced to the severest punishment (Arı & Karateke, 2010: 278).

The Book of Dede Korkut is a book of morals which explains the history and offers role-model to the future from the perspective of Turkish mythology. It is the Turkish tradition that can determine and detect the events faced by these characters who can be role-models to the society (Duymaz, 2000: 109).

We choose sample protagonists among these characters presented in each literary work and illustrate them as role-models (Ekici, 1995: 123). When we consider more thoroughly, we can see that structures that show

clothing, architectural and other esthetical values of the Oghuz Turks such as "*golden-head marquee*" and "*bird-shouldered cloak*" have importance in eliminating the disorders and encouraging the inner and outer beauty. From this point of view, showing effort on eliminating the disorganization with positive warnings, taking forms of politeness into consideration and correcting appearance, misbehaviors and discourse regarded shameful in the frame of moral rules can be possible.

Function of the Character of Dede Korkut in Terms of Social Education

While Dede Korkut, the person the book is named after, is not known thoroughly, it is stated that he was a legendary Turkish ancestor, who lived in the era of the Oghuz Turks. As Dede Korkut was not the main figure of the stories, he was a blessed, wise, aged bard, who was regarded as a judge that the folk consulted, and who helped the Oghuz defeat their challenging enemies. It was observed that all Oghuz beys and their members consulted Dede Korkut in all their affairs for his wisdom and life experience, and they discussed their issues with him. Dede Korkut appears at the end of the all 12 stories in the books with the same function that is praying for the luck and happiness of the character and of the Oghuz that the character represents. In addition, Dede Korkut, also known as Dedem Korkut, Korkut and so on, was a wise person, to whom the Oghuz Turks consulted and trusted in his knowledge and experience. He was also a person appearing in periods as birth and naming of the character. He was also a wise and saint man, guiding the society with all his spiritual merits (Ergin, 1989: 73).

The storyteller Dede Korkut was both scholar, oracle, sure interpreter and a "saint" who gained God's prophecy. Moreover, he was an advisor and an arbitrator who showed a solution way to every problem. He was a person to whom the people in the community trusted. He was a man keeping his promise, and his requests would be fulfilled. According to Gökyay (1987: 309), Dede Korkut was a "folk healer" and "shaman" rather than a politician.

This elder bard in the Book of Dede Korkut, who was the eldest of Oghuz people and a leader in moral aspects, was also the most important representative in positive locating of senility as the most important source of traditional information and experience. In this context, the aged wise was a representative of "respect ideology".

Students can obtain information about Dede Korkut epic in the school environment and learn the moral values of the society in which they live with the help of this masterpiece. Respect is the first of these values. Dede Korkut epic took its name as an extension of the respect value. Although Dede Korkut was not the protagonist of the stories, he gave his name to

the work, and he was definitely consulted in each story. The fact that the Oghuz people asked him for advice when they were in trouble, that he gave names to their children, that he prayed for the tribes of Oghuz and that he was a leading people in social events reflect the respect towards him (Şahin, 2015: 72).

From all these aspects, only using the name "Dede Korkut" is considered to be enough for teaching the concept of respect.

Child and Child Raising in the Book of Dede Korkut

Child education is quite significant in the Book of Dede Korkut, and it is also emphasized in the introduction part of the book.

A girl does not get advice unless it's her mother's, a boy does not learn manners unless they're from his father's. Boy looks like his dad, one of his two eyes. If a supreme son leaves his family, he becomes a new source for another family. What if a son's father dies and leaves no legacy to his son. What if a son inherits from his father if there is no state (government). My Khan, May Allah (God) keep you from malice of the ones who are stateless (Ergin, 1989: 74).

The Book of Dede Korkut reflects a structure of a nomadic society. In nomadic societies, raising a child is achieved with the use of customs, folk and morals. Boys have more importance in a society based on force and strength. Boys are not only the ones providing personal safety, or creating religious endearment, they are also crucial deposits for the existence and future of the society (Binyazar, 1996: 4).

Having child is crucial in the Book of Dede Korkut. It is believed that those who don't have any children are cursed. This is underlined with Bayindir Khan's words in Bogach Khan-Son of Dirse Khan:

If there is someone who does not have a boy or a daughter, place him in the black marquee, black kitsch shall be put under him, black sheep stew shall be brought in front of him, leave him if he eats, he shall go if he does not, put those with boy in the white marquee, place those having daughter in the crimson marquee. God curses those not having any sons or daughters. We also curse them, let them know (Ergin, 1989: 79).

Boys in the Book of Dede Korkut are given names by Dede Korkut when they perform a valor. In the Book of Dede Korkut, braveness and combativeness of these young people is an important tradition for them to survive in the nomadic life. It is stated in the book that Bogach Khan and Bamsi Beyrek are given their names in this way by showing courage (Ergin, 1989: 82, 120).

As a matter of fact, those who do not act bravely, do not chop off anyone's head, do not feed the poor and do not dress someone cannot get

seigniory (beylic). In the tribe of Segrek - Ushun Koca's son - this case is stated as follows:

"He was called Ters Uzamısh. There was a valiant in the Oghuz. This wise man sitting over there got each place he lived in with his sword and bread; what about you? Did you decapitate anybody? Did you shed blood? Did you feed the hungry? Did you help the poor?" said Aydur. Egrek Aydur asked: "Hey Ters Uzamısh! Is it a talent to decapitate and to shed blood?" Aydur replied: "Yeah, it is a talent." (Ergin, 1989: 225).

Again the words Prince Kazan told his son Prince Uruz for not showing braveness indicate how the Oghuz people would raise their children, and being a role-model was at the center of education in the Oghuz society:

"*He said, you are as big as a hill, but you do not have a mind as a trifler. You have grown big, but you do not have a brain as a corn. Does a child learn talent from his father, or a father learn from a child? You took me to the border of heretics and decapitated. What did I see in you? What can I learn from you?*" (Ergin, 1989: 156)

Since a child who ignores his/her father's and mother's advice is not treated well and is excluded by the community, it is seen that children do not neglect their parents' words and rather accept them even if they know they are right (Ergin, 1989: 91).

The kids in the Book of Dede Korkut are raised in the understanding of prioritizing the benefit of their society rather than their own benefits. This stems from the fact that the environment in which they live necessitates acting all together. The Beys' making their own houses pillaged plays an important role in shaping children's consciousness. That is because of the fact that primarily bey and the parents behave in a way that "what is mine is also yours" (Ergin, 1989: 243).

Qualifications and Behaviors that can be Used in Child Education According to the Book of Dede Korkut

Characters in the Book of Dede Korkut such as Bogach Khan, Kan Turalı, Bamsı Beyrek, Lady Selcen and Lady Burla, all of whom were impressive in their environment and influenced their environment, are quite important in terms of the fact that they reflect the character and life-style of Turkish people having lived hundreds of years earlier.

These people, who passed through challenging trials in the path of being a character rather than a type, are individuals who change, grow and effort in the way of self-accomplishment as noble personalities throughout the story. These people, who are stated as models in the Book of Dede Korkut and their world of values, appear as a force leading the dramatic action of the Book of Dede Korkut.

The system of values in the Book of Dede Korkut presents itself with the demonstration of positive and negative behaviors. We can educate our children based on the manners exhibited there. We can show them the favorable manners to be imitated, and indicate the behaviors that are to be avoided by pointing the evil manners in the book and their results. We can examine these behaviors that can be used in child education by separating them into two sub-topics as positive and negative behaviors.

Positive Behaviors:

Courage – Valor – Manliness

Courage stands out in many parts of the Book of Dede Korkut. Characters sometimes try to withstand against 300-600 people just by themselves. Bogach, who fought with a bull one-to-one in a scene in the Tribe of Bogach Khan - Dirse Khan's Son, is an example of courage and valor for students. This is because of the fact that Bogach defeats the bull by using both his physical strength and intelligence. The reason of this is that he takes his hand back from the place he leans upon and the bull falls upside down (Ergin, 1989: 82).

Here, students might be given the message that strength has a purpose, and valor can work when it is used with intelligence. Educational settings in which children can show their courage should be designed. Atmosphere that everyone can share their opinion openly must be created, power play and courage should be used in the development of students' skills of entrepreneurship and leadership.

Loyalty – Fidelity

There are lots of examples about loyalty and fidelity in the Book of Dede Korkut. Loyalty of Deli Dumrul to her wife, loyalty of Begrek and Karacuk Çoban (Shepherd) to Kazan, resistance of Karacuk Çoban against 600 people for Kazan and his loyalty to Kazan can be used to trigger the students' awareness of loyalty and fidelity (Ergin, 1989: 99, 103, 247).

Students can be provided opportunity to gain awareness of educational opportunities the state provides them and of struggle that their families supply for their education. Moreover, they can be engrained with the idea that they should not disappoint them, and they should be good kids for their families and good citizens for their country.

Sharing

Sharing has a great importance in the Book of Dede Korkut. Kazan Bey makes his house pillaged, share his property with his community. Bamsi Beyrek wears a crimson kaftan when he gets married. His friends ask why he wears red, but they wear White. He answers: "*Don't worry, I am going to wear today, but you will wear it one by one for 40 days*"

(Ergin, 1989: 129).

Analyzing the tribe of Beyrek, families and teachers can learn that the property we have would increase through sharing. For instance, if we share books with our friends, many more people can learn new things.

Social Solidarity and Synergy

In the Book of Dede Korkut, there are very good examples of unity and solidarity. When some beys are captive or in a difficult situation, other beys come together to help:

One day, Kazan's assistant Beyrek on a gray horse came to help rapidly. He said - Kazan! Draw your sword; I am here for you. I have seen my Khan beyond this. Big Yegenek - Kazılık Koca's son, who was able to kill the Oghuz beys, who were pompous, virtuous like a bird, gold-earringed, belted and thick rapidly came for help. He said - Kazan! Draw your sword; I am here for you…(Ergin, 1989: 113).

"*Dirse Khan feeds the hungry, dresses the naked, pays the debt of those in debt*" (Ergin, 1989: 81).

In the Book of Dede Korkut, the victories after wars, feasts organized when someone has a child, pillage of rich Oghuz beys' properties annually to help the poor and such kind of activities reinforce feelings of physical and spiritual social solidarity and synergy.

Activities of school administration such as determining the students in need, giving them books and exam preparation tests, organizing activities such as fairs to help the poor and providing help in need can promote the students' feelings of social solidarity and synergy.

In addition, sportive activities such as tours and dinners can help students learn to work in groups and fit into the environment.

Chastity – Honor

Long-necked Lady Burla in the Book of Dede Korkut eats flesh of her own child and tries to be patient to save her honor and and not to smear the fame of Kazan (Ergin, 1989: 107).

Again Segrek's wife says, "*I'll wait you until you turn back, and I won't let even a male fly touch on my skin*" (Ergin, 1989: 229).

Students can be given the idea from the Book of Dede Korkut that an individual can make even bad things unwillingly for the sake of honor. Furthermore, they can be taught that the concept of honor is highly important in Turkish culture.

Respect

Respect parents and landlords is an issue of importance in the Book of Dede Korkut:

- Kan Turalı kisses his mother's hands and sets off (Ergin, 1989: 187).
- Emren kisses his parents' hands before attacking the enemy (Ergin, 1989: 221).
- When Kazan turns back to his land, his daughter and daughter-in-law visit him, kiss his hands, and prostrate themselves before him (Ergin, 1989: 243).
- Egrek kisses his little brother's neck, Segrek kisses his brother's hands (Ergin, 1989: 233).

In addition to these, hands of the ones who perform menliness, valor and favor are kissed. They earn respect. In the tribe of Bamsı Beyrek, Beyrek saves bezirgans from the heretics. Bezirgans visit the marquee of Pure Bey. They see that Beyrek is just sitting there. Prior to Pure Bey, they rush to him and kiss his hands. Pure Bey gets angry and reminds them manners: "*You stupid, how you dare to kiss a son's hands instead of his father's*" (Ergin, 1989: 120).

From these examples in the Book of Dede Korkut, it can be deduced that it is necessary to advice students with appropriate words based on love and respect in both family and school settings. It should be told them that respect for the old, tolerance to the young, sincere and candid behaviors to all people are in our culture. It should also be noted that our ancestors lived in an environment of respect and love hundreds of years ago. Additionally, it can be emphasized that we have achieved to act sincerely to each other for centuries and it is really important for us.

Negative Behaviors:

Slander and Gossip

Forty valiant men get jealous of Boghach Khan in the tribe of Boghach Khan - Dirse Khan's Son. They gossip about him, and slander him. They utter that he behaves shamelessly and disrespectfully. They also remind that Dirse Khan would be ashamed if Bayındır Khan hears about these claims, and they ask Dirse Khan to kill his son (Ergin, 1989: 84).

Bad results stemming from such kinds of behaviors that can even result in death of a person should be explained in schools by considering the Book of Dede Korkut. Additionally, school counselors and class teachers should express whenever possible that such kinds of behaviors are bad and cannot be beneficial for anybody.

Lie

The term lie can be seen in several tribes in the Book of Dede Korkut:

• In the tribe where Kazan is captured, Uruz is informed that his father is Bayındır Khan, whom he previously knew as his grandfather (Ergin, 1989: 240).

• In the tribe of Bamsı Beyrek, Aunt Kısırça and Boğazça Fatma say "*the girl marrying to you is me*" and Begrek pushes Banı Çiçek for appearing by making all her shames public since they have lied (Ergin, 1989: 147).

• Yalancıoğlu (Son of the liar) Yaltacuk, ensanguines the shirt which was given by Begrek for being able to get married to Banı Çiçek, and says "*Begrek was killed in Dervend, and this shirt is a sign of this fact*". Finally, it is understood that he has lied. He gets punished by getting killed with Begrek's sword (Ergin, 1989: 151).

The texts above can be read by the children, and they can be advised that lying is very bad. Moreover, they should be told that liars always get into trouble and being honest is virtuous. Furthermore, both school counselors and class teachers should give advice to the students when they face such situations, and importance of dignity and personality ought to be emphasized.

Arrogance

In the Book of Dede Korkut, arrogance is condemned, and the people who behave arrogantly are punished. For instance, in the tribe of Deli Dumrul, although Deli Dumrul is firstly the one who is very self-confident by believing that he is the strongest, he turns into a person who needs for others' help (Arı et al. 2010: 282).

The students should be asked for reading the tribe of Deli Dumrul in the Book of Dede Korkut, and they should be informed that arrogance can cause anybody to have bad experiences. They should also be advised that nobody is superior to the others, and if there is any superiority, it needs to be in knowledge and goodness.

Immorality

In the tribe of Cyclopes in the Book of Dede Korkut, evil things and bad luck appearing in the tribe caused by Sarı Çoban's (Yellow Shepherd) - Aruz's shepherd – attacking to a fairy perching on headwaters is stated (Ergin, 1989: 211).

Reading the tribe of Cyclopes should be advised to the students, and they should be advised that immorality does not only affect the immoral person, but it also gives irreparable harm to his society.

Betrayal

In the book of Dede Korkut, when forty valiant men of Dirse Khan learns that Bogach Khan is alive, they tie his hands, bind his neck, wallop him until he bleeds and bring him to the heretic (Ergin, 1989: 91).

Students ought to read the tribe of Bogach Khan, and they should be warned that betrayal is a wrong behavior. They should also learn that it is not appropriate for our national and human values. Additionally, necessity of loyalty and friendship should be advised to the students.

Sleep – Carelessness

In the tribe where Kazan was captured and rescued by his son Uruz, the Oghuz's indulgence of sleep was expressed like this: "*Little death caught Kazan and made him sleep. The Oghuz gentlemen used to sleep for seven days, so they used to say little death for it*" (Ergin, 1989: 234).

Kazan is caught during the state of sleep and he gets captured by being fettered.

This event in the Book of Dede Korkut should be read to the students, and they should be advised that our country, Turkey, is in a very strategic position. It should be highlighted that the world is awake, so we should keep our eyes out as a society, and we should keep up with time.

Conclusion

In the Book of Dede Korkut, the most important function of Dede Korkut is his being a guide. Even just using his name is enough for teaching the concept of respect. When the tribes in the Book of Dede Korkut are analyzed, we can become aware that events are conveyed in a chain transfer, and it is written out with a dominant perspective. Another significant characteristic of the Book of Dede Korkut is that it concretizes the things that should not happen by showing sometimes bad and sometimes good and true models.

The Book of Dede Korkut is a work of history, culture and common thinking and enjoyment of the Turkish nation. It is a precious work that would hold Turkish children's psychological and mental structure together. Having a child is crucial in the Book of Dede Korkut, and bringing children is provided by customs and traditions. Especially boys are regarded as an assurance for existence and future of the society. When introduction section of the Book of Dede Korkut is examined, it can be seen that child education is highly important. The fact that a child receives first education from his/her parents first is mentioned by claiming that girls get advice from their mothers, and boys learn table manners from their fathers.

According to the Book of Dede Korkut, a child should be trained in a way that benefits of the society rank in priority than individual's own benefits. He/She should also be advised to take his/her parents' advice and to respect them. The exalted values in the Book of Dede Korkut are behaviors such as courage, loyalty, bravery, respect, fidelity, chastity while the humiliated, condemned and unacceptable values are behaviors such as slander, gossip, lie, arrogance, immorality and betrayal.

Briefly, the Book of Dede Korkut makes an effort to create virtuous generations by receiving positive behaviors from the book among the negative ones that are presented in it as well. Values education is a remarkably important issue in education, and the Book of Dede Korkut is a great source to help students learn the values. That is why, it can be used by teachers in educational settings.

References

Arı, B. & Karateke, E. (2010). Dede Korkut hikâyelerinde kadın ve çocuk eğitimi [Woman and child education in Dede Korkut stories]. *MKÜ Sosyal Bilimler Enstitüsü Dergisi 7*(14), 275-284.

Binyazar, A. (1996). *Dede Korkut Kitabı [The Book of Dede Korkut]*. İstanbul: Yapı Kredi Yayınları.

Duymaz, A. (2000). *Dede Korkut Kitabı'nda Alplerin Eğitim ve Geçiş Törenleri [Rites of Education and Passage of the Alps in the Book of Dede Korkut]*. Ankara: Atatürk Kültür Merkezi Yayınları.

Ekici, M. (1995). *Dede Korkut Hikâyeleri Tesiri ile Teşekkül Eden Halk Hikâyeleri [Folk Tales with the Influence of Dede Korkut Stories]*. Ankara: Atatürk Kültür Merkezi Yayınları.

Ergin, M. (1989). *Dede Korkut Kitabı [The Book of Dede Korkut]*. *C. 1.* Ankara: T.D.K. Yayınları.

Fidan, N. (2012). *Okulda Öğrenme ve Öğretme [Learning and Teaching in School]*. Ankara: Pegem Yayıncılık.

Gökyay, O. Ş. (1973). *Dedem Korkut'un Kitabı [The Book of Dedem Korkut]*. İstanbul: MEB Yayınları.

Gökyay, O. Ş. (1987). Dede Korkut hikâyelerinde bazı düzeltmeler [Some editions in Dede Korkut stories]. *Türk Folkloru Belleten 2*.

Kaplan, M. (1997). *Türk Edebiyatı Üzerinde Araştırmalar I [Research on Turkish Literature]*. İstanbul: Dergah Yayınları.

Şahin, A. (2015). *Dede Korkut Hikâyeleri'nde ortaya çıkan bazı değerlerin liselerde yaşanabilirliğine ilişkin müdür ve öğretmen görüşleri [Views of principals and teachers on the livability of some values that emerged in Dede Korkut Stories in high schools]*. (Master's thesis). Gaziantep: Zirve University – Kahramanmaraş Sütçü İmam University.

Chapter 2

PHILOSOPHICAL FOUNDATIONS OF PROGRAM DEVELOPMENT

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1. Introduction

Education and philosophy walk together, mutually forming each other, exchanging with each other in the process of thought and action (Brauner and Burns 1965, 2010 via Büyükdüvenci, 2010). Sönmez (2008, 2) also used a similar expression for science and Philosophy; *Philosophy without science is deaf and dumb, and science without philosophy is blind*. Accordingly, he states that every scientific development, invention, discovery, knowledge with validity and reliability affects philosophy, and philosophical views also open the way for science. Just like the mutual interaction of the mechanical universe created by science and the new science shaped by a stance against this understanding.

Sönmez (2008, 2) mentions that every science has a philosophy in our age. Just as philosophy leads fields such as mathematics, history, nature, law, religion, and state, it similarly constitutes a 'perspective' for education.

According to Brauner and Burns (1965, via Büyükdüvenci, 2010), a person who doesn't gain a point of view should always look from the foundation to the top. This situation, contrary to popular belief, is impracticable. What's more, it's the perspective that distorts the most and provides the least clarity. From such a point of view, nothing can be seen as a whole or to a good extent. When there is no point of view, the world flattens, children and teaching also look bad. However, philosophy allows people to use deep perception to the highest level, which is practical.

In the published papers about the philosophy of education, the following implication has been the most notable; Most of them first explain the practical benefit and justification of philosophy and make an effort to defend it. Kıssack (2002) states this situation as follows; *The concept of 'theory' is seen as foggy, fictional, and unverified with idealism, speculative side, distance from the application, and therefore it has a negative connotation*. What raises the value of the concept of the application is the thought-based foundation to which it depends. For example, what determines the success of a football team in practice is its pre-practice designs, such as setting up your own games, identifying bare necessities, creating original strategies. Similarly, it is possible for an engine mechanic to repair the car with the theoretical infrastructure he creates to understand the working order of the machine. In this context, the philosophy of education is a prerequisite for learning, and this is the whole practical justification.

In the following section, the perspectives that guide education will first be examined in a historical line, and then in the philosophical basing process of program development, the explanations of alternatives that can be selected when approaching the problem of existence, knowledge, value will be made.

2. Philosophical Foundations of Program Development

Demirel (2005, 42) defines the philosophy of education as follows; It is a set of basic numerical and consistent values that are based on guiding and evaluating practices in education, and a continuous and critical review of them. Then it is possible to say that; The philosophy of education is a branch of philosophy that is trying to clarify the educational phenomenon with its 'unique fields' as in the words of Erden (2005, 29). These fields are ontology (philosophy of existence), epistemology (philosophy of knowledge), axiology (philosophy of values). Kneller (1971, via Çetin, 2010) also stated that education trends are essentially based on the basic assumptions of the study fields of general philosophy and took education in terms of its approach to existence, knowledge, and values.

Each educational trend is distinguished from the others by the difference in the approach of the philosophical view on which it is based on the problem of existence, knowledge, and value. Therefore, educational programs also differ in parallel with the educational trend they are involved in and the philosophical views on which they are based. But it is believed that philosophical views cannot be expressed by abstracting from science and history. In this sense, in the following part, the periods in which the mutual interaction of science and philosophy is highest are briefly expressed in a chronological framework, and then the principles that philosophy is based on in ontological, epistemological, and axiological foundations are given.

From the point of view of the historical background, it seems that the level reached by the first civilizations in science was limited by their approach to studying nature. Yıldırım (1997, 21-28) states that for the first time in Greek civilization (1000 BC) there were people who wanted to understand nature with a sheer passion for knowledge. Socrates is the name that can be considered a turning point in the orientation of this understanding effort from nature to human. Yıldırım also states that with the deep influence of Socrates, philosophy of morality, whose the only problem is human and behavior, rose instead of philosophy in regard to nature, and from this point on, philosophers were divided into two camps; on the one side, the *idealist camp* in an effort to understand the outside world, led by Plato, and on the other side, the realist camp that deals with the human in relations with the inside and the outside world, led by Aristotle.

Yıldırım (1997, 57-59) states that the millennial period between the end of ancient Greek civilization and the beginning of the Italian Renaissance (4.-13. century A.D.) was the dark age of Europe. During this period, the passion for studying the universe unique to Greek culture just to understand and know has been replaced by the hope of integration with

God in the other world. Science was becoming an increasingly mystical metaphysics. This is thought to be the point at which realism first changed shape. *Classical realism*, which accelerates with Aristotle's ideas, takes on a religious dimension (*religious realism*) at this point. It is no longer a possibility to examine nature with an independent and open approach. Yıldırım (1997, 73) stated that the scholastic thinking that prevailed in the 13th century also strives to find a rational basis for Christianity. The rising name during this period was St. Thomas Aquinas. He's a religious thinker. But the difference from dark age theologians is that it emphasizes scientific reasoning as well as faith as a source of knowledge. In this sense, he fused Aristotle's science with Christian teaching. The rising value of scholastic philosophy declines with the Renaissance two hundred years later. Because there's no way to keep the human mind in the ready and tight patterns anymore. Realism will change shape for the second time. Because with the Renaissance and the humanist understanding it brought, the orientation to man and the world began, and major advances were made in science in the following periods. At this point, religious realism has been replaced by natural-scientific realism. Realist understanding is generally thought to continue until the interaction of science and industry in the 19th century. Yıldırım (1997, 144) emphasizes that the biggest change separating the 19th century from previous centuries is the science-industry relationship. Faith in 'progress' is the most prominent feature of this century. The first prominent figure during this period was the French philosopher A. Comte. He defends a positivist worldview based on science. The 19th century, which inherited classical science based on the idea that the real world was made up of materials and their law-abiding movements, was the period when 'Materialism' emerged. Politzer (2008, 49) describes materialism as the philosophy of Marxism. He expresses that Marxism, which is the scientific world understanding, is against unscientific idealism; There are two completely different and totally opposite answers to respond to the question "How is the person thinking?": The first answer; "Man thinks because he has a soul", the second answer; "Man thinks because he has a brain". According to Politzer (2008, 38), those who adopt the first answer are included in the idealist camp. They say that the soul creates matter, but it is not scientific. Those who adopt the second response are included in the materialist camp. Some believe that nature and matter are the main elements, which is scientific understanding. According to Politzer (2008, 223), there can be neither soul nor idea independent of matter. If we are talking about the movement of ideas (dialectics), it will actually consist of the movement of matter. Yıldırım (1997, 147) states that classical science was replaced by contemporary science in the 20th century. In parallel with the nature of the period based on 'change', realism will be replaced by *pragmatism*. During this period, Dewey is an important name. Sönmez (2008, 130) stated that *postmodernism* emerged in the second half of the

20th century as an approach towards the enlightenment period, i.e. all the values and opinions created by modernism. This movement argues that modernism cannot make people happy with reason, science, scientific knowledge, but draws people into a dead end. Today, it can be thought that the mentality that shaped the understanding and science of the 21st century is postmodern understanding, also its philosophy was shaped by postpositivist philosophy. As Bernice (1997, via Gürsakal, 2007) stated, the new sciences in which order is replaced by disorder, a chaotic universe replaced by a mechanical one, predictability replaced by unpredictability are based on this understanding.

The emergence of philosophies affecting educational trends and therefore the teaching programs to be evaluated within the framework of these trends is expressed above depending on the historical ground and its interaction with science. The fact that any philosophical thinking shapes educational trends and curriculum basically affects the way philosophy looks at that educational trends and the educational program, thus ensuring that it differs from others in at least one dimension. For this reason, in the following chapter, the principles that philosophy is based on ontological, epistemological, and axiological foundations are first given, and then the educational trends and the educational programs that will be organized based on these trends are explained together with their basic principles and philosophies.

2.1. Ontological Foundations

Kneller (1971, via Çetin 2010) states that all philosophical trends are basically divided into three metaphysical areas. These are;

a) *Idealistic metaphysics:* According to idealistic philosophy, the reality is spiritual, not physical in nature. It's not material, it's intellectual. Human reaches the truth not by studying matter - nature, but by thinking and researching the soul. The truth is not given to people from the outside, and it is tried to be extracted from inside of them.

b) *Realistic metaphysics:* The basic principle of realist philosophy is that reality is matter. The material world is real and lies outside of human thought. Human attains knowledge of the truth by observing matter (outside world). Realist metaphysics is divided into two groups: The first is rational realism. This, in itself, is divided into two, classical realism and religious realism (Scholasticism). Both of them agree that the material world is real and can be observed. The point of separation of religious realism (Scholasticism) is that knowledge of the physical world is sent to man by God through the Bible and that humans can achieve knowledge of the truth by observing nature and learning the knowledge in the Bible. The other stage of rational realism, natural and scientific realism, emerged in Europe

during the rise of science in the 15th and 16th centuries. According to this trend, humans will reach reality by studying the matter with scientific methods. According to the realists, unlike the idealists, the knowledge of truth is not extracted from the inside of a person. It's given to him from the outside.

c) *Pragmatist metaphysics*; It is known as American philosophy. It was born out of the British experimenter tradition. According to the pragmatists, we can only know what we receive through our senses. Reality is created by one's interaction with the environment. A person is not taught anything, he/she learns by himself/herself as a result of the interaction with the environment.

2.2. Epistemological Foundations

Akarsu (1998, 70) briefly describes epistemology as information theory. In addition to addressing information-theoretical problems in general forms, an adequate educational philosophy should also try to see these problems in terms of the objectives and functions of education.

Scheffler (1965, via Büyükdüvenci 2010) expresses the sincere relationship of the concept of knowledge with changing civilizational ideals, changing technologies and scientific models, and summarizes the three philosophical approaches related to knowledge as follows;

a) *Rational approach (the knowledge of reality is reached with reason):* Mathematics is an exemplary science for this. Mathematical truth is general and imperative. Mathematical dots and lines are ideal, not physical objects. They're understandable, but they can't set an example in the natural world. Mathematicians arrive most accurate truths that cannot be destroyed by an experiment. In Plato's dialogues, there is the statement that the geometry problem was solved by a slave who did not know any mathematics, through the well-prepared questions asked to him. Therefore, the source of true knowledge is immanent; it is in consciousness. It can be revealed through mutual conversations and questions.

b) *Empirical approach (the knowledge of reality is achieved by observation):* In this understanding, natural science is taken as the main model. A person who is blind from birth cannot perceive green color, as well as cannot imagine it. Because neither this color nor any other phenomenal element is already present in mind. And it is not revealed by mutual conversations. But it is gained through experiments and observations. In Locke's words, the mind is a 'tabula rasa' (blank page) from birth. All world knowledge that will occur on this blank page should be based on experiment-observation.

c) *Pragmatic approach (The knowledge of reality is achieved through active struggle-interaction.):* The mind can neither be perceived as a deep well of obligatory truths nor as a blank page on which the experiment is written. It is rather a potential force for generating active ideas that undertake the work of finding solutions to the problems that the environment presents to the organism. According to Dewey, learning works in the form of experimentation and making. Because we only learn real information from the results when we apply and control an idea.

2.3. Axiological Foundations

Kneller (1971, via Çetin, 2010) expresses the assumptions of all philosophical movements regarding the values as follows;

a) *Idealistic values:* According to idealists, values and ethics are ore. The understanding of good, right, and beautiful does not change from generation to generation or from society to society. They are not man-made. They are part of the great universal nature, hence the universal human nature.

b) *Realistic values:* Realists agree with idealists that there are a number of fundamental values. But they differ in their views on why. Classical realists match Aristotle. According to them, there is a universal law of morale in accordance with the universality of the mind. It is shared by all people who are intelligent beings. According to scholastics, there is a universal law determined by God. But because people are born sinful, they can't learn it by themselves. They are in need of God's help. Scientific realists, on the other hand, reject all kinds of supernatural sensations. One learns truth through reasoning.

C) *Pragmatist values:* Relativity of values is one of the basic principles of pragmatism. According to the pragmatist, there is no universal value that applies to all humanity and people. No value can be imposed on the person from outside. He develops the 'useful' value himself as a result of his interaction with his environment.

Here, the educational consequences of the theoretical foundations expressed so far are included in the section that follows.

3. Educational Trends and Philosophies that Guide Them

In this section, educational movements such as perennialism, essentialism, progressivism, and re-constructionism are explained together with their philosophies.

Doll (1992, 25-27) describes educational trends with the thoughts of two different groups. These groups are traditionalists and reformists. Traditionalists are a group that tries to achieve this through teaching and discipline while caring about preserving existing knowledge and values.

The reformists are the group that looks ahead and gives importance to building the future and tries to achieve this by learning and experience.

In this study, trends will be explained within the framework of the classification that finds expression in Figure 1 in terms of the philosophies on which they are based.

Traditionalists		**Reformists**	
Perennialism	Essentialism	Progressivism	Re-constructionism
(traditional)	(conservative)	(contemporary)	(liberal)
Idealist philosophy		Pragmatism	
Realist philosophy		(humanism, existentialism)	

Figure 1: Educational Trends In Terms Of The Philosophy On Which They Are Based

As can be seen from Figure 1, educational trends have been studied on two groups: traditionalists and reformists; since the philosophies affecting trends are not separated from each other by precise lines, each trend has been dealt with in relation to the philosophy that is dominant in it. Accordingly, in the following section, perennialism is explained by approaching idealist philosophy, also essentialism by approaching realist philosophy, progressivism and re-constructionism by approaching pragmatism.

3.1. Traditionalist Trends

In this section, the perennialism education trend formed by idealistic philosophy and the basic education trend formed by realist philosophy are discussed with their reflections in the curriculum.

3.1.1. Curriculum Under the Perennialism Movement and Its Influence

Perennialism; Oliva (1988, via Erden, 2005, 120) stated that perennialism is the oldest and most conservative educational movement. Perennialism is based on idealistic philosophy. It's parallel to idealism. Politzer (2008, 40) describes idealism and mentions the difference between moral idealism and philosophical idealism. According to this, moral idealism is the dedication of a person to a country or to a cause. Philosophical idealism, on the other hand, is a teaching based on the explanation of the world with thoughts. It is the philosophical idealism that is mentioned here. Philosophical idealism suggests that thought is of the first degree, as well as, suggests that existence is created by thought, or in other words, thought creates matter.

Ornstein and Hunkins (2008, 38) emphasize the commitment of the Perennialism trend to the past and traditional values, stating that the main

purpose of education in this trend is to bring the student to universal reality 'with his mind'. He cites the importance of 'Liberal Arts' in the effort to reach universal reality. These courses, which can also be evaluated as general formation, are Latin, Greek, Grammar, Rhetoric Art, Logic, Mathematics, and Philosophy. These lessons are important because they form the scientific history and cultural heritage of the west. It reflects the great ideas of the past that can guide the present and future. Ornstein and Hunkins (2008, 41) criticize the competitive soul of perennialism. He says that this is the philosophy underlying the west's tendency towards supremacy and domination and today's cultural-economic globalization mentality. As the clearest indication of this understanding, he points to Murray's book, published in 2004, in which the science art geniuses of the last three thousand years are highlighted and ranked by their belonging to western culture, saying that Western culture is constantly in competition and claims to be the best.

Sönmez (2008, 85-87) expresses the basic characteristics of the perennialism trend as follows; In perennialism, the human is a smart being. Since there are absolute truths in the universe, not change, but unchanging, people can reach these truths by using their mind. In achieving the right, the deduction should often be used. The duty of education is to make people use their mind consistent, to bring them to absolute truths, to adapt to the universal truth, and to make them free and happy. The content of education includes teaching what has been proven to be true in the past, agreed upon, and achieved through reason. For example, ancient Greek and Latin classics should be studied. Because they are the most consistent examples of cultural heritage. As for educational life, Socratic discussions are appropriate, as deductive is preferable. It's important for a person to use the mind. But it's more important that he/she mustn't abuse it. For this reason, discipline should be provided, if necessary, punishment should be applied. A person should be raised according to ideal and universal facts, not real life. In the evaluation of education, questions that inquiry whether the student is using his or her mind should be based. In addition, the content of the questions should cover ideal and universal facts, not real life.

Sönmez (2008, 73-77) expresses the basic features of the curriculum shaped by idealistic philosophy within the framework of the perennialism trend as follows; the idealistic curriculum should consider and explain the absolute relations between God-Universe-Human. Philosophy, mathematics, and theology are the main courses of this type of program. To develop effective space, principal cultural values, history, literature, artistic criticism should also be included in the curriculum. The exhibition of works that tell stories of heroism, which are superior products of the mind, will feed education in accordance with this philosophy. In the idealistic curriculum, knowledge is primary. All accurate, absolute,

precise information is pre-existing in the human mind. That is why the principle of 'the student must learn by being self-directed' is so important for the idealistic curriculum. The learning environment must be qualified to mobilize the student's hidden interests. In this way, the awakening of interest and desire of the student will facilitate introspection and therefore learning. The deduction should be preferred as a method in education. Socratic debates should be held. In the idealistic curriculum, it is important to have subjects, lessons, and universal truths at the center. For this reason, idealistic teaching programs are subject-centered programs. Subject area, discipline area, large areas, and correlation designs from subject-centered program models can be preferred.

3.1.2. Fundamentalism Trend and Teaching Programs Affected by It

Essentialism is based on realism. Sönmez (2008, 90-92) expresses the basic characteristics of essentialism as follows: Human is not equipped with any innate knowledge. Knowledge is acquired later. The way to get it is through induction. The information obtained by induction is absolute and accurate. Knowledge and technique are constantly accumulated. The school must also pass on this information. Also, the school is not a place of reform, but an institution of learning. The exact truths obtained in the past in this institution, the dominant cultural values that have been formed so far, must be passed on to new generations. In this way, first of all, the generational conflict will be prevented. In addition, the new generation will be similar to the old generation, the change will be prevented, and cultural heritage will be preserved. The goals, functioning, scope, and evaluation of education in the basic trend are as follows in short; the goals of education are to try to adapt a person to society and to prevent change, for this, to convey the dominant cultural values. It is both about preserving cultural heritage and educating generations of knowledgeable and skilled. *Scope of education;* Science (physics, chemistry, biology), social sciences (sociology, psychology, history), and general culture (language, fine arts, philosophy, mathematics, geometry) should be taught in order for them to be knowledgeable and skilled, and to adapt to society and protect cultural heritage. Controversial, imprecise, unclear issues should not be brought to the classroom, and change and uncertainty should not be the subject of the educational environment. *Processing;* Basic subjects and lessons are transferred by the teacher, a representative of the cultural heritage. But the active or passive nature of the student will vary according to the overweighing philosophy of essentialism. For example, in schools providing technical education, in science high schools, the student will be in a more active position with experiment, observation, research. In this case, it is possible to say that realist philosophy outweighs. But, the issues will be at the center again. Discipline and authority are also imperative

in the basic essentialism environment. The teacher should teach students the solution and answers. Asking them questions and waiting for them to solve the questions, also using discussion techniques will be waste of time. But this situation directs students to memorization. *Assessment status;* Untaught subjects should not be asked in the exam. If a student has memorized what the teacher has told him/her and reflected it on the exam paper, it indicates that he/she knows. In technical education, they should be expected to make and show the taught technique, behavior, and product.

Ornstein and Hunkins (2008, 41-42) state that essentialism, unlike perennialism, deals with Mathematics, Science, and new technology. Accordingly, the essentialism is also based on subject-centered teaching programs, and the general formation is important for them, but they do not choose their subjects from the past like the perennialism. '3Rs - **r**eading, w**r**iting, a**r**ithmetic' courses in the general formation of the essentialism curriculum can be considered an indicator of this understanding. Ornstein and Hunkins emphasize that competitive attitude prevails in the fundamental trend, as in perennialism. Accordingly, education based on essentialism is perfectionist and results-oriented. According to this trend, the school is not a play center, but an educational institution. Dealing with a child's social and psychological problems is a waste of time. The main thing is the cognitive development of the student, and the student has to demonstrate the high standards expected of him/her by modeling the expert teacher of his/her subject.

Sönmez (2008, 87-90) expresses the qualities of the teaching environment based on realist philosophy as follows: According to realism, the truth is matter. Human is also a natural and social being. He/she uses his/her mind to get to the truth. The most effective way of reasoning is induction. Thus, it should be seen that the main emphasis of the realist curriculum is the reason. The reason he/she prefers induction as a method is that he/she thinks that it is an effective way to reach truth-matter that is classified, divided into disciplines, and organized. Another emphasis of the realist curriculum at this point is the understanding of the discipline. The disciplines of the truth, each of which is organized with units in its own right, should be transferred to the student's empty mind by straight-up and rhetorical methods. Observation-experiment techniques should be supported by research. The content of course should be determined by subject area experts according to the realist curriculum. That is why experts and scientists have come to absolute, precise, universal knowledge in universities with their research-observation-experiments on reality. However, since the student's mind is empty, he/she is likely to use his/her mind for useless trivia. That's why learning and teaching is hard work. It requires a high level of discipline. The student should be ensured not to object to school rules. This curriculum is subject-centered just like the

idealistic curriculum. However, apart from the idealistic teaching program, it does not only give space-centric design and correlation design, but also discipline design and wide-area design. In the subject-centric model, the student is a passive recipient. However, in disciplinary design, the student must be active with experiment, observation, and research. In other words, while it is sufficient for the student to see and understand in the subject-oriented understanding, he/she is expected to transfer and use in the discipline design. Furthermore, the intertwining of subjects in correlation design contradicts the realist teaching program's understanding of organized disciplines.

3.2. Innovative Trends

In this section, the trends of progressivism and reconstructionism, which are mainly shaped by pragmatic philosophy, and the educational programs influenced by these trends are presented, the explanations on pragmatic philosophy are given first.

According to Akarsu (1998, 151), action in pragmatic philosophy is superior in principle to knowledge and thought. Pragmatism is the direction of thought that emerged in America and England in the 19th century and early 20th centuries. In this understanding, what is useful to life is good and leads it forward. Veysel (2008, 93) talks about Heraclitus' understanding of change, the relative knowledge of sophists, especially Protagoras, who accepts 'human as the measure of everything', A. Comte, which suggests the understanding that the human mind can dominate nature, and F. Bacon, who argues that this dominance will only take place through scientific methods and therefore by induction, though Dewey is thought to be the most important name in pragmatism.

Aytaç (2006, 107) expresses the words about Dewey and his views; According to Dewey, education is a practiced philosophy. In this process, the thought arises from the life that brings with it an active life. For this reason, young people only learn when they are active. Dewey derives the principle of 'learning by doing' from this idea. In the educational environment, the child should stand at the center of the organization, the school business, with all the details around it, such as the sun in the sun-centric universe. This means in practice that complete elimination of the old school system along with school desks. Shifting learning to laboratories, libraries, playgrounds, workshops, and even kitchens is needed.

Dewey (2007, 21) made the following statements regarding the reason for these thoughts. The rise of the new understanding of education, which is mentioned as progressive schools, is actually an expression of discontent with traditional education. That is why the traditional order is based on the push from above and outside. Young people are expected to reach the

capacity of adults. However, the gap is so great that it is not possible for young people who are moving slowly to travel this distance. However, according to Dewey (2007, 111), what is needed is a pure and simple education. This will only be possible by centering on the philosophy of experience.

Dewey (2007, 75-76) expresses his views that are contrary to tradition with his explanations of the nature of freedom; There is only one freedom that will not lose its importance; freedom of thought. This cannot be considered separate from freedom of action. Practices based on the fact that students sit in fixed desks, in military seating patterns, limit not only mobility but also mental and moral freedom. Dewey harshly criticizes the traditional views, saying 'We must get rid of this straitjacket and shackle chain practices'.

Veysel (2008, 96-103) expresses the basic characteristics of programs based on pragmatic philosophy as follows; the real in the pragmatic curriculum is 'change'. A person is a cultural and social being who chooses the useful throughout his life. Education is the process of creating desired behavioral changes through experiences. Knowledge is formed later by the lives that a person experiences as a result of interaction with their natural and social environment. In the pragmatic curriculum, subjects should be chosen from life, theory and practice should be combined. Theory in planning, practice in courses should be a priority. It is important to use the scientific method, trial, and error. In this type of curriculum, the student should do it, the teacher should be a guide. It should be noted that the educational environment is democratic and does not use punishment. Learner-centered programs are shaped by a pragmatic philosophy of education. Instructional design can be considered as activity-based, social processes and experiences-based, functional and technological approaches.

3.2.1. Progressivism Trend and Teaching Programs Influenced by It

Sağ (2003, 16) states that progressivism is called a progressive trend because it stands against a constant and fundamental view that does not include innovation and creativity, and accepts social change and says "the learner must adapt to it."

Sönmez (2008, 92-96) expresses progressivism as the application of pragmatic philosophy to education and explains the basic characteristics of the trend as follows; Education should be open to constant change. Because it is life itself, and life is constantly changing. The professions and problems in life should all be moved to the learning environment. Course topics should be used as tools that will expand the perspectives of learners and help them dominate nature and ensure that they become competent, capable, and efficient members of society. The learner must be taken to the

center. The character education should be taken care of, so collaborative work should be based on it. Attention should be paid to his/her nature and special personality; his/her hidden abilities should be developed. His/her thinking should be developed, and in order to do so, he/she should be asked to solve problems taken from life, so that the student will have the opportunity to test his/her own hypotheses. It must be ensured that student reveals a useful work for a tangible, visible life. A democratic environment in which student is encouraged and there is no punishment is essential. In evaluation processes, the ability to solve natural problems that he/she encounters by using scientific methods should be audited. This, in turn, will be an assessment that gives weight to the process.

Ornstein and Hunkins (2008, 47-51) stated that the progressivism movement was divided into the following groups; 1) Child-centered, 2) Activity-centered, 3) Humanist (creative), 4) Radical (Neo-Freudian). The progressivism movement based on child-centered and activity-centered understanding weakened by the advent of essentialism in the 1940s-50s, but in the ongoing process it approached existentialism and was known by Humanist and Radical movements which Ornstein and Hunkins expressed the last two groups as new progressivist. Progressivists and new progressivists also reject lower-level cognitive skills, such as memorization, counting, sorting, and so on, as well as, reject textbook dominance. They prefer group learning to individual, competitive learning. They focus more on the learner than on the subject, and on experience than on verbal and numerical skills. The progressive group unites in traditional criticism at the following points; 1) the authority of the teacher, 2) commitment to textbooks, 3) constant memorization of knowledge and repeat with exercises, 4) failure of static purposes and materials to take into account the changing world, 5) the use of punishment as a method of discipline, 6) education that is completely disconnected from individual experiences and social realities. It can be considered that new progressivists take the student to the center, unlike progressivists who take the learner to the center. The basic thoughts of this group can be summarized as follows; 1) individual teaching should be fundamental (independent studies, special projects, etc.) 2) students should have new learning options that will be shaped according to their interests (substance abuse, intercultural relations, urban problems, etc.) 3) alternative education opportunities should be offered (open classes, short-term courses, etc.) 4) education should be moved outside the school walls 5) standards in admission to universities and other schools and in the general course should be stretched.

Ornstein and Hunkins (2008, 48-50) state that humanistic and radical trends arose in the 1960-70s in response to the substantive emphasis on the subject matter and cognitive learning by essentialism. Accordingly, harsh discipline in school makes students passive and obedient. In the book

'Crisis in the Classroom', Silberman, who defends humanism, mentions that he offers students a completely free environment in the first level and free studies in the second level surrounded by independent studies, social environment, and experience. In this sense, it is thought that the humanistic curriculum embodied in concepts such as happiness, aesthetics, spirituality, compassion, empathy can be expressed with the need for self-realization and the understanding of freedom at the center. On the other hand, Ornstein and Hunkins criticize the humanistic curriculum for neglecting intellectual development, determining achievements based on subjective criteria, and therefore lacking a scientific basis.

Illich is one of the most important voices of the extremists, who call the students prisoners and teachers guards. Illich (2006, 7) argues that contemporary society generates a continuous institutionalization and specialization, classifying and subordinating individuals, also schools are tools of this process, and thus he argues the idea of cleansing society from schools. According to him, deschooling is a movement that will liberate humanity. Even work, leisure, politics, urban, and family life are an education in their own right while working on their organization is more meaningful than living with schools that monopolize the distribution of opportunities, rather than giving individuals equal chances.

3.2.2. Reconstructionism Trend and Teaching Programs Influenced by It

Tezcan (1981, via Sağ, 2003, 16) expresses the reconstructionism understanding as follows; Educators should teach children a detailed program of social reform that handles everything to rebuild society. Thus, education will create a new social order. The new society will be a true democracy in which the basic institutions and resources are controlled by society.

Ornstein and Hunkins (2008, 51-55) stated that the new structuring movement was shaped by socialist utopian ideas in the 19th-20th centuries. This group criticizes the progressivists for neglecting social problems and serving the dominant understanding. According to the new configurators, education is not only the right of certain classes, but should also center on the community, not the person, and the trend order requires social change. Internationalists in this group begin to approach global problems more sensitively as part of the social order. If we follow the USA historically, although it has been relatively isolated, it is now seen that its high power and dominance force it to notice and take into account other nations and cultures. How much more tolerant can it be that it has only four percent of the world's population and thirty-eight percent of total income? Education needs to be conceptualized in a way that enables the masses to embrace social change, equality of opportunity, and true democracy.

Sönmez (2008, 103-107) describes this trend as a continuation of progressivism. According to Özden (2006, 505), the argument that the mind can explain everything and turn it into simple formulas has been replaced by the understanding that reality is complex, and disorder in the universe is order. This is a new epistemology that develops in response to positivist rationale. It is postpositivism. In such an understanding, students will be able to choose their true among the truth, which can also be thought of as the reproduction of the existing and a silent acceptance of different truths rather than the construction of new truths. This is what shapes the individual side of the reconstructivist understanding. In this sense, the emphasis of new reconstructivism on the construction of subjective meaning is graying. Similarly, according to Benton and Craib (2008, 215), this trend is an expression of opposition to enlightenment, rationality, and science, representing oppression and hierarchy. On the one hand, there are science, knowledge, rationality, presence, identity, hierarchy, domination, white European men, on the other hand, deformity, absence, difference, women, and minorities. In different words, the praise of differences in this movement, as well as, multiculturalism and political relativity are dominant. But the point that is thought-provoking here is the problem of whether following every difference with an aesthetic course will take society forward; This idea is expressed by Benton and Craib's criticism of the German national socialist culture and the attitudes of societies that treat women as second-class citizens, an understanding that cannot go beyond thinking that it has made them different.

On the other hand, Sönmez (2008, 103, 132) emphasizes the social dimension of reconstructionism from an optimistic point of view. According to this, modernism and positivist approaches have not been able to make people happy with reason and scientific knowledge. Humanity is in a conflict of values today. It'll either disappear or recreate itself. For reconstruction, it is required to hold on to unified and consistent values, to gather races, nations, colors, breeds, beliefs in an international way, and to establish the state of the world. It's the democracy that's going to do it.

Sönmez (2008, 104-106) expresses that the reconstructionism movement feeds on these ideas and explains its repercussions on teaching programs. According to this, humanity is a whole with knowledge and sense. Harmony, love, hatred, conflict are human emotions and cannot be ignored. Education is not only life, it is also the future. Future-related issues should be moved to the classroom. Consistent cultural values (love, democracy, cooperation, world civilization, brotherhood) should be included. Since a person is expected to change and rebuild society, facts and events concerning nature and society should be moved to the classroom and critical thinking should be provided. The main responsibility for changing society belongs to the school, and it is possible to correct the

community starting with the individual. A democratic education should be based on scientific methods, experiments, observations, activities i.e. practices, where a student is active and the teacher is just a guide.

Demirel (2006, 25) also treats reconstructionism as a continuation of progressivism shaped by pragmatic philosophy. He states that the purpose of education in this movement is seen as the reorganization of society and the establishment of real democracy. In other words, education is a tool of social reform, responsibility should be carried out through schools. Demirel also emphasizes that this trend will be reflected in teaching programs with the findings of behavioral sciences. It is believed that this point contradicts both the democratic learning environment (2008, 104-106) and the movement's attempt to capture true democracy, as stated by Sönmez.

4. Philosophy Of Program Development In Turkey

Türk (2002, 163-165) states that 'education' dominated ancient Turkish societies until the 10th century. Accordingly, it must be the main purpose for new generations to learn to place the high virtues, dedication, wisdom, heroism, and discipline in their daily life. The duty of women to teach children traditions, the transmitting of cultural values, and history by the elderly, the activities of men such as production and military were given through natural education. The same philosophy was observed in Turkish states after the acceptance of Islam. Turkish tradition and religious education, which encourages the education of humanity and virtue, is at the center.

Güven (2003, 2-12) mentions that during the Ottoman establishment and ascension period, the state was strengthened due to the seriousness and intensity of efforts in the field of education, science, and culture. The backward movement, on the other hand, is associated with the fact that they did not notice the Renaissance and Reform movements, and moreover, they stayed away from them with religious pressures, preventing the free development of thoughts. During this period, the Ottoman empire, by isolating itself more, realized that it could not cope with other countries, and began to question and compensate for its shortcomings by focusing on what it could do. At this point, it turned to the west as a solution. The period when westernization efforts began symbolically is known as Tanzimat (1839). In this sense, the Ottoman effort to westernize can be associated with a pragmatic philosophy. Because this effort has rather shown itself at the points where the state is insufficient and there were dead ends in the system. Güven (12-125) examines the reflection of this westernization movement in the teaching system under the following five basic headings:

1. The opening of military schools in the Western-style; The Ottoman Empire approached the European world because of its military requirements before thought and literature. It was considered more important to train military surgeons for war, to train engineers to build road – buildings, to train financiers to collect regular taxes. It can be stated that these schools are based on the essentialism trend with the acceptance of students according to merit, the attitude of choosing the best, the class order in terms of the functioning of teaching, the use of blackboard, the consolidation of continuous practice and the understanding based on memorization.

2. The change of the official school system; With the "Maarifi Umumiye (National Education) Regulations" in 1869, education was made compulsory in the first level, schools were divided into levels and degrees in general education, some measures were taken to increase teachers' knowledge and develop economically, both the central organization and places outside the center were organized, information about procedures that would contribute to the personal development of students was provided, and it was decided to receive a certain amount of money from the public as a general education allowance. It can be considered that this movement is the product of a progressive understanding in a general sense.

3. Sending students abroad and applying the thoughts of statesmen educated in the West; In this process, the Ottoman Empire sent many students and statesmen to Europe. In general, it is said that those who receive training and return go on the path of transfer and imitation, rather than synthesis. But these intellectuals, on the one hand, taught, and on the other hand, made original contributions. Almost all of them have expressed their views on the secularization of education, the separation of religion and education, many of them have written their own books, tried to find the value of scientific terms in the mother tongue, and contributed to the development of an indigenous Ottoman understanding of science. This movement can also be considered as the product of a progressive understanding.

4. Foreign schools; Due to the cosmopolitan nature of the Ottoman Empire, it allowed the people who could not receive enough education to organize their own education. Foreign schools have come to life because of this logic. It is an undeniable fact that these schools played an important role in the rise of the Ottoman education level. Numerically, they have served many more students than those who studied in Ottoman schools. Foreign schools have become an attraction center with their advanced programs including splendid and planned buildings, crowded and competent teaching staff, foreign language, gymnastics, and so on. Studying in these schools, which almost literally apply the western understanding of education, has been seen as a way to achieve status over time. These schools have not

succeeded in inviting Christianity, which is their main purpose, but their educational impact is high. This understanding can also be considered within the scope of the progressivism understanding.

5. The coming of the printing press into Ottoman society; The printing press entered the Ottoman empire late due to conservative looks and could not be used very effectively due to respect, aesthetic understanding, and prejudice-arrogance. As a matter of fact, even after the coming of the printing press, Ottomans chose to do the duplication work by hand because of his respect for the Ottoman book, pen, paper, Qur'an and preferred the handwriting works to printed works because they were beautiful and glamorous, and they could not be proud to have received anything from minorities. Despite this, the fact that the first books were selected and printed from the field of positive and social sciences, not religious, accelerated the entry of new ideas into the Ottomans. This is another important movement in progressivism understanding.

As a result, it can be stated that the slow progress of Western education gradually detracted the Ottoman understanding of education and curricula from the pressure of dogmatism, the abandonment of strict punishments and the approach to the student began, this understanding and values continued until the Republic with modern scientific and educational institutions.

Gözütok (2003) states that the real program development efforts in Turkey began with the proclamation of the Republic and considers the process as follows;

- The law on the unification of education, issued in 1924, gathered all educational institutions within the Ministry of National Education. From this point on, program development work in Turkey began mainly in the field of primary education and then continued at the level of secondary education. The program, which was prepared under the name "1924 elementary school curriculum program", was organized by considering the understanding, needs, and conditions of education and training of the newly established Republic of Turkey. The program, which can be considered a project, remained in practice for two years.

- "1926 elementary school curriculum program "remained in practice for ten years, and in 1930, "Village Schools, curriculum program" was prepared to educate village children according to the conditions and needs of the village, with the principles of the city schools' curriculum. Secularism, the return to the west, and positive sciences were the essence of this change in educational programs.

- In 1936, the previous program was revised and developed in accordance with the needs of the day. In this program, the principles of "National Education" were included in the first chapter entitled "Primary

School goals". Later, the focus was on "principles of primary school education and training". This program remained in force until 1948. During this period, the basic philosophy of the programs was to improve the adoption of the republican regime and the virtues and blessings of this regime for new generations. It is worth noting that the programs have a national feature first of all (MEB; 1990, s.32).

Sönmez (1991, via Gözütok, 2003) also expresses that the economic, political and social structure of Turkish society, the influence of the western world, developments in science and technique, the views of foreign experts, and Atatürk's understanding of education have shaped the understanding of education during the republican era.

- Since the beginning of the 1939-1940 academic year, the "Village Primary School Program Project" has been implemented. In the program, Turkish, arithmetic, geometry, history, geography, country knowledge, and painting courses are almost identical to primary schools of cities. However, the contents of Life Science, Nature Science, Business and Agriculture courses were made suitable for life in the village. The idea of training the new teacher to implement this program revealed the village institutes. Village institutes were closed in 1954 with ideological concerns.

Karagöz (1965, via Gözütok, 2003) states that the 1948 curriculum considers the teaching of knowledge as the basis and this situation leads to the creation of a dense content by increasing the number of subjects and units that need to be addressed for each course. He emphasizes that it is not possible to eliminate the difficulties caused by this situation in applications.

- The 1962 draft program was also created based on these problems, examined by the Turkish education board, implemented for a period of 5 years, provided that it was tested and developed in some schools. Education and training in the draft were saved from adhering to a single textbook, and the draft was made easier for teachers and students to access all kinds of resources and conduct research and investigation. The draft program handled the work of evaluation as a continuous action. Draft, instead of evaluating students only in the middle and end of the year; unit and annual studies were reviewed on a daily, weekly, monthly basis, and an assessment was made at the end of each event to determine the extent to which the objectives had been achieved.

- The application of the "1962 Program Draft" was accepted as the "1968 Elementary School Program". Although the 1968 program was important for the teaching of units and subjects to bring innovations such as preparation, planning, unit and cluster work, research, review, self-learning, discussion, and evaluation to the education system, it failed due

to the fact that the results of the application were not adequately evaluated, rearranged and modernized.

In the 1980s, program development again gained weight. Some research has been done to ensure continuity and standardization in program development.

- In 1990, it was found appropriate to pass courses and apply the credit system. During this period, consistency and standardization in program development were tried to ensure, but these efforts failed. The system was accepted to allow the student to be guided according to his or her own interests, desires, and skills, to be trained in certain fields, and to evaluate his success, not his failure. The Course Passing and Credit System, which centered the student, has been removed from the application with decisions that are not based on an evaluation by politicians for reasons that are widely implemented without pilot applications, are not adequately understood by educators and parents, and the "Passing Grade Level" system has gradually come into force since the 1995-1996 academic year.

- In 1994, Curriculum Laboratory Schools (CLS) were developed to achieve the goals of the National Education Development Project. Özdemir (2007, 102-103) considers CLS's, which were implemented with the support of the World Bank, as an initiative to create a culture of management in education. According to him, since the 1980s, our education system has become more open to external influences due to the impact of globalization. This is why we are turning to flexible teaching programs that can react quickly to the demands of the flexible business-market. As a natural consequence of this, the system is tried to be made flexible enough to adapt more quickly to the political, economic, and cultural changes surrounding it.

Sönmez (1991 via Gözütok 2003) states that the education system that was employed during the Republican period was generally based on pragmatic philosophy and the trend of progressivism, which is an extension of it. But while the trend of progressivism is theoretically advocated in constitutions, laws, and government programs, he emphasizes that practices are not in this direction. According to him, not progressivism, but essentialism and perennialism were based and applied in general in every grade school. In other words, teachers and subjects are central, not students in the TME system; People who memorize what the teacher says, what the books write, who argue that what they know is precisely true, who are timid, copycat, dictatorial, disconnected from life, equipped with a scholastic thought have been trained instead of persons who use the scientific method, think freely and flexibly, are democratic, secular, with social justice, values, love, and respect. In addition, while the system theoretically advocates training each person in accordance

with their interests, abilities, and desires, in practice these characteristics were usually not taken into account, and on the contrary, a competitive approach was employed to work. In short, during the Republican period, the Turkish education system used the educational trends of essentialism and perennialism, organized according to pragmatism on theory, but based on realist and idealist philosophies in practice.

Taş (2006, 412-413) states that new perspectives arising from advances in science and technology have a direct impact on the educational philosophies of countries. He stresses that in recent years, The United States, Britain, Canada, Australia, Austria, Israel, and New Zealand have restructured their education and training programs in line with the constructivist understanding, and there has been an effort to change in this direction in Turkey in recent years. This is the constructivist approach based on the process of change. Although the constructivist approach is an effective method of bringing up new generations that are intellectual and actually constructive and strong in terms of philosophy, the main thing is the need to apply this theory consciously. As a matter of fact, most of the teachers who are the practitioners of the new programs and who are responsible have little knowledge of this new approach, and most of them are completely closed to learning. At this point, no matter how strong the link between education and philosophy, the overlap of practices with the philosophical approach is seen as an important problem that needs to be reviewed.

4. Conclusion and Discussion

Just as societies need intellectuals to constantly analyze themselves and produce ideologies to move forward, programs also need a philosophy that constantly analyzes and refreshes themselves to help educate new learner generations. A program without philosophy is doomed to unravel like a society without ideology. But the point that needs to be sensitive and has also been observed in all societies throughout history is the tendency to use education programs in politics. The tendency of societies to raise bankers, engineers, lawyers with the concern for superiority and dominance, and their desire to suppress intellectual movements with their religious concerns are no more important than the right of moral, qualified, free, constructive new generations to grow up and live.

The more evident the benefits of the generation that Village Institutes have raised with a progressive understanding are, the more it is clear that individuals who grow up self-directed within the philosophy of the credit system, which is an inadequate imitation of the humanist understanding, or within the philosophy of the essentialist curriculum laboratory schools (CLS) established with a business mentality, cannot be beneficial to the society.

The fate of education, dominated by a purely quantitative paradigm, is shaped by individuals who have no answers except '0, 1 – right, wrong', who try to measure everything, and constantly reproduced inequalities. Although such an understanding seems to provide a quantitative increase in the well-being of societies, in the long term it can cause irreparable harm to humanity by qualitative shallowness in the individual.

For this purpose, educational programs should not focus on a single philosophy, but also support character and moral development, as well as intellectual development for both the individual and society. Local-cultural and universal values should be taken care of, these values should not be melted down in postmodern understanding. At any stage of the education program or in any course; The curriculum must be based on a permanent understanding if it helps the student to question a value from a classic work for his life. An essentialist point of view should be used if it is helpful in learning any subject, for example, the integral topic of mathematics. An idealistic attitude should be used if it is necessary to teach the transfer of values from generation to generation. In order for people to grow up in life, who can touch life, change and transform it, the progressive trend must be put into the curriculum. However, power struggles or inter-community competition must be prevented from diffusing into education and polluting new generations.

REFERENCES

Akarsu, Bedia. 1998. **Felsefe Terimleri Sözlüğü.** Ankara: İnkılapYayıncılık.

Aytaç, Kemal. 2006. **Çağdaş Eğitim Akımları**. Ankara: Mevsimsiz Yayınları.

Benton, Ted, Ian Craib. 2008. **Sosyal Bilim Felsefesi.** Çev. Ümit Tatlıcan, Berivan Binay. Bursa: Sentez Yayınları

Büyükdüvenci, Sabri. [10.03.2010]. **Eğitim Felsefesi** dergiler.ankara.edu.tr/dergiler/40/512/6313.pdf.

Çetin, Hasibe. [10.03.2010]. **Eğitimden İdealist Beklentiler Pragmatist Yaklaşımlar**. dergiler.ankara.edu.tr/dergiler/40/491/5783.pdf

Demirel, Özcan. 2005. **Eğitim Sözlüğü.** Ankara: Cantekin Matbaacılık.

_____. 2006. **Eğitimde Program Geliştirme.** Ankara: Pegema Yayınları.

Dewey, John. 2007. **Deneyim ve Eğitim**. çev. Sinan Akıllı. Ankara: Odtü Yayıncılık.

Doll, Ronald. C. 1992. **Curriculum Improvement Decision Making and Process.**. 8.th ed. Boston: Allyn and Bacon Publishing.

Erden, Münire. 2005. **Öğretmenlik Mesleğine Giriş.** İstanbul: Epsilon Yayıncılık.

_____. 2009. **Eğitim Bilimlerine Giriş.** Ankara: Arkadaş Yayınları.

Gözütok, Dilek, F. Türkiyede Program Geliştirme Çalışmaları. Milli Eğitim Dergisi. http://yayim.meb.gov.tr/dergiler/160/gozutok.htm

Gürsakal, Nemci. 2007. **Sosyal Bilimler Karmaşıklık ve Kaos.** Ankara: Nobel Yayınevi

Güven, İsmail. 2003. **Osmanlı Eğitiminin Batılılaşma Evreleri.** Ankara: Naturel Yayınları.

Illich, Ivan. 2006. **Okulsuz Toplum.** çev. Celal Öner. İstanbul: Oda Yayınları.

Kıssack, Michael. 2002. Hermeneutik ve Eğitim: İnsan Bilimleri Öğretmenleri İçin Düşünceler. AnkaraÜniversitesi Eğitim Fakültesi Dergisi. c.35. s.1-2: 171-182.

Ornstein, Allan. C., Francis, P. H. 2008. **Curriculum: Foundations, Principles and Issues.** Boston: Prentice Hall.

Özdemir, Murat. 2007. Eğitimde Yeniden Yapılanma: Müfredat Laboratuvar Okulları. Mersin Üniversitesi Eğitim Fakültesi Dergisi. c.3. s.1:102-116.

Özden, Yüksel. 2006. 21. Yüzyılda Eğitimi Yeniden Canlandırma Çabaları. **Türkiye' de Eğitim Bilimleri: Bir Bilanço Denemesi.** ed. Muhsin Hesapçıoğlu, Alpaslan Durmuş. 1. bs. Ankara: Nobel Yayın Dağıtım: 504-521.

Politzer, Georges. 2008. **Felsefenin Başlangıç İlkeleri.** çev. Hasan İlhan. Ankara: Alter Yayıncılık.

Sağ, Vahap. 2003. Toplumsal Değişim ve Eğitim Üzerine. C.Ü Sosyal Bilimler Dergisi. c.27. s.1:11-25

Sönmez, Veysel. 2008. **Eğitim Felsefesi.** Ankara: Anı Yayıncılık.

Taş, Akbulut M. 2006. Newton ve Kuantum Felsefelerinin Eğitim Programlarına Etkisi. Felsefe ve Sosyal Bilimler. **Felsefe ve Sosyal Bilimler Sempozyumu Bildirileri.** Muğla Üniversitesi: 405-413.

Türk, Ercan. 2002. **Türk Eğitim Sistemi ve Yönetimi.** Ankara: Nobel Yayıncılık.

Yıldırım, Cemal. 1997. **Bilim Tarihi.** İstanbul: Remzi Kitabevi.

Chapter 3

SELF-EFFICACY PERCEPTIONS OF MUSIC TEACHER CANDIDATES TOWARDS INDIVIDUAL INSTRUMENT TEACHING

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Introduction

'Self-efficacy' term was defined as a part of social-cognitive theory by Albert Bandura. According to Bandura (1997), self-efficacy is the belief in one's capabilities to deal with different situations and to perform a certain task required to produce given attainments and this belief is dependent on individual's belief in his abilities.

Self-efficacy is not a function of individuals' skills, but a product of their judgment of using their skills; In the process of education, it is stated that teachers are used to estimate their behavior and responsibilities and to explain their individual differences in activities. According to Garvis (2013, p. 86) "self-efficacy is developed through the interaction between an individual's judgement of their teaching ability to perform a task and their perception of the actions required to perform that task successfully".

In researches, it has been revealed that self-efficacy beliefs affect the practices of teachers in the classroom and that a teacher who has a strong self-efficacy belief behaves more enthusiastic and more enthusiastic about teaching (Gibson ve Dembo, 1984; Schunk, 1985; Woolfolk ve Hoy,1990; cited by Saracaloğlu, Karasakaloğlu and Gencel, 2010). Fritz, Miller, Kreutzer and MacPhee (1995) stated that a teacher with a high self-efficacy belief is more responsive to the needs of their students and more likely to create a warm classroom environment (cited in Bıkmaz, 2005). Also, it is stated that teachers who have a strong competency satisfaction tend to have a strong planning, organization and effort and are trying to teach better when they have a high level of competence (Milner and Woolfolk, 2003).

Tschannen-Moran, Woolfolk Hoy and Hoy (1998) defined teacher efficacy as "a teacher's judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated"

In education, teachers must have qualifications in some areas so that students can reach the desired level. Kurtuldu and Çiftçi (2010, p. 62) defines the teaching qualification as the belief that a teacher can achieve success even in children who have difficulty in learning. Tepe (2010, p. 5) defines teaching "competence as a whole of knowledge, skills, attitudes and personality traits necessary for effective performance in different teaching environments".

Teaching performance affects teacher self-efficacy and performance eventually becomes a source of self-efficacy. At the same time, teachers' beliefs about the components of good teaching also affect their self-efficacy (Tschannen-Moran et al., 1998, pp. 202-248).

Instrument teaching can be defined as a process of teaching, starting, directing, facilitating, performing and supervising instrument for a certain purpose based on the definition of music teaching. The aim of the teacher in teaching individual instruments is to organize the learning process by using teaching methods and techniques and to ensure that the desired behaviour is gained by the students.

Music teacher education is the process of teaching individuals who are directed or directed to this profession in the field of music. In general, this process focuses on the competences required by the music teaching profession. Instrument education is one of the important dimensions of music education. In music education programs within the faculties of education, instrument training covers eight semesters in music teacher training programs and is one of the most important disciplines in shaping music teacher.

In our country, vocational instrument training is provided in different institutions, and the trainers who give education in these institutions have different educational processes and they can develop different approaches, goals and perspectives while giving education to their students. These institutions can be listed as State Conservatories, Education Faculties, Fine Arts Education Department, Music Education Departments, Fine Arts Faculties, Music Departments and Fine Arts and Sports High Schools. In State Conservatory, instrument training is started at primary level and this process continues until university education. These schools are one of the leading institutions providing professional instrument training. Faculties of Education Music Departments are educational institutions that provide musical education at university level and aim to train music teachers. In these schools, instrument education is given for 4 years.

Although it is imperative that learning is equipped with the right knowledge and skills in dealing with fencing, the transfer of these knowledge and skills to the student for individual training it is often not enough. At this stage, the ability of students to improve the learning capacity as well as the development of the teaching methods that carry the big improvement (Çilden, 2003).

The researches which was conducted by Ataman (2010) and Koca (2013) show that teacher candidates do not have enough knowledge about teaching individual instruments, they want to have information about how to teach their instruments not only to play in individual instrument classes (Umuzdaş, 2012).

According to Afacan (2008), there is a relationship between teachers' self-efficacy in music teaching and student achievement; who are self-confident, aware of their talents, who believe that they can succeed, the

students will be more successful in trying to try methods, learning and application will increase. It is thought that teachers with high self-efficacy beliefs can organize an effective, efficient teaching process and enable students to reach the desired level.

In the literature search, no scale and study has been found for the determination of self-efficacy in individual instrument teaching for music teachers and pre-service teachers. For this purpose, research has been carried out to determine the self-efficacy beliefs of music teacher candidates for individual instrument teaching.

Method

This study was a descriptive study. The study made use of a general screening model. In this context, the following questions were tried to be answered in the study:

1. What are the pre-service teachers' self-efficacy levels for teaching individual instruments?

2. Do the self-efficacy levels of prospective teachers show a significant difference

- according to gender?
- according to type of high school graduated from?
- according to individual instruments?

Participants

The participants in this study were 167 pre-service music teachers who enrolled in different Universities in spring 2017. This study has employed "criterion sampling method", one of the purposive sampling methods. According to Patton, (1990) "the logic and power of purposeful sampling lies in selecting in formation-rich cases for study in depth" (p.169). Demographic information about the participants is provided in Table 1.

Table 1. *Demographic characteristics of the participants*

		f	%
Gender	Female	104	62.3
	Male	63	37.7
Type of high school graduated from	Fine Arts	145	86.8
	General high school	22	13.2
Individual Instrument	Violin	59	35.3
	Viola	17	10.2
	Cello	29	17.4
	Flute	22	13.2
	Bağlama (traditional)	20	12.0
	Guitar	14	8.4
	Ud (traditional)	6	3.6
Total		167	100

Data Collection

Individual Instrument Teaching Self-efficacy Scale

This scale was developed by Koca (2014) to measure the self-efficacy beliefs of music teachers and prospective music teacher towards individual instrument teaching. The scale consists of 21 items (and is based on a 5-point Likert scale anchored from 1 (Disagree) to 5 (Totally Agree). The scale was a single dimension scale. The Cronbach's Alpha internal consistency of the scale was .97.

Data Analysis

In this study, prospective teachers' individual instrument teaching self-efficacy beliefs was determined by using frequency (f), percent (%), arithmetic mean and standard deviation, t test and Anova. SPSS 20.0 statistical package program was used in analyzing the data. "Independent groups t- test" was used to determine whether the responses of prospective teachers to scale items varied according to (a) gender and high school type variables. On the other hand, One Way Analysis of Variance (ANOVA) was used to determine whether they varied according to individual instrument type variable.

The relevant categories of measure was: "Strongly disagree (1)", "Disagree (2)", "Uncertain (3)", "Agree (4)", "Strongly agree (5)". The options and limits of the scale were as follows: Strongly Disagree (1.00-1.80), Disagree (1.81-2.60), Uncertain (2.61-3.40), Agree (3.41-4.20), Strongly Agree (4.21-5.00). Accordingly, negative question items (1,4,10,13,14) were scored inversely.

Results

Table 2. The results of the prospective music teachers' individual instrument teaching self-efficacy beliefs

Items (n= 167)	Strongly Agree f-%	Agree f- %	Uncertain f-%	Disagree f- %	Strongly Disagree f- %	$\overline{X}$
1. I think I have the competence to teach my individual instrument correctly.	25/15.0	113/67.7	22/13.2	6/3.6	1/0.6	3.93
2. I think I can bring basic knowledge about my instrument to my students	6/3.6	37/22.2	36/21.6	78/46.7	10/6.0	2.71
3. I don't trust myself enough to teach my individual instrument. (reverse coded).	28/16.8	108/64.7	27/16.2	2/1.2	2/1.2	3.95
4. I don't think I have the skills to teach instrument (reverse coded).	49/29.3	103/61.7	11/6.6	2/1.2	2/1.2	4.17

5. I think I will apply the teaching methods involved in individual instrument teaching as required	61/36.5	100/59.9	5/3.0	1/0.6	-	**4.32**
6. I am worried that I will use the etudes and musical pieces that I will use in teaching individual instrument.	3/1.8	18/10.8	29/17.4	98/58.7	19/11.4	2.33
7. I think I have knowledge in gaining basic behaviors in individual instrument teaching	19/11.4	128/76.6	10/6.0	9/5.4	1/0.6	3.93
8. I have the qualification to choose etudes to gain basic techniques	7/4.2	79/47.3	32/19.2	42/25.1	7/4.2	3.22
9. I have the ability to select the musical pieces for reinforcing the basic techniques	23/13.8	100/59.9	11/6.6	26/15.6	7/4.2	3.63
10. I don't feel sufficient about applying teaching methods in individual instrument teaching (reverse coded).	3/1.8	58/34.7	52/31.1	48/28.7	6/3.6	3.02
11. I can make technical exercises and gam exercises for my students	44/26.3	100/59.9	17/10.2	6/3.6	-	4.09
12. I can organize course content according to individual differences of students in individual instrument teaching	7/4.2	79/47.3	25/15.0	47/28.1	9/5.4	3.14
13. I do not believe that the education of my instrument in my profession is enough to teach in my professional life (reverse coded).	32/19.2	60/35.9	68/40.7	5/3.0	2/1.2	3.69
14. I do not think that I will be able to make applications for the difficulties that students may face in the instrument teaching process (reverse coded).	42/25.1	87/52.1	35/21.0	2/1.2	1/0.6	4.00
15. I can motivate my students to work regularly.	60/35.9	100/59.9	4/2.4	3/1.8	-	4.30
16. I think I have information about the resources I can use in teaching individual instrument	31/18.6	106/63.5	27/16.2	2/1.2	1/0.6	3.98
17. I can make the pupil feel joy from his/her individual instrument	60/35.9	85/50.9	22/13.2	-	-	4.23
18. I can evaluate my students' musical performances correctly in exams	55/32.9	95/56.9	14/8.4	2/1.2	1/0.6	4.20
19. I think I can motivate my students in individual instrument course.	23/13.8	95/56.9	47/28.1	-	2/1.2	3.82
20. I can help my students overcome performance anxiety.	15/9.0	64/38.3	39/23.4	37/22.2	12/7.2	3.20
21. I can make the pupil aware what and how they should practice outside the course.	22/13.2	87/52.1	56/33.5	-	2/1.2	3.76

As it is seen in table 2, analysis of average scores of prospective music teachers revealed that the highest average which was obtained from the statement is "I think I will apply the teaching methods involved in individual instrument teaching as required" ($\overline{X}$ = 4.32/ I strongly agree).

Table 3.The result of arithmetic mean score of prospective music teachers' individual instrument teaching self-efficacy levels

	n	Min.	Max.	$\overline{X}$	sd
Arithmetic Mean	167	3.24	4.14	**3.70**	.178

When table 3 is examined, it is seen that the total number of arithmetical means of all music teacher candidates is 3.70. This value shows the "agree" option on the scale. According to these findings, it can be said that the levels of individual instrument teaching self-efficacy of music teacher candidates are generally high in general.

Table 4. T test result of prospective music teachers' according to genders.

Gender	n	$\overline{X}$	ss	sd	t	p
Female	104	3,73	,174	165	2,81	,005*
Male	63	3,65	,176			

*p<0.05

As table 4 demonstrates, the analysis results show that there is a significant difference according to genders (p<.05). Accordingly, it can be said that female students individual instrument teaching self- efficacy level ($\overline{X}$ = 3.73) was higher than male students ($\overline{X}$ = 3.65).

Table 5. T test result of prospective music teachers' according to high school graduated from

Type of high school graduated from	n	$\overline{X}$	ss	sd	t	p
Fine Arts	145	3,71	,182	165	1.546	,124
General high school	22	3,64	,144			

p>0.05

As table 5 demonstrates, the analysis results show that there is no significant difference according to high school types (p>.05).

Table 6. Result of one-way analysis of pre-service music teachers according to individual instrument

Variance source	Sum of Square	df	Mean Square	f	p
Between groups	.207	6	.035	1,089	.371
Within groups	5.081	160	.032		
Total	5.288	166			

p>0.05

As table 6 shows, statistically there is no significant difference between students' individual instrument teaching self- efficacy level and the variable of individual instrument [F (6-160) =1,089; p > 0.05].

Results and Discussion

As a result of the research, it was found that the teacher candidates' arithmetic means belonging to all items of individual instrument teaching self-efficacy scale were at the agreeing level with 3.70. The teacher's self-efficacy belief affects the quality of teaching, the methods and techniques used, the student's participation in learning, and the student's understanding of what is taught, and this determines the success of the students. Therefore, it is expected that pre-service teachers will have higher self-efficacy beliefs (Üredi and Üredi, 2006).

As a result of the study, it was observed that the pre-service teachers' self-efficacy levels for individual instrument teaching were high in certain factors. In the light of the data obtained from the research, the self-efficacy levels of music teacher candidates for teaching individual instrument are listed below:

The items with low self-efficacy levels:

- "I think I can bring basic knowledge about my instrument to my students" ($\overline{X}$ =2.71).

- "I do not think that I will be able to make applications for the difficulties that students may face in the instrument teaching process" (reverse coded) ($\overline{X}$ =4.00**)**

The obtained results are different to the results of another research conducted by Koca (2013b). In the related research, open-ended questions were asked to reflect the current situation of music teacher candidates on the planning, implementation and evaluation dimensions of instrument teaching. According to the results of the research, the majority of the teacher candidates stated that they could make applications to their students about the difficulties they might encounter.

Items in which teacher candidates express as uncertain:

● "I have the qualification to choose etudes to gain basic techniques"

● "I can organize course content according to individual differences of students in individual instrument teaching"

Performing regular exercises and exercises during the instrument training is a very important factor for instrument training process. In the individual instrument classes, each student's class is a class and since each student's ability to learn to play the instrument, his intelligence and physical competence cannot be the same, he has to take care of the students separately and look at this aspect (Çilden, 2001).

A good teacher should organize the training program according to the student by taking into account the differences of individual learning among students. It is important or even imperative to prepare learning / teaching situations with an individual approach, as each student's musical intelligence, perception, physical competencies, study disciplines and attitudes towards the instrument are different in individual instrument training courses (Çilden, 2006, p. 543).

● "I can help my students overcome performance anxiety".

Being a supportive, motivating and tolerant teacher, and loving his / her course, making the course interesting and disciplined are the important factors that increase the quality of instrument education.

The findings of the study revealed that there is a significant difference according to genders ($p<.05$). Accordingly, it can be said that female students self-efficacy levels for individual instrument teaching was higher than male students. Another finding of the study is that there is no statistically significant difference between pre-service teachers' self-efficacy levels for individual instrument teaching and the variables of type of high school graduated from and individual instruments' (see table 5 and 6).

The ability, capacity and ability to convey the basic technical and musical truths that will enable music teacher candidates to develop is an important condition that will help those students who may be future instrument educators to be competent in their instruments. However, "effective teacher is not only a teacher who knows how to teach or how to solve problems encountered during teaching, but also a teacher who knows which one he / she knows and when to implement it at the right time" (Şendurur, 2001, p.152). Therefore, the general aims of individual instrument teaching courses, as the name implies, include teaching methods and applications for individual instrument, will enable the candidates to be more prepared and effective in the teaching process. In the light of the research results, the following suggestions are presented:

Recommendations

At the undergraduate level, students take only one semester of individual instrument and instruction for instrument teaching. The fact that the instrument teaching course takes place in the curriculum in a more period, in parallel with the individual instrument lessons and in accordance with its purpose, may be useful in eliminating the information gap in technical subjects.

References

Afacan, Ş. (2008). Müzik öğretimi özyeterlilik ölçeği. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi (KEFAD)*, 9 (1), 1– 11.

Ataman, Ö. G. (2010). Müzik öğretmeni yetiştiren kurumlardaki bireysel çalgı (flüt) ve öğretimi dersine yönelik flüt öğretim program tasarısı. Marmara Üniversitesi Eğitim Bilimleri Enstitüsü, Yayınlanmamış Doktora Tezi, İstanbul.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.

Bıkmaz, F. H. (2005). Öz-yeterlik inançları. İçinde, Y. Kuzgun ve D. Deryakulu (Ed.). *Eğitimde bireysel farklılıklar*. Ankara: Nobel Yayıncılık.

Çilden, Ş. (2001). Bireysel çalgı eğitiminde temel ilkeler ve etkili faktörler, *Çağdaş Eğitim Dergisi*, 272, Ankara.

Çilden, Ş. (2003). Çalgı Eğitiminde Nitelik Sorunları, Cumhuriyetimizin 80. Yılında Müzik Sempozyumu İnönü Üniversitesi, Malatya, 30-31 Ekim 2003

Çilden, Ş. (2006). Müzik Öğretmeni Yetiştirme Sürecinde Çalgı Eğitiminin Nitelik Sorunlarının İrdelenmesi. *Ulusal Müzik Sempozyumu Bildirisi*, Pamukkale Üniversitesi.

Koca, Ş. (2013a). An investigation of music teaching self-efficacy levels of prospective preschool teachers. *Educational Research and Reviews*, 8 (12), 897-900.

Koca, Ş. (2013b). Examination of music teacher candidates' opinions on their individual instrument teaching competence. *Turkish Studies*, 8(8), p. 835-845

Koca, Ş. (2014). The Development of Individual Instrument Teaching Self-efficacy Scale. Proceedings of Müzed Regional Conference Music Culture &Education On The Silk Road.(pp. 480-184), İstanbul.

Fritz, J. J., Miller – Heyl, J., Kreutzer, J. C. & Macphee, D. (1995). Fostering personal teaching efficacy through staff development and classroom activities. *The Journal of Educational Research*, 88(4), 200 – 208.

Garvis, S. (2013). Beginning generalist teacher self-efficacy for music compared with math and English. *British Journal of Music Education, 30*(1), 85–101.

Gibson, S. & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology,* 76 (4), 569-582.

Kurtuldu, M.K. and Çiftçi, E. (2010). Müzik öğretmeni adaylarının mesleki öz yeterlik algılarının incelenmesi. *Yüzüncü Yıl Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*,19,60-73.

Milner H. R. & Woolfolk-Hoy A. (2003). Teacher self -efficacy retaining talented teachers: A case study of an African American teacher. *Teaching and Teacher Education*, 19, 203-276.

Patton, M.Q. (1990). *Qualitative evaluation and research methods*. (pp. 169-186), Beverly Hills, CA: Sage.

Saracaloğlu, A.S, Karasakaloğlu, N. and Gencel, İ. E. (2010). Türkçe öğretmenlerinin özyeterlik düzeylerinin çeşitli değişkenlere göre incelenmesi. *Electronic Journal of Social Sciences,*9 (33), 265-283.

Şendurur, Y. (2001). Keman eğitiminde etkili öğrenme - öğretme yöntemleri, *G.Ü. Gazi Eğitim Fakültesi Dergisi*, S: 21(3), p.145-155.

Tepe, S. (2010). *Müzik öğretmenliği programında bireysel çalgı eğitimi-gitar öğrencilerinin mesleki yeterlik algılarının değerlendirilmesi*. Marmara Üniversitesi Eğitim Bilimleri Enstitüsü, Yayınlanmamış Yüksek Lisans Tezi, İstanbul.

Tschannen-Moran, M., Woolfolk Hoy, A. and Hoy, W.K. (1998). Teacher efficacy: its meaning and measure. *Review of Educational Research,* 68, 202-248 .

Umuzdaş, S. (2012). Müzik eğitimi Anabilim dalı öğrencilerinin viyolonsel dersine ilişkin algı ve beklentileri. *Akademik Bakış Dergisi*, 33, 1-8. Retrieved from http://www.akademikbakis.org

Uslu, M. (1996). Türkiye'de Çalgı Eğitiminin Yaygınlaştırılmasında ve Geliştirilmesinde AGSL Müzik Bölümlerinin Önemi, *1. Ulusal AGSL Müzik Bölümleri Sempozyum Bildirisi*, Uludağ Üniversitesi Eğitim Fakültesi Müzik Eğitimi Bölümü, Bursa.

Üredi, I. and Üredi L., (2006). Sınıf öğretmeni adaylarının cinsiyetlerine, bulundukları sınıflara ve başarı düzeylerine göre fen öğretimine ilişkin öz-yeterlik inançlarının karşılaştırılması. *Yeditepe Üniversitesi Eğitim Fakültesi Dergisi*. 1, 2 http//www.yeditepe.edu.tr

Chapter 4

TURKISH PRESCHOOL CHILDREN'S MUSICAL IMAGES

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Introduction

Pre-school education, which has an important place in the development of the child as a whole, is an educational stage that prepares children's physical, mental and social development in a planned environment and prepares them for primary education which is a higher level (Erden, 1998, p. 172).

Music is a way for the child to express himself. They transfer their feelings and thoughts with music they listen to, say and play. Education through music plays an important role in the education of preschool children. The concept and practice of education through music is mainly due to the fact that music is a supportive and facilitative educational method to achieve the goal. (Uçan, 1997, p.32).

The aim of music education in early childhood is to help the child's emotional, cognitive, language and psycho-motor development, in other words, to enable the child to be able to express freely what they think, think with rhythm and songs, and to win the love of music (Megep, 2007). Preschool music is one of the children's favorite activities. In many studies, children enjoy music and naturally enjoy their emotions and express their feelings by music (Fox, 2000; Gruhn, 2002; Snyder, 1997).

In Turkey, music activities in the preschool education program include sound and music listening and distinguishing studies, rhythm studies, breathing and sound studies, singing, playing, creative movement and dance, musical accompaniment and musical story creation activities. These activities support the recognition of local, national and universal children's music, as well as providing the child with the right to listen, play and play music. In addition, these activities contribute to individual and community responsibilities such as making music, listening to others, collaborating (Meb, 2013, p. 48), helping to increase children's cognitive, language, motor, social and emotional skills (Meb, 2013).

In order for the child to express himself, to be able to make judgments and evaluations, and to have aesthetic pleasures as a result of the development of skills such as creativity, music activities are needed (Güler, 2006, p.5). For understanding the level of knowledge and experience of children, it is stated that drawing provides important opportunities in communicating with them (Kendrick and McKay, 2004). It is stated that the drawing is a tool in which young children reflect their own statements until they learn to write, in a sense they are written by them, and most of the young children like to draw and paint. In this context, it is stated that drawing should be seen as an important participatory research technique for listening to children (Küttner-Lange 2008, Holmes 2005, cited by Şahin and Dostoğlu, 2014).

"Drawing plays an important role in focusing children's attention on the spontaneous concept as well as allowing them to make connections between concepts. Drawing will often contain and make visible the essence of an idea or concept" (Brooks, 2009, p.19). In many studies (Anning, 2002; Coates & Coates, 2006; Cox, 2005; Dockett & Perry, 2005; Einarsdottir; Haney, Russeo, and Bebell, 2004; Holliday, Harrison & McLeod, 2009; Hopperstad, 2010; Papandreou, 2014; Scott Frisch, 2006; Soundy, 2012; Watts, 2010) children's drawings were used as a way to obtain information about the children's perspectives.

Malchiodi (2013) stated that children had two goals when working with children on the pictures they made. The first of these; the other is to help the child to reveal his thoughts, feelings, and his views on the events, and the other to help the child understand his / her feelings, thoughts, beliefs, and the way he perceives events and the environment in deciding the most appropriate intervention.

In the creation of knowledge in the research process, the necessity of the contribution of children is emphasized as an important dimension to be considered. The research processes carried out with the participation of children are important in terms of obtaining the findings that affect the children's lives positively and in terms of the special experiences acquired by the children during this period (Şahin and Dostoğlu, 2014, p.612). Holmes (2005) and Clark (2005, 2010) describe children in this age group as socially competent and expert in their own lives; draws attention to the need to hear the voice of children and get information from them in their working processes (cited by Şahin and Dostoğlu, 2014, p.612). Based on these views, it was aimed to get information about the musical images of preschool children by drawings and interviews.

Method

The research was carried out by using phenomenology. Phenomenology researches are the researches that aim to understand the existing perceptions, knowledge and behaviours of individuals about a case and assume that each individual has some information about the phenomenon (Fraenkel and Wallen, 2009).

Participants

The participants of the study consisted of 52 children from 60-72 months range who were enrolled in preschool education institutions in Mersin city center in 2016-2017 academic year. Children participating in the study are 18 boys and 34 girls.

Data Collection Process

The data were collected with Mosaic Approach. This method is a method of collecting data on the basis of accepting the children sufficiently

to express themselves as adults. In the process of collecting data to enable children to express themselves better; it is used as a method combining techniques such as drawing techniques and techniques (Clark, 2005; Darbyshire, MacDougall and Schiller, 2005; Freeman and Mathison, 2009; Punch, 2002). When the literature is examined, it is seen that the Mosaic Approach performed by Alison Clark as a successful study in which a child-centered methodology has been adopted and different techniques are used together. The multi-method described in this study, which deals with the relationship between early childhood and physical environment, is seen as valuable in terms of providing various channels that allow children to express themselves (Şahin and Dostoğlu, 2014).

In the context of open-ended intensive interview, the general framework of the interview questions before the research was prepared and developed in the course of the discussion to obtain in-depth information. As a result of different research experiences of the researcher with children, it was decided to use open-ended condensed interview technique instead of structured and semi-structured interview techniques.

In the light of his interviews with children under 5, Clark (2010) stated that it is necessary for the child to choose a place that is familiar to the child rather than a different environment in the interviews, in the light of his own experiences, in the light of his interviews with children under 5 years of age (Şahin and Dostoğlu, 2014, p. 618). In the light of this view, in order to make them feel more comfortable and express themselves with the children participating in the research, interviews were conducted with the prospective teachers who were in the days of the internship and acquainted with the faculty of education. Interviews were conducted with children concerning "music". Expressions of children were recorded to the voice recorder. In the researches, it is stated that the researcher should not interpret these on his / her own and when he / she is asked to use the drawings of the children, taking the interpretation of the child's picture in a time allocated (Holmes, 2005). After the interviews, the children were asked to draw pictures about music and to explain and interpret their drawings. The data obtained from the interviews with the children about the drawings they made were coded and the themes were revealed by the researcher.

Data Analysis

The data obtained in the study were analyzed using descriptive analysis technique. Children's drawings were analyzed according to the content analysis method. Content analysis method tries to determine relations and concepts (Yıldırım & Şimşek, 2011). The data obtained from this approach are summarized and interpreted according to the previously determined themes (Yıldırım and Şimşek, 2011, p.224). The data were

obtained via draw and express technique. The data obtained as a result of the research are arranged taking into account the questions used during the interview process. The data recorded in the voice recorder then converted into a written document. In the research, direct quotations were tried to be included in order to increase reliability.

Validity and Reliability

The credibility of the research results is one of the most important criteria of scientific research. Validity and reliability concepts in qualitative research are expressed as the most important factors showing the credibility or quality of the results of the research (Creswell, 2009; Maxwell, 2005). In this study, in order to increase the reliability and validity, the following procedures were applied:

• Necessary permissions were obtained from school administrators, teachers and parents of children before starting the research. Despite the permission of the parents of children did not participate in the study.

• In order to increase the validity of the research, the research process has been explained in detail.

• In order to increase the consistency of the research, the findings were tried to be presented without comment and with one-to-one quotations.

Results

As a result of interviews with children and analysis of pictures, the images of the children on the concept of "music" were determined according to the categories. The frequency values of the data are shown in Table 1.

Table 1. *Distribution of data by category as a result of interviews*

Categories	**F**
Singing	43
Entertainment	36
Emotion	26

As shown in table 1, children thoughts on music are divided into 3 categories. Children expressed music as "happiness" and "emotion". This data is defined as the emotional category. In the" entertainment "category, the majority of children have defined music as" dancing". The majority of children expressed music as "singing."

After the interviews, the children were asked to draw pictures about music and to explain and interpret their drawings. The drawings and explanations of the children are given below:

Music as "entertainment"

Figure 1. *Umut's Drawing (Boy)*

R: Welcome, can you tell us your picture, what did you draw here?

Umut: *"Guitar"*

R: Another

Umut: *"I drew the microphone".*

R: Another

Umut: *"A drum, and this is also played by the mouth".*

R: So who are these?

Umut: *"Audience, they are dancing".*

R: So what are these?

Umut: *"Light".*

R: Well, who are they?

Umut: *"Musician".*

R: Are you involved in these?

Umut: *"Yes".*

R: Which one is you?

Umut: *"This, guitar player".*

Figure 2. *Aras's Drawing (Boy)*

R: Welcome, can you tell us your picture, what did you draw here?

Aras: "My mom is here".

R:Well, what are they doing here?

Aras: "They are holding hands and dancing".

R: What is this?

Aras: "Guitar".

Figure 3. *Asmin's Drawing (Girl)*

Asmin: "*She's playing bağlama (traditional instrument) on this stage. This received the microphone, she sings by dancing, this holds the rhythm, this is fireworks, these are also lights..they are on stage".*

Figure 4. *Fatma Zehra's Drawing (Girl)*

Figure 5. *Yiğit's Drawing (Boy)*

Figure 6. *Derin's Drawing (Girl)*

Figure 7. *Erdem's Drawing (Boy)*

Music as "singing"

Figure 8. *Gülşen's Drawing (Girl)*

Gülşen: *"Long is singing, the little one also sings from behind. she's going to teach songs because she's a music teacher".*

Music as "emotion"

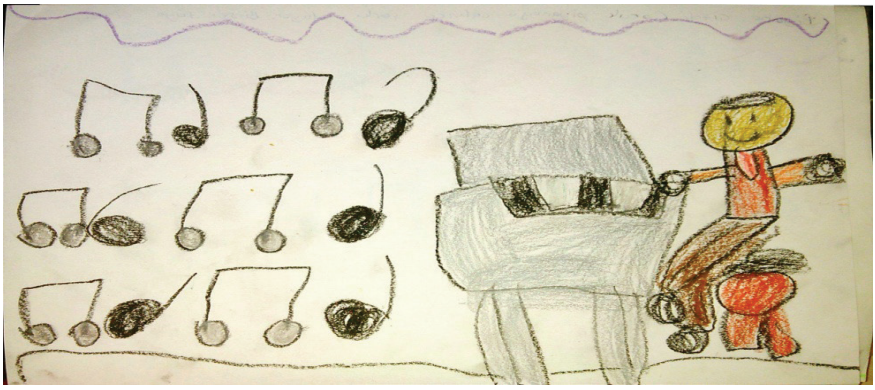

Figure 9. *Birsen's Drawing (Girl)*

Birsen: *"...when the kid plays the piano, he's happy".*

Table 2. *Recognition of musical instruments of preschool children involved in the study*

	F
Guitar	48
Piano	38
Flute	26
Drum	24
Violin	16
Saz (Bağlama) (traditional instrument)	14
Zurna (traditional instrument)	8
Darbuka(traditional instrument)	6
Harmonica	4

As shown in table 2, the instrument known by the majority of the children (F=48) is the guitar.

Traditional Instruments

Figure 10. *Bağlama*

Figure 11. *Zurna*

Figure 12. *Zurna & Drum*

Figure 13.*Darbuka*

Table 3. *Music images in children's drawings*

Categories	F
Musical instruments	46
Microphone	16

As shown in table 3, when the musical images of children's drawings are examined, it is seen that they mostly use musical instruments (f=46). After the musical instruments, it was observed that they drew microphone pictures (f=16).

Examples of Musical instruments in children's drawings

Figure 14.*Zeynep's drawing (Girl)*

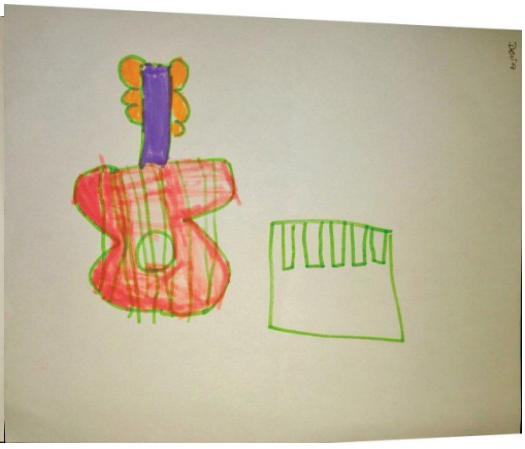

Figure 15.*Deniz's drawing (Girl)*

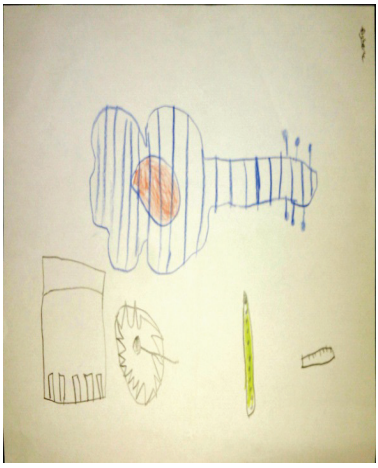

Figure 16. *Ayberk's drawing (Boy)*

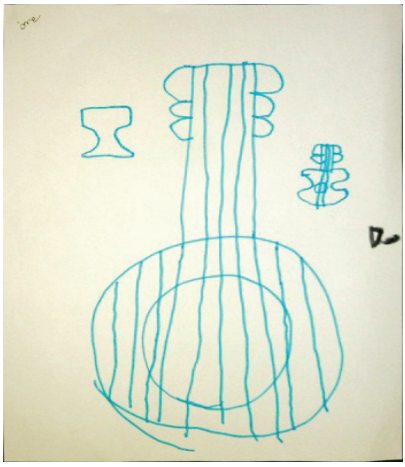

Figure 17. *Ömer's drawing (Boy)*

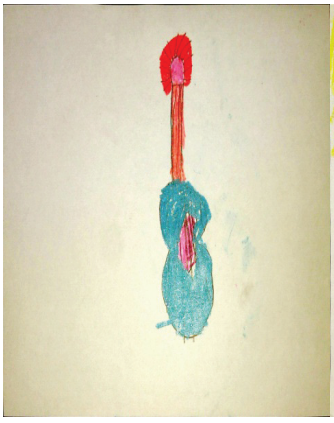

Figure 18. *Ada's drawing (Girl)*

Figure 19. *Berat's drawing (Boy)*

Figure 20. *İkbal's drawing (Girl)*

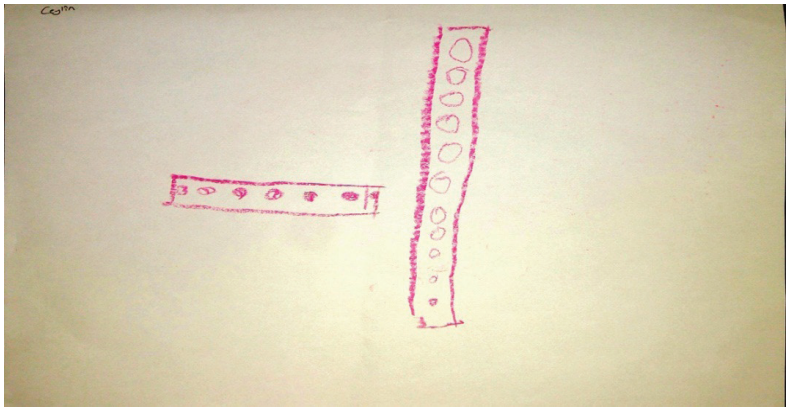

Figure 21. *Ceylin's drawing (Girl)*

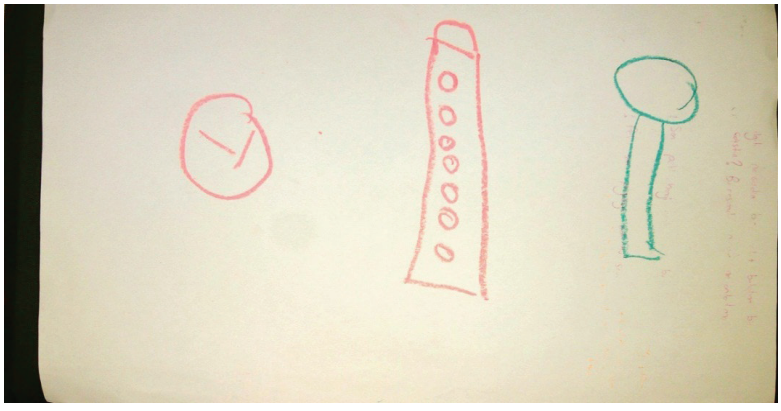

Figure 22. *Beril's drawing (Girl)*

Figure 23. *Eylem's drawing (Girl)*

Explanations and interpretations of children's drawings about musical instruments:

Figure 14: Zeynep: *"I drew guitar, I want to play guitar".*

Figure 15: Deniz: *"I want to play the guitar also a piano".*

Figure 16: Ayberk: *"I want to play guitar, harmonica, flute, drums, piano. I want to know all about it".*

Figure 17: Ömer: *"I want to play violin, guitar, drums".*

Figure 18: Ada: *"I drew guitar. We can make strings from something else. We can make the guitar from cardboard. I don't have a guitar in my house, but our teacher showed me the guitar".*

Figure 19: Berat: *"This is guitar, this is maracas, this is drum, this is piano, this is violin, that's the flüte".*

Figure 20: İkbal: *"I drew a xylophone, a flute and a piano".*

Figure 21: Ceylin: *"A flute and a harmonica. I like wind instruments".*

Figure 22: Beril: *"This is drum, this is flüte and this is a microphone, we sing".*

Figure 23: Eylem: *"Guitar, guitar playing instrument, the song is playing in the sky. There are hearts".*

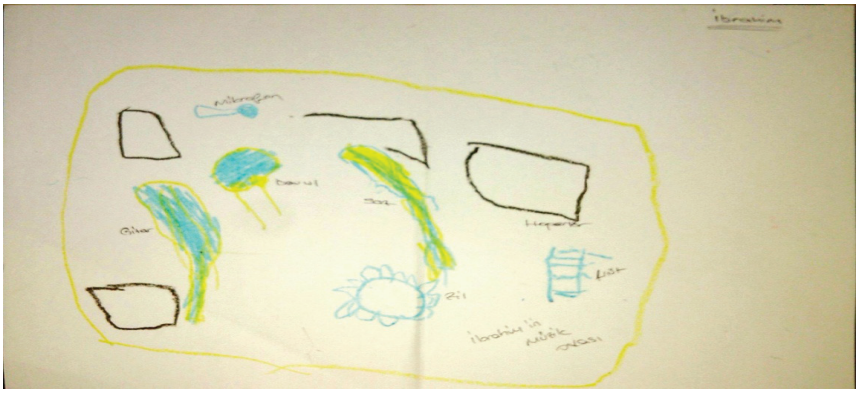

Figure 24. *İbrahim's Musical Room (Boy)*

Figure 24: İbrahim: *"I have a music room. I have a flute. I have a guitar. I have a microphone. I have a speaker. I'm making music".*

Discussion and conclusion

The aim of the study is to get information about the musical images of preschool children by drawings and interviews. As a result of interviews with children, their thoughts on music are divided into 3 categories.

Children expressed music as “happiness” and “emotion”. This data is defined as the emotional category. In the” entertainment “category, the majority of children have defined music as” dancing”. The majority of children expressed music as “singing.”

The results of the study are similar with Bowles (1998) research results. In Bowles ‘ research, when children were asked to choose their favourite music activities, they expressed as playing an instrument, singing, creative dance, listening to music, making music, talking about music.

According to Merrill (2002), children love singing. Singing as an individual or group gives an experience that gives a sense of freedom for all children, joy and vitality. It also enhances the children’s ability to observe, understand and explain, as well as the development of social relations.

Children naturally love to sing, move, dance, discover the instruments (Mueller, 2003; Tarnowski, 1999; cited by Kim, 2007, p.22). Children can sense a lot of things during singing, playing, and dancing, and gain a lot of knowledge and experience.

For example, during these studies they become aware of their own competencies, gain consciousness of belonging to a group, learn to help and share, can produce movement in accordance with the rhythm of music, express their emotions through music, gain love of music, develop good listening skills, gain coordination of hand-eye (cited by Öztürk, 2008, p.46).

When using musical instruments, the child creates his own rhythms and the ability to play the instrument by reflecting the energy in positive ways. This improves the success and confidence of the child (Şen, 2006). In research involving 5-year-old children by Temmerman (2000), the children described their favorite music activities as movement to music and playing instruments. According to the results of the study, when the musical images of children’s drawings are examined, it is seen that they mostly use musical instruments (f=46) and the most well-known musical instruments of the children participating in the research is guitar (see table 2).

Recommendations

Kindergarten should be an elaborate garden where the children will be well-liked and their saplings will be grown. In such a garden, tiny people can be more physically and spiritually more able to achieve a healthier personality development (Sun & Seyrek, 1993). In this direction children are encouraged to love music.

The child who loves music loves human beings, loves society, loves life, gains a unique spirit power and wealth (Yönetken, 1996, p.20). In the

light of the thoughts of Yönetken, it is thought that we should direct our children to music and music activities.

The preschool teacher should be able to prepare the environment for each child to deal with the music event of particular interest and to make the child interested in all kinds of music activities. It is thought that the child should be prepared to be interested in music, to be developed according to his / her ability and to be able to love music completely.

References

Anning, A. (2002). Conversations around young children's drawing: The impact of the beliefs of significant others at home and school. *Journal of Art and Design Education,* 21(3), 197– 208.

Bowles, C. L. (1998). Music activity preferences of elementary students. *Journal of Research in Music Education*, 46 (2), 193–207.

Brooks, M. (2009). Drawing, visualisation and young children's exploration of "Big Ideas". *International Journal of Science Education*, 31(3), 319-341.

Clark, A. (2005). *Talking and Listening to Children, Children's Spaces*, (ed.) Mark Dudek, Oxford: Architectural Press, 1-13.

Clark, A. (2010). *Transforming Children's Spaces, Children's and Adults' Participation in Designing Learning Environments*, Abingdon, Oxon: Routledge.

Coates, E., & Coates, A. (2006). Young children talking and drawing. *International Journal of Early Years Education,* 14(3), 221–241.

Cox, S. (2005). Intention and meaning in young children's drawing. *International Journal of Art and Design Education*, 24(2), 115–125.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: Sage.

Dockett, S., & Perry, B. (2005). Children's drawings: Experiences and expectations of school. *International Journal of Equity and Innovation in Early Childhood,* 3(2), 77–89.

Einarsdottir, J., Dockett, S. & Perry, B. (2009). Making meaning: children's perspectives expressed through drawings. *Early Child Development and Care*, 179(2), 217-232. doi: 10.1080/03004430802666999

Erden, M. (1998). *Öğretmenlik Mesleğine Giriş*, İstanbul: Alkım Yayınları.

Fraenkel, J. R. & Wallen, N. E. (2009). *How to design and evaluate research in education.* (7th Edition). New York: McGraw-Hill.

Fox, D. B. (2000). Music and the baby's brain. *Music Educators Journal,* 87(2), 23-28.

Gruhn, W. (2002). Phases and stages in early music learning. A longitudinal study on the development of young children's musical potential. *Music Education Research*, 4(1), 51-70.

Güler, N. (2006). *Okulöncesi Öğretmenlerin Müzik Etkinliklerini Gerçekleştirme Durumları ve Eğitim Gereksinimlerinin Belirlenmesi*. Yayımlanmamış yüksek lisans tezi). Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü, Eskişehir.

Haney, W., Russeo, M., & Bebell, D. (2004). Drawing on education: Using drawings to document schooling and support change. *Harvard Educational Review,* 74(3), 241–272.

Holliday, E., Harrison, L. J., & McLeod, S. (2009). Listening to children with communication impairment talking through their drawings. *Journal of Early Childhood Research*, 7(3), 244-263.

Holmes, G.R. (2005). *Doing Your Early Years Research Project: A Step by Step Guid,* London: Paul Chapman Publishing.

Hopperstad, M. H. (2010). Studying meaning in children's drawings. *Journal of Early Childhood Literacy*,10(4), 430-452.

Kendrick, M. and McKay R. (2004). Drawings as an alternative way of understanding young children's constructions of literacy. *Journal of Early Childhood Literacy*, 4(1) 109–128.

Kim, H.K. (2007). *Early Chıldhood Preservıce Teachers' Beliefs About Music, Developmentally Appropriate Practice, And The Relationshıp Between Music And Developmentally Appropriate Practice.* Unpublished PHD dissertation. University of Florida.

Malchiodi, C. A. (2013). *Çocukların resimlerini anlamak*. Ankara: Nobel Tıp Kitabevi.

Maxwell, J. A. (2005). *Qualitative Research Design: An Interactive Approach.* London: Sage.

Meb. (2013). *Okul Öncesi Eğitim Programı*, Ankara: MEB Yayınları.

Megep. (2007). *Çocuk Gelişimi ve Eğitimi Müzik Etkinlikleri* 2. Ankara: Milli Eğitim Bakanlığı. Retrieved from http: // megep. meb.gov.tr/mte_ program_modul/modul_pdf/761cbg028.pdf

Merrill, J. D. (2002).Successful singing for all in the elementary grades. *Music Educators Journal,* 89(2).

Scott Frisch, N. (2006). Drawing in pre-schools: A didactic experience. *International Journal of Art and Design Education,* 25(1), 74–85.

Snyder, S. (1997). Developing musical intelligence: Why and How. *Early Childhood Education Journal,* 24(3), 165-171.

Soundy, C.S. (2012). Searching for deeper meaning in children's drawings. *Childhood Education*, 88(1), 45-51. doi: 10.1080/00094056.2012.643718

Sun, M.& Seyrek, H. (1993). *Okulöncesi Eğitimde Müzik*, Mey Yayınları, İzmir.

Şahin, B.E & Dostoğlu, N. (2014). Erken çocukluk döneminde çocukların araştırma sürecine katılımı. *The Journal of International Social Research*, 7(35),609-620.

Şen, Y. (2006). Okul öncesi dönemde çocuğun gelişiminde müziğin önemi. *Atatürk Üniversitesi Sosyal Bilimler Dergisi*,7(1), 337-343.

Papandreou, M. (2014). Communicating and thinking through drawing activity in early childhood. *Journal of Research in Childhood Education*, 28(19), 85-100. doi: 10.1080/02568543.2013.851131

Temmerman, N. (2000). An investigation of the music activity preferences of preschool children. *British Journal of Music Education*, 17(1), 51–60.

Uçan, A. (1997). *İnsan ve Müzik İnsan ve Sanat Eğitimi*. Ankara: Müzik Ansiklopedisi Yayınları.

Watts, R. (2010). Responding to children's drawings, *Education 3-13*, 38(2), 137-153. doi: 10.1080/03004270903107877

Yıldırım, A. & Şimşek, H. (2011). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin Yayıncılık

Yönetken, H.B. (1996). "Türkiye'de Müzik Eğitiminin Önemi", *Müzik Öğretimi*, Ankara: Müzik Ansiklopedisi Yayınları, Alf Matbaası.

Chapter 5

OPINIONS OF SCIENCE TEACHERS ABOUT THE USE OF ANALOGY AND ANALOGIES ON SOME ISSUES

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1. INTRODUCTION

It is only possible for students to understand the concepts used in science classes correctly and to use these concepts in solving the problems they encounter, by providing students with the correct knowledge and skills in science teaching programs (Canpolat, Pına rbaşı, Bayrakçeken & Geban, 2006). Achieving this goal in chemistry lessons where abstract concepts are predominant seems more difficult than in other science lessons (Gülçiçek & Güneş, 2004) . Analogies (Orgill & Bodner, 2003), which have an important place in the teaching of abstract concepts, have an important place in overcoming this problem. Analogies used in learning the scientific concepts that are seen as complex by students; using a familiar, known situation; foreign is the telling of an unknown situation (Dagher, 1998). The unknown situation or a subject area that is tried to be explained here is named as "target", known situation or area as "source" (Castillo, 1998; Küçükturan, 2003). Glynn et al, analogy; establishing a link between concepts, theories or formulas using only similar aspects or in other words; Concepts, theories and formulas, and defined as a mapping formed in any similar direction (Transmitting Ekici, Ekici & Aydin, 2007). Glynn (2008) expressed the graphical representation of the analogical relationship between source and target in his studies.

Glynn (2007), while teaching with analogy; He stated that attention should be paid to specifying the target concept, organizing the source according to the target, determining the similarities between the target and the source, comparing similar features, determining the situations where the analogy does not work, and drawing conclusions from the subject of the target concept. An example analogy to be used in the lessons; concretely revealing the new concept, descriptive, not complex, but simple (Arnold & Millar, 1996) and Dupin and Joshua (1989) , should be easily applicable to different teaching situations. If an analogy is to be used as an aid to the teaching of a subject, it should be noted that the analogy to be chosen is an analogy belonging to the "student world" (Thiele & Treagust, 1995). Because only then can the student make sense of the relationship between target and source. The choice of an analogy that the student has never encountered before, has no prior knowledge of, or is contrary to his cognitive structure will undoubtedly lead to more conceptual confusion. Clearing misconceptions (Stavy, 1991; Sen & Çıldır, 2007; Nottis & McFarland, 2001; Paatz, 2004) and analogies that plays an important role in conceptual change (Opfer & Doumas, 2008; Sevim, 2013) a positive attitude scratch with the help of students enrolled in courses development (Coll, France & Taylor, 2005) and problem solving skills can also be increased (Uğur, 2009). According to Bilgin and Geban (2001), Maxwell, Rutherford and Einstein used analogies as a teaching technique to better understand the problems. Done a lot of research, teaching made

using analogies students shows that effective in promoting the success of (Asoko & deboo, 2001; Glynn & Takahashi, 1998; Keller,1983; Şeyihoğlu & Özgürbüz, 2015). Inaddition, it has been determined that students who are taught by analogy understand the concepts more quickly (Brown, 1994; Duit, Roth, Komorek & Wilbers 2001). The purpose of analogy is to facilitate the understanding of the target concept by finding appropriate analogies between source and target (Gentner & Forbus, 2011) . Thus, meaningful learning is achieved by integrating old information and new information in the cognitive structure (Bryce & Macmillan, 2005). Knowledge that provides a bridge between existing knowledge and new knowledge; It has been defined as "organizer" by Ausubel (Ausubel, 1968). From this point of view, analogies; it can be used as a kind of "organizer" in meaningful learning. Analogies, which are a teaching technique that teachers can easily use in crowded classrooms (Gökharman, 2013), can also be used as a complementary assessment tool in evaluating students (Aykutlu & Şen, 2012; Karamustafaoğlu & Yavuz, 2006). For example; electric current with the help of teachers will make the analogy to students about the issues, both students ready presence, levels of both alternative concepts identified (Aykutlu & Şen, 2011). As a result of the literature review, while the opinions of teachers and teacher candidates about the use of analogies in lessons and studies on the analogies they use were encountered (Digilli & Afyon, 2014; Dönder, 2010; Girgin & Şahin, 2020; Yerrick et al ., 2003), there is no study that specifically covers the content of this study and reveals the opinions of pre-service science teachers about the use of analogy in chemistry lessons. Apart from this, in many studies, it has been determined that the analogies developed by pre-service teachers may cause misconceptions (Coll, France & Taylor, 2005; Şenpolat, 2005; Web, 1985) . A wrong analogy made by teachers, who have an important place in the learning-teaching process, can lead to misconceptions in students that will be very difficult to compensate (Glynn, Russell & Noah, 1997). Considering these points, the prospective teachers who will be the teachers of the future; It is important to know what their thoughts are about the use of analogies in their lessons and to determine how they will use analogies in their future lessons. In line with these purposes, it is aimed to answer the following sub-problems: Teacher candidates;

I. What are his views on the use of analogy in chemistry subjects?

II. What analogies are they going to use about viscosity, gas and plasma?

2. METHOD

Research, teachers of chemistry in the course analogies with views towards the use i to determine relevant analogies of perception and events

in a natural environment in a realistic and holistic a way to qualitative research methods for the expression (Lightning & Sims, 2006) based was conducted.

2.1. Implementation Working Group and the Making

In the study conducted with the participation of teacher candidates, the study group was determined according to the criterion sampling method (Yıldırım & Şimşek, 2006) , one of the purposeful sampling methods. The criteria sampling method is a sampling method based on the study of all situations that meet a predetermined set of criteria. Criteria or criteria can be created by the researcher or determined according to a previously prepared criteria list (Yıldırım & Şimşek, 2006) . In determining the pre-service teachers who will participate in the study, the basic criterion was the graduation of the teacher candidates by taking all theoretical and applied courses related to chemistry, science education and education. It is accepted that the teacher candidates participating in the research have the necessary knowledge since they are graduates. The pre-service teachers saw both how the knowledge they acquired in practice schools was applied and made applications about how to apply them, thanks to the School Experience I, II and Teaching Practice courses for one year. Therefore, no explanation was made to the teacher candidates about analogy before the application. The study was carried out with senior students studying at the Science Education Department of a state university in the Western Black Sea in the fall semesters of 2018-2019. Araştır Mani 55 teachers of the candidates participated. In the practices carried out during the research process, pre-service teachers were first informed about what to do, then they were given one lesson hour and asked to answer the questions asked.

2.2. Data Collection Tool

In the study, six questions were used to determine the opinions of the preservice teachers about the use of analogy in chemistry lessons, and four questions were used to determine their analogies about some of the concepts in the matter and their states. While choosing the questions to be used in the research, firstly, researches on analogies were taken into consideration. Then, about whether the questions formed are suitable for the scope of the research, three are chemistry, one is chemistry education and two are experts in science education; A total of six people’s opinions were taken.

2.3. Data Analysis

In this study conducted using qualitative research methods, descriptive analysis consisting of four stages was used in the evaluation of the data obtained (Yıldırım & Şimşek, 2006). In the first stage, the framework that will be used in the analysis of the

data was created. First of all, all of the student responses were read by the researchers one by one. Then, a category was created for each question asked in the study. In the second stage, data was entered for each question within the framework of the created categories. After entering the data for all the questions, the data were examined again and the findings were obtained by categorizing them separately according to their similarities. In the third stage, where the findings were defined, the findings were supported by direct quotations taken from interviews with pre-service teachers. In the final stage of the interpretation of the findings, the described findings were explained, associated and interpreted. In order to support the findings obtained, teacher candidates Semi-structured interviews were made with 3.5% of them.

Yıldırım and Şimşek (2006), validity for qualitative research, taking necessary precautions while reaching correct information; They explained its reliability as a clear and detailed description of the research process and the data obtained, which could be evaluated by another researcher. In order to increase the internal validity of the study (Büyüköztürk et al, 2008), the findings obtained in line with the data were examined separately by two different chemistry and science education experts whether they were categorized correctly or not. Detailed quotations from interviews with students were made to support the findings. In order to increase the external validity related to the generalizability of the results, all the information about how the research was conducted, how the data was collected, what method was followed in the analysis of the data, in short, how the research was conducted was given in detail (Büyüköztürk et al, 2008). In order to increase the internal reliability of the study, the interviews with the students were recorded by the researchers using a voice recording device with the help of an unchanging approach (Büyüköztürk et al, 2008). Quotations taken from the interviews are given without adding. In order to increase external reliability, necessary arrangements were made by referring to expert opinion on the data collection tools used in the study, the data obtained and the findings obtained as a result of the data (Yıldırım & Şimşek, 2006).

3. FINDINGS

3.1. First Sub-Problem Results

When the findings of the research's first sub-problem are examined; It was determined that pre-service teachers thought that analogy could be used in chemistry lessons in general, and it would have a positive effect on increasing students' achievement and attitudes towards the course. The seven questions and answers asked to determine the opinions of the pre-service teachers about the use of analogy in chemistry lessons are given below in detail:

Participants to the first question on the definition of analogy was asked. It is seen that 55 teacher candidates who participated in the study generally defined analogy as *"the difference between similarities and situations "*. In the interviews conducted in order to support the findings, the preservice teachers defined the analogy as follows: A student described difficult and abstract events as the way they are told by analogy with concrete concepts or events. Another student teachers understand by evil described with simple examples of topics that are difficult yl be using different aspects of the event have described as. Another student said, '*Based on the known, it is an analogy method used to reach the unknown* ' and' *To make an abstract concept more understandable with concrete analogies*.'They expressed as.

Semi-structured interviews were also carried out, the analogy of teachers in the literature to be as *"two similarities between different situations"* support as they define.

In the second question, the usability of analogy in teaching lesson subjects was asked. Here, it has been observed that teacher names are generally divided into two. The opinions of the teacher candidates are expressed in the form of a table below:

Table 1: Percentage Distribution of the Opinions of Pre-service Teachers on the Usability of Analogy in Lessons

	In Abstract Concept Teaching	**In Concrete Concept Teaching**
Analogy Used	67.2%	32.8%
Analogy Not Used	10.9%	89.1%

While 89.1% of the pre-service teachers think that it is unnecessary to use analogy in the teaching of chemistry subjects that include concrete concepts such as solid, liquid and volume, 32.8% of the pre-service teachers think that analogy can be used in the teaching of chemistry subjects that include concrete concepts. 89.1% of the teacher candidates participating in the study think that there will be no problem in understanding the chemistry subjects including concrete concepts by the students and they believe that these concepts can be explained by giving examples from daily life about chemistry subjects that include concrete concepts. 32.8 of the pre-service teachers, who have the idea that analogy can be used in the teaching of chemistry subjects that include concrete concepts, think that the permanence of knowledge can be increased by using analogy in the teaching of concrete concepts, which are mostly included in basic subjects. Teachers participating in the research of majority (% 89.1), *gas, water vapor, mole, latent melting and atom* including abstract concepts such as the chemistry of the teaching of subjects were found to consider it

is necessary to use the analogy. Interviews with pre-service teachers also support these ideas:

T 1 : "The matter of matter is already a very concrete subject that can be explained with direct experiments and observations."

T 2 : " Analogy can be used in teaching the subject of gases. Because if each statement about gases is explained through analogy, students can envision some things more easily in their minds. "

In the third question, the contribution of an instruction using analogy to students' learning and success was questioned. The vast majority (89.1 %) of the 55 teacher candidates who participated in the study had the idea that the use of analogies in chemistry subjects would contribute to students' learning. Teacher candidates will be held as an analogy aided science of the course, students will facilitate their learning, and students will increase the retention of knowledge yaratılıcılıg the they think could be improved. Regarding the students' success in chemistry subjects, 92.5% of the prospective teachers thought that an analogy-supported lesson would facilitate the teaching of difficult subjects and consequently increase student success, while 7.5% of the pre-service teachers thought that the exams would not increase the student success because of the problems. In the interviews, the preservice teachers expressed their thoughts as follows:

T 1 : " It contributes significantly to students' learning in a lesson using analogy. Because it increases the recall of information and facilitates concretization. "

T 2 : "A teacher using analogy thinks that the student will be successful because it will be easy for the student to understand the subject. For this reason, analogies that are made considering the needs of the students and when used correctly affect the success of students positively. Thus, students are helped to learn. Here, the permanence of information is also in question. "

In interviews with teacher candidates, use the analogy of teaching a subject made mentioning meaningful, the information you have the persistence to increase to student achievement for will contribute to students' learning is indicated.

The fourth question was asked whether pre-service teachers preferred analogy in their lessons. When the findings regarding this question were examined, all of the pre-service teachers (100%) participating in the study stated that they thought of using analogy in their future teaching lives.

In the fifth question, which asked about the changes in the attitude of analogy towards chemistry subjects; It was determined that all of the pre-service teachers (100%) who participated in the study thought that an

instruction using analogy at the right subject and at the right time would have an effect on students ‘ positive attitude towards chemistry and science course. It was determined that the prospective teachers had the idea that chemistry subjects, which contain mostly abstract concepts and mathematical expressions, would become more understandable by using analogy, and thus students would change their negative attitudes towards difficult and incomprehensible chemistry subjects. The preservice teachers explained these opinions as follows:

T 1: “Success is among the important factors that affect attitude. I think the analogy can be effective at the level of success.”

T 2: “It will turn the boring looking part of chemistry subjects into positive. It will also affect the attitude towards chemistry subjects as it will attract the attention of the student and appeal to his daily life and make you feel of success.”

The opinions of the teacher candidates about the effect of an analogy instruction on the student’s attitude towards chemistry subjects were confirmed in the interviews.

In the sixth question, the preservice teachers were asked at what stages of the lesson they would like to use the analogy. While 45.2% of the pre-service teachers stated that they could use analogy at every stage of chemistry subjects and science lessons, 23.4% of them thought that analogy could only be used in the development phase of the lesson. Eight of 55 pre-service teachers who participated in the study had the idea that analogy could be used in the introduction and development stages of chemistry subjects, while 12 pre-service teachers had the idea that analogy could be used only at the beginning of the lesson. The preservice teachers believe that by using analogy in the introduction and development part of the lesson, a better understanding of the subject from the foundation can be achieved. The preservice teachers who think that analogy should be used only in the development part of the lesson think that alternative student thoughts can be formed when a subject that the students do not know is entered with an analogy. The prospective teachers think that by using analogy in the introduction part of the lesson, students’ attention can be drawn against the lesson. In addition, pre-service teachers advocate that the analogy should be used in the development phase of the lesson in order to better grasp the subject after giving preliminary information about the basic concepts. According to the teacher candidates, at what stage of the lesson the analogy will be used, the content of the subject, the degree of difficulty, the materials, methods and techniques used in the lesson determine. Accordingly, if necessary, analogy can be used at every stage of the course.

As the last question, pre-service teachers were asked whether they would use analogy as a measurement tool or not. While 68.2% of the teacher candidates participating in the study thought that it would not be correct to use analogy as a measurement-assessment tool in chemistry lessons, 22.5% of the pre-service teachers thought that analogy could be used as a measurement-evaluation tool in chemistry lessons. According to prospective teachers who do not intend to use analogy in their lessons as a tool of assessment and evaluation, even if students know the subject, they may not be able to create an analogy. It was determined that the teacher candidates had the idea that analogy could be used as a measurement-evaluation tool in lessons by giving the students the target and source situations and asking the students to find the similarities between the two situations.

This situation stated the positive and negative evaluations by the prospective teachers as follows:

T1 : "An assessment of how well the student understands the subject can be done by asking the student to compare the topic I describe with something different they see in everyday life and to point out the differences between these two and similar aspects. Besides, I can draw the figures by printing analogies. If there are any missing parts from here, I ask them again to help them understand the lesson better. "

T2 : "I would not prefer to use analogy because making an analogy requires mastering the subject. So making an analogy about a topic can push the student into a sense of failure or the student may not be able to do them from the lesson. Besides, it cannot be an accurate measurement tool. The student cannot always make a correct analogy. That's why I wouldn't consider using it as a measurement and evaluation tool."

3.2. Findings Related to the Second Sub- Problem

When the findings of the second sub-problem of the study were examined, the teacher candidates had the most "water flowing from the pipe" in teaching the concept of electric current, "water pipes with different cross-sections" the most in teaching the concept of resistance, "liquid pressure" in teaching the concept of potential difference, the most in teaching the concept of generator. It was determined that they thought of teaching by using more "water pump" analogies (Table 2).

Table 2: Pre-Service Teachers' Analogies About Electrical Concepts

Chemical Concepts	Gas	Plasma	Viscosity
Analogies Used	Stars in the Air	Starch Water mixture	Honey

(43.4%)	(30.5%)	(28.3%)
Smoke	Flames	Space
(21.3%)	(19.5%)	(5.2%)
Cloud	Planets	Ethyl alcohol
(10.2%)	(15.4%)	(2.4%)
Balloons	Match flame	Mix the dough with water
(3.2%)	(4.8%)	(8.3%)
Spray	Melting of Matter	Fluent All Substances
(6.6%)	(8.2%)	(7.9%)
Blood cells	Plasma batch	Engine oil
(2.8%)	(3.7%)	(11.2%)
	Hazardous waste	Fluid solids
	(2.1%)	(3.9%)
Missing explanation	Missing explanation	Missing explanation
(15.3%)	(9.0%)	(32.8%)

The preservice teachers made the following explanations about the analogies they intend to use in teaching electric current , resistance, potential difference and generator:

***Gas* :**

T 1 : "I would use *the stars in the air* analogy in teaching *the* concept of *gas*. The *stars in the air resemble each other because they move through the air as if they were gas bubbles.* "

T 2 : " Gases are like smoke from a chimney. Because *they move in the air like gases in smoke. '*

Plasma :

T 1 : " All planets and interstellar space are matter. It can be used here to describe matter between the planet and the stars.

T 2 : "The mixture of starch and water can actually be used as an analogy. Starch is a powdery substance. When we pour the water on it, it becomes runny like mud. Therefore, I use this item as an analogy. "

Viscosity :

T 1 : " K ahwa honey Let's say we have seen in Asylum. When you take the honey in your hand, turn it over and put it on a plate, you

will see it move slowly. However, if it were water, it would flow away immediately. So we understand from this simple logic that honey has a higher viscosity than water."

When the explanations of the teacher candidates about the given concepts are examined, it is seen that they can establish the similarities between the target concept and the source concept in an understandable way.

When the analogies created by the pre-service teachers regarding viscosity are examined, it is seen that there are many expressions that are empty and without explanation (Table 2). In line with this result, it can be said that pre-service teachers failed to create an analogy about viscosity. When asked from the pre-service teachers why they did not form an analogy about these concepts or why they had meaningless expressions in their analogies, they gave the following answers:

T 2: " Viscosity is already an abstract concept as a concept difficult to explain and I see. Obviously viscosity i found a parable of la I want to say we can not."

It supports the interviews that some of the preservice teachers failed to create analogies about some concepts. When the research findings were examined, it was determined that some analogies created by pre-service teachers could cause misconceptions in students. For example, teachers of viscous of t they made about the concept of " honey " analogy can be given (Table 2). It was determined that the pre-service teachers only mentioned the similarities between the target and source concepts in their analogies, but not the limitations. Explaining the concept of viscosity by analogy with " honey " and not mentioning the limitations of the analogy may cause students to see viscosity as a tool in which electrons are kept as a storage.

4. CONCLUSION AND RECOMMENDATIONS

As a result of the research; Pre-service teachers define analogy as "establishing similarities between two different situations", it is necessary to use analogies in science and chemistry lessons, especially during the teaching of abstract concepts that are difficult to understand, and if necessary, according to the content of the subject, difficulty level, materials, methods and techniques used in the lesson, It has been determined that they think it can be used. According to the teacher candidates, with an instruction using analogy, students' learning can be facilitated, the permanence of the knowledge can be increased and the creativity of the student can be improved. As a result of the research; teacher candidates in analogy's chemistry lessons, increasing students' success and developing positive attitudes towards the lesson.

It has been determined that they think it can be used. It supports these views of teacher candidates about the use of analogies in lessons in previous studies (Ekici, Ekici & Aydın, 2007; Dilber & Düzgün, 2008; Dönder, 2010; Jonāne, 2015 Mason & Tornatora, 2016) . Another result of the first part of the study is that most of the pre-service teachers have the idea that analogy cannot be used as a measurement-assessment tool in chemistry lessons. In fact, this result shows that the prospective teachers have an idea about what analogy is theoretically, but they do not know exactly how to use it in their lessons. For this reason, more applications should be made to pre-service teachers to ensure that analogies can be used as a complementary assessment-evaluation tool in the courses they took during their university education. Analogies are seen by prospective teachers as a teaching strategy that ensures understanding of the subject only in lecture. With the analogies to be made by the students, teachers can determine the places that students do not understand, and reveal their prior knowledge and alternative concepts.

When the results of the second part of the study were examined, it was determined that the pre-service teachers mostly thought of using the "starch-water mixture" model in teaching the plasma subject. Similar to the results of the studies conducted by Demir, Önen and Şahin (2011), Cankoy (2005), Karamustafaoğlu and Yavuz (2006) and Nottis and McFarland (2001), it was revealed in this study that teacher candidates were not very successful in making analogies. It has been determined that especially the analogies made by pre-service teachers regarding viscosity are insufficient (see Table 2). As in the studies of Aykutlu and Şen (2011), Dikmenli and Çardak (2007) and Durmuş (2013), it was determined that especially in the analogies made by the teacher candidates, the explanation of the target and the source was insufficient and the limitations of the analogies were not specified properly. It can be said that analogies prepared in this way can lead students to misconceptions. In order to prevent alternative concepts that may arise from analogies, it is necessary to clearly state the aspects and limitations of the source from the target. In teacher training programs, the subject of teaching with analogy should be included more in teaching techniques. It should be emphasized that the prospective teachers should pay attention to what they should pay attention to when using analogies in their lessons and which process steps should be followed.

5. REFERENCES

Arnold, M., & Millar, R. (1996). Exploring the use of analogy in the teaching of heat, temperature and thermal equilibrium. In G. Welford, J. Osborne & P. Scott (Ed.), Research in Science Education in Europe (pp. 22-35). London: The Falmer Press.

Asoko, H., deBoo, M. (2001). Analogies and Illustrations: Representing Ideas in Primary Science. Hatfield: The Association for Science Education

Ausubel, D. P. (1968). *Educational psychology, a cognitive view.* New York, Holt, Rinehart: Winston.

Aykutlu, I., & Şen, A. İ. (2011). Fizik öğretmen adaylarının analoji kullanımına ilişkin görüşleri ve elektrik akımı konusundaki analojileri. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *41*(41).

Aykutlu, I. ve Şen, A. İ. (2012). Üç aşamalı test ve kavram haritası ve analoji kullanarak lise öğrencilerinin elektrik akımı konusundaki kavram yanılgılarının belirlenmesi, Eğitim ve Bilim, 37(166), 275-288.

Bilgin, İ. ve Geban, Ö. (2001). Benzeşim (Analoji) yöntemi kullanılarak lise 2. sınıf öğrencilerinin kimyasal denge konusundaki kavram yanılgılarının giderilmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi,* 20, 29-32.

Brown, D. E. (1994). Facilitating conceptual change using analogies and explanatory models. International Journal of Science Education, 16(2), 201-214.

Bryce, T., & Macmillan, K. (2005). Encouraging conceptual change: the use of bridging analogies in the teaching of action–reaction forces and the 'at rest'condition in physics. *International journal of science education*, *27*(6), 737-763.

Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö.E., Karadeniz, Ş. ve Demirel, F. (2008). *Bilimsel Araştırma Yöntemleri*, Pegem Yayıncılık: Ankara.

Cankoy, O. (2005). Negatif ve pozitif işaretli sayıların çarpımının öğretimine öğretmen adaylarının önerdiği yöntemlerdeki benzetimler. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi,* 29, 63-68

Canpolat, N., Pınarbaşı, T., Bayrakçeken, S., & Geban, Ö. (2006). The conceptual change approach to teaching chemical equilibrium. *Research in Science and Technological Education*, 24(2), 217-235.

Castillo, L. C. (1998). "Theeffect of analogyinstruction on youngchildren'smetaphorcomprehension". RoeperReview , 21 (1)

Coll, R. K., France, B., & Taylor, I. (2005). The role of models/and analogies in science education: implications from research. *International Journal of Science Education*, *27*(2), 183-198.

Dagher, Z. R. (1998). The Case for Analogies in Teaching Science for Understanding, in Mintzes, J. J., Wandersee, J. H, Novak J. D., (Eds.) Teaching Science for Understanding; A Constructivist View, Academic Pres.

Demir, S., Önen, F. ve Şahin, F. (2011). Fen bilgisi Öğretmen Adaylarının Bakış Açısıyla Analojiler, Necatibey Eğitim Fakültesi, EFMED, 5(2), 86-114.

Digilli, A., & Afyon, A. (2014). *Fen bilgisi öğretmen adaylarının geliştirdikleri benzeşimler (Analojiler) üzerine bir araştırma* (Master's thesis, Necmettin Erbakan Üniversitesi).

Dikmenli, M. ve Çardak, O. (2007). *Biyoloji öğretmen adaylarının geliştirdikleri analojiler üzerine bir araştırma*. Uluslar Arası Öğretmen Yetiştirme Politikaları ve Sorunları Sempozyumu, Bakü, 16-20.

Dilber, R., & Düzgün, B. (2008). Effectiveness of analogy on students' success and elimination of misconceptions. *Latin- American Journal of Physics Education,* 2(3), 174-183.

Dönder, A. (2010). İlköğretim 7. Sınıf Fen ve Teknoloji Dersi Öğretmenlerinin Analoji Geliştirme Yeterlilikleri (Elazığ ve Diyarbakır illeri Örneği), Yüksek Lisans Tezi, Fırat Üniversitesi, Sosyal Bilimler Enstitüsü, Elazığ

Duit, R., Roth, W. M., Komorek, M. & Wilbers, J. (2001). Fostering conceptual change by analogies - between Scylla and Charybdis. Learning and Instruction, 11 (4-5), 283-303.

Dupin, J. J., & Johsua, S. (1989). Analogies and" modeling analogies" in teaching: some examples in basic electricity. *Science Education*, *73*(2), 207-24.

Durmuş, A. (2013). Öğrenme Nesneleri Kavramına İlişkin Geliştirilen Örnek Analojiler. *Journal of Kirsehir Education Faculty*, *14*(2), 371-384

Ekici, E., Ekici, F, & Aydın, F. (2007). Fen bilgisi derslerinde benzeşimlerin (analoji) kullanılabilirliğine ilişkin öğretmen adaylarının görüşleri ve örnekleri. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, *8*(1), 95-113.

Gentner, D. & Forbus, K. D. (2011). Computational models of analogy. Wiley Interdisciplinary Reviews-Cognitive Science, 2 (3), 266-276.

Girgin, D., & Şahin, Ç. (2020). Sınıf Öğretmeni Adaylarının Bilim ve Sanat Merkezi'ne Yönelik Analojileri. *Cumhuriyet Uluslararası Eğitim Dergisi*, *9*(3), 935-960.

Glynn, S., Russell, A., Noah, D. (1997). Teaching Science Concepts to Children: The Role of Analogies, http://www.coe.uga.edu/edpsych/faculty/glynn / twa.html.

Glynn, S. M. & Takahashi, T. (1998). Learning from analogy-enhanced science text. Journal of Research in Science Teaching, 35 (10), 1129-1149.

Glynn, S. M. (2007). Methods and strategies: The teaching-with-analogies model. *Science and Children*, 44(8), 52-55.

Glynn, S. M. (2008). *Making science concepts meaningful to students: Teaching with analogies.* In S. Mikelskis-Seifert, U. Reingelband & M. Brückman (Eds.), Four decades of research in science education: From curriculum development to quality improment. 113-125. Münster, Germany: Waxmann.

Gökharman, H. K. (2013). *"Maddenin yapısı ve özellikleri" ünitesinde analoji kullanımının öğrenci başarısına ve tutumuna etkisi (Çivril örneği)* (Master's thesis, Pamukkale Üniversitesi Eğitim Enstitüsü).

Gülçiçek, Ç. ve Güneş, B. (2004). Fen Öğretiminde Kavramların Somutlaştırılması: Modelleme Stratejisi, Bilgisayar Simülasyonları ve Analojiler. Eğitim ve Bilim. 29 (134), 36-48

Jonāne, L. (2015). Using Analogies in Teaching Physics: A Study on Latvian Teachers' Views and Experience. *Journal of teacher education for sustainability*, *17*(2), 53-73.

Karamustafaoğlu, S., & Yavuz, D. (2006). Fen ve Teknoloji Öğretimine Yönelik Sınıf Öğretmen Adaylarının Geliştirdikleri Analojiler. VII. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Ankara, 322.

Keller, J.M. (1983). Motivational Design of Instruction. In Reigeluth, C.M. (Eds). Instructional Design Theories and Models: An Overview of Their Current Status. Lawrence Arlbaum Associates, Inc. New Jersey.

Küçükturan, G. (2003). "Okulöncesi Fen Öğretiminde Bir Teknik": Analoji. Milli Eğitim Dergisi, 157, Kış 2003, 9-15.

Mason, L. ve Tornatora, M. C. (2016). Bilimsel olayların durum karşılaştırması için talimatlı ve talimatsız analojik kodlama. *Eğitim Psikolojisi* , *36* (2), 391-412.

Nottis, K.E.K., & McFarland, J. (2001). A comparative analysis of pre-service teacher analogies generated for process and structure concepts. Electronic Journal of Science Education, (5), 4, Retrieved 15.10.2011 from http://ejse.southwestern.edu/article/view/7667/5434

Opfer, JE ve Doumas, LA (2008). Çocuklukta analoji ve kavramsal değişim. *Davranış ve Beyin Bilimleri* , *31* (6), 723.

Orgill, M.,& Bodner, G. (2003). What research tells us about using analogies to teach chemistry. Chemistry Education: Research and Practice, 5(1), 15-32.

Paatz, R. (2004). A case study analysing the process of analogy-based learning in a teaching unit about simple electric circuits. *International Journal of Science Education,* 29(9), 1065-1081.

Sevim, S. (2013). Bilimde daha etkili olan kavramsal değişimi teşvik etmek: Kavramsal değişim metni mi yoksa analoji mi? *Türk fen eğitimi dergisi* , *10* (3), 24-36.

Stavy, R. (1991). Using analogy to overcome misconceptions about conservation of matter. Journal of Research in Science Teaching, 28(4), 305-313. DOI: 10.1002/tea.3660280404

Şen, A.İ., & Çıldır, I. (2007). Üniversite Öğrencilerinin Elektrik Akımı Konusundaki Düşüncelerinin Farklı Yöntemlerle Tespit Edilmesi. Uluslar Arası Öğretmen Yetiştirme Politikaları ve Sorunları Sempozyumu, 11-15.

Şenpolat, Y. (2005). Fen Bilgisi Öğretiminde Analoji Kullanımının Öğrenci Başarısına Etkisinin Araştırılması, Yüksek Lisans Tezi, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Erzurum.

Şeyihoğlu, A. & Özgürbüz, İ. E. (2015). Analysis of Analogies in Geography Textbooks. Education and Science. (40)179, 163-179. doi: http://dx.doi.org/10.15390/EB.2015.2609

Thiele, R.B., Treagust, D.F. (1995). Analogies in chemistry textbooks. International Journal of Science Education, 17 (6): 783-795.

Uğur, G. (2009). Doğru Akım Devreleri ile ilgili Olarak, 11. Sınıf Öğrencilerinde Oluşmuş Kavram Yanılgılarının Giderilmesine ve Öğrencilerin Fizik Dersine Karsı Tutumlarına Analoji Kullanımının Etkisinin Araştırılması. Yüksek Lisans Tezi, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Türkiye.

Webb, M. J. (1985). Analogies and their limitations. School Science and Mathematics, 85, 645-650.

Yerrick, R.K., Doster, E., Nugent, J.S., Parke, H.M., & Crawley, F.E. (2003). Social interaction and the use of analogy: An analysis of preservice teachers' talk during physics inquiry lessons. *Journal of Research in Science Teaching*, 40(5), 443-463.

Yıldırım, A. ve Şimşek, H. (2006). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seçkin yayınları.

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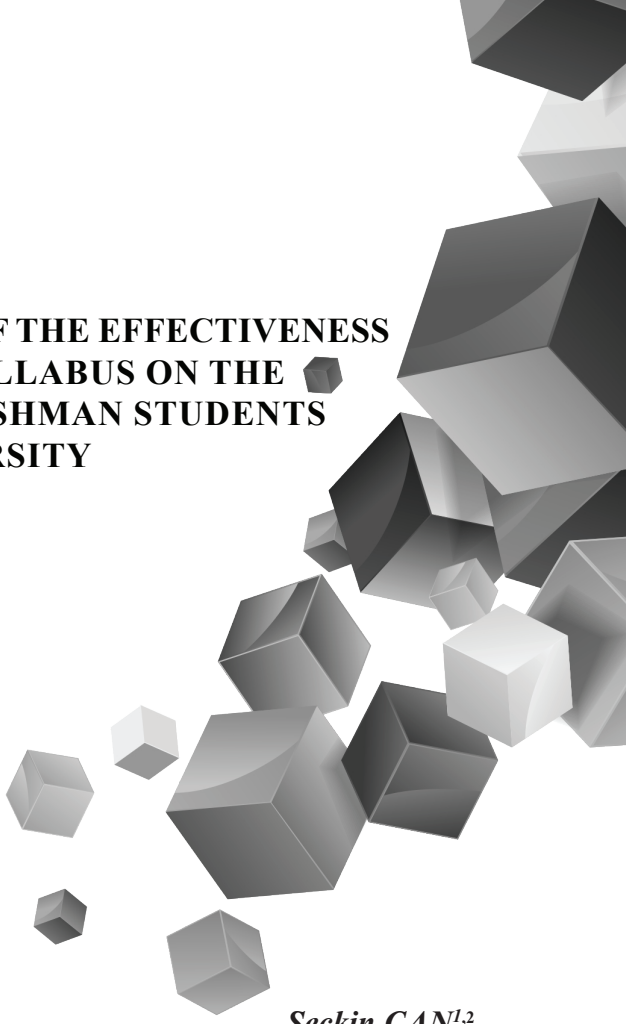
Chapter 6

AN INVESTIGATION OF THE EFFECTIVENESS OF THEME-BASED SYLLABUS ON THE MOTIVATION OF FRESHMAN STUDENTS AT A PRIVATE UNIVERSITY



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2 The study was retrieved from the researcher's MA dissertation titled "An investigation of the effectiveness of theme-based syllabus on the motivation of freshman students at Atılım University"

1. INTRODUCTION

The question why some people can learn a second or foreign language easily and others cannot under same circumstances has been a matter of debate for a long time. There are quite a lot of variables that affect the success in foreign language, and motivation is one of the most significant of them. Thus, motivation research has received much attention in recent years. The trend towards motivational theories has generated more interest in the topic among researchers. While motivation is considered as learners' own property, it is also a transitive concept since teachers can also motivate their students. Moreover, learning a language is a long- term activity and motivation does not remain constant. Therefore, it is more complex than it seems and balancing the various internal and external influences is significant during the long process.

Being one of the most well-known types of content-based syllabus, theme-based syllabus can be described as a syllabus organized around a theme or topic rather than around another organizing feature such as a grammatical syllabus (Brinton, Snow & Weche, 1989). In traditional syllabuses, content is used for enclosing the grammatical input into the content; however, in theme-based model, content is used to develop the language skills. Theme-based syllabus is also advantageous in terms of materials since it can be designed considering students' needs and interests. Thus, it may have a positive impact on students' motivation

1.1. Problem

Students' low motivation is one of the main problems that instructors have to deal with in "Introduction to Communication Skills" course offered to freshman students at private university. Students frequently have concentration problems during the class and this situation decreases the success level. They find the reading texts in the coursebook boring and would like to read more up to date texts. In addition, they are more willing to read authentic texts based on daily life.

The current syllabus used in the course is not designed around students' interests and students read the texts in the coursebook chosen by the committee at the beginning of the semester. Moreover, instructors do not have a chance to use extra materials during the course due to the hectic program. It is obvious that increasing students' motivation is not possible through the current syllabus in use; thus, designing a new syllabus organized around themes considering students' interests is necessary.

1.2. Aim of the Study

This study aims at investigating the effectiveness of the theme-based syllabus on the motivation of freshman students taking "Introduction to

Communication Skills Course" at a private university. The theme-based syllabus will be prepared based on the results of student interest survey. After applying the syllabus in class for five weeks, the effectiveness of it will be investigated through interviews with students.

The following questions will be investigated in the study:

1) What are the themes that freshman students would like to focus on in Introduction to Communication Skills Course?

2) Is the theme-based syllabus based on students' interests a positive factor in increasing student motivation??

3. METHOD

At the beginning of the research, an interest survey was designed and conducted to identify the themes that students are interested in. After the quantitative analysis of the interest survey, five themes which ranked the highest numbers were chosen and a five-week theme-based syllabus was designed. During the first teen weeks of the semester, the common syllabus prepared by the institution was used in all sections of the same course. In the second stage of the study, the theme-based syllabus was employed during five weeks in one section of the same course.

After the implementation of syllabus, semi structured interview sessions were conducted with twenty-six students. The questions were adapted from the study of Kormos (2008) who investigated the elements that characterize the language learning motivation of Hungarian English language students in terms of Dörnyei and Ottó's (2003) process model of motivation. At the end, effectiveness of the proposed theme-based syllabus on the motivation of students taking the same course was investigated qualitatively.

3.1. Participants

The interest survey was applied to freshman students at a private university. The participants were 158 first year students aged between 18-21. Nearly all of the participants had prep class both at university and in high school. At the end of university preparatory class, they took proficiency exam and those who scored between 60 - 66 (out of 100) enrolled in this course. When it was considered that minimum passing grade was 60 in prep school, it was obvious that their proficiency level was low. After the implementation of the theme-based syllabus, 26 students were interviewed. The interviewees were chosen from the students who had been included in the interest survey.

3.2. Instruments

The first instrument used in this study was an interest checklist adapted from Metin (2002). It was used for the study aiming at designing

an advanced level speaking course syllabus for the first-year students at ELT departments in Turkey. Two major changes were made while adapting the interest survey. The first change was changing some topics which students would not have any background information. The second change was the reorganization of the items in terms of appearance in order to make students understand it easily. The checklist consisted of two parts. First part consisted of a list of main topics to be scaled on an interest scale and sub-topics for each main topic. Students first responded to a 3-point scale ranging from 1 to 3. Each number represented a certain interest level; that is, 1- boring; 2- neutral; 3- interesting. The students responded to the checklist showing their ranking by encircling one of the numbers. Second part consisted of a plain list of the main topics presented in the first part. Students were supposed to use sub-topic lists in the first part and choose their most favorite sub-topic for each main title and write their choice down in the space provided. Students were fully guided while filling the questionnaire and it was assumed that students sincerely answered the questions. The aim of the checklist was to identify the areas learners were interested in and designing the suggested syllabus by taking these topics into consideration. There were 21 main titles in the checklist and each title had different subtopics. Main titles were general concepts like sports, and subtopics were more specific like popular sports, extreme sports, Olympics, world sport records.

The second instrument used in the study was student interviews. Interview questions were adapted from Kormos (2008) who searched motivational profile of English learners in Hungarian context. These questions were based on Dörnyei and Otto's process model of motivation and aimed at gathering information about the pre-actional, actional and post-actional stages of motivation

Based on the findings of quantitative data analysis, a five-week theme-based syllabus (was designed and employed. After the quantitative analysis of the student interest survey, technology, travelling, mysteries of the world, addictions and issues in sports were identified as the most popular topics and five-week theme-based syllabus was built on them. While designing the syllabus, the pre-defined aims and objectives of the course were not ignored and the proposed theme-based syllabus was developed in the parallel of the main syllabus in terms of target skills. During the process, the main syllabus prepared by the institution was adopted in other classes. However, since all the students were supposed to take the same final exam at the end of the semester, all the specific activities included in the main syllabus were also reflected in the proposed theme-based syllabus. Thus, standardization in teaching was achieved.

3.3. Data Collection

The questionnaire was conducted to first year students at a private university. One hundred fifty-eight students from various departments answered the questions in the survey. Since they had difficulty in understanding certain items due to insufficient proficiency level, participants were guided by instructors while filling in the questionnaires.

Twenty-six interview sessions were conducted by the researcher. Six students preferred to be interviewed in the classroom and the others were interviewed in the office. Since students' proficiency level was not sufficient and they would have difficulty in expressing themselves in English, they were all interviewed in Turkish.

4. RESULTS AND DISCUSSION

After the survey had been conducted, the topics and subtopics were ranked from the most favorite to the least favorite:

Table 1: List of Most Popular Topics and Subtopics

THE MOST FAVOURITE TOPIC	THE MOST FAVOURITE SUBTOPIC
1. Issues in Technology	The internet
2. Traveling	Holiday
3. Mysteries of the world	UFOs
4. Addictions	Computer games
5. Issues in Sports	Popular Sports
6. Arts	Cinema
7. Crime and Punishment	Serial killers
8. Famous People	Paparazzi
9. Earth Matters	War
10. Humor	Comedy movies
11. Relations	Best friends
12. Historical Issues	World wars
13. General Issues	Hobbies
14. Health and Beauty	Diets
15. Hot Issues	Terrorism
16. Issues in Education	University life
17. Work and Business	Advertising
18. Cultural Issues	Different cultures
19. Psychology	Dreams
20. Political Issues	History of politics
21. Gender Issues	Gender differences

Student interview was composed of two parts. The first part included results based on the categories of the qualitative data analyses, which were divided into three major themes following Dörnyei and Otto's (1998) process model of motivation: choice motivation (pre-actional stage), executive motivation (actional stage) and retrospective motivation (post-actional stage.) In the second part, a comparison was made through open

ended questions seeking students' reflections about the main syllabus used in the first ten weeks and the proposed theme-based syllabus adopted in the last five weeks.

4.1. Choice Motivation

Twenty-one of participants started learning English at relatively early age because they went to private school. Others started learning English at third grade and surprisingly there was no difference between their proficiency levels. None of the interviewees could give a proper answer to the question about their main goal when they started learning English. It is probably because of the age level they receive English courses:

English was not different from physical education course for me. It was funny and enjoyable. I was expecting to play game all the time and have fun. What kind of aim can I have at that age? (R3)

On the other hand, most of the interviewees identify the prep school year as the period in which they set concrete goals. They need to pass prep school proficiency exam, so they unintentionally identify their goals in the parallel of this exam. Three students also stated that the medium of instruction is English at the university, thus, they need to have a certain proficiency level to follow departmental courses. The number of these students is not enough to generalize this aim for all students and it is possible to say that interviewees usually set their goals considering daily circumstances.

Prep school was a waste of time. My main aim was passing proficiency exam and coming to the department. I can learn English after I graduate from university. (R21)

When interviewees are asked about their goals for now, it is obvious that they are aware of the importance of learning English. All of the interviewees stated that they want to be equipped with all the necessary skills to communicate in English effectively. Probably, the reason of the change in their perspective is their expectations since they have noticed that they need to have a certain proficiency level to be successful not only at school but also in business life.

TOEFL exam is frequently mentioned by the students during the interviews. It is obvious that they have modified their goal of learning English considering the conditions. Therefore, it seems that their main aim is to be able to perform four language skills at the highest possible level. However, there is an obvious contradiction between their aim and attitude towards English. The interview results confirm that considerable number of students have negative attitude towards English language. Sixteen students stated that they would not have chosen an English medium university if

they had had a chance. Moreover, twenty-one students confessed that they would not try to learn English if it was not necessary to find a job.

I have never been successful in English courses. It is always a big problem for me. English courses are like a torture for me. (R17)

The utterance above may be a bit exaggerated, but it is necessary to say that most of the students have similar opinions about English and this is mainly because of the feeling of being unsuccessful. Half of the interviewees stated that they were neutral or positive towards English when they started to learn, but their attitude turned into a "hate" after the series of failures in exams or in classroom activities.

4.2. Executive Motivation

As regards with language learning effort, it is necessary to emphasize that the picture is not promising. All of the participants stated that they do not make enough effort to improve their English. It is also clear when their proficiency level is examined since they only focus on passing the class or getting high mark rather than being fluent at international level. While some of the respondents confessed that they had never studied English, some stated that they studied hard in preparatory class since English was the only course they were supposed to pass. In brief, most of the participants are exam-oriented students and this situation prevents them from improving their English. If they get enough grade for passing the class, they do not need to make extra effort to improve their English.

When it comes to the question of what kind of language strategies students use to improve their language competence, the picture is not promising again. More than half of the students could not name any strategies. Others identified watching movies in English, surfing on the internet, reading books and watching foreign broadcasts. However, these are generally passive activities and not sufficient for maintaining their level of competence rather than improving. Only two students expressed that they tried to learn new words from foreign language input and improve their speaking skills through video conversation on the internet. In spite of the passive and unproductive approach they have, all of the learners stated that they want to improve their English. Ironically, eighteen of the respondents are planning to improve their English after they graduate from university instead of the school where the medium of instruction is English.

My aim is getting the highest grade I can. I know my English is not enough, but I can improve it after I graduate from university. I am planning to go abroad and enroll in an English course. (R3)

Only five of the participants studied another foreign language apart from English, but none of them can identify it as "learning" since they

received a limited instruction for a short period of time. Therefore, it is not possible to talk about any effect of another language on their English level. In the same way, thirteen of the students have been to an English-speaking country before, their main aim was travelling and they did not need to use English all the time. Only one student stated that he went to Malta for English education for six months but he could not stay so long due to accommodation problems. However, he stated that spending three months in Malta affected his self-confidence in positive way. Surprisingly, seventeen of the interviewees have foreign acquaintances and they can communicate with them in English. Probably, some keywords and daily expressions are enough for them to express themselves. They are generally positive about their foreign friends and they believe that their friendship is also good for their English. Furthermore, participants do not have any prejudge for British and American cultures in general.

The interviewees had rather negative view about language learning at the university. They harshly criticized the efficiency of the English classes at the university and identify the poor English instruction as the main cause of their low proficiency level. They were dissatisfied with the insufficient language practice in class and boring topics, materials, methodology and instructors.

We are supposed to read many texts, write many paragraphs, learn many new words. But we cannot use them in our departmental courses. This is useless. It would be better if our departmental courses and English courses were parallel. (R8)

Another student criticized the materials and methods used in English classes.

I am not interested in most of the reading and writing topics in the classes. Therefore, I cannot motivate myself. Is it so difficult to find an interesting material for the class? Instructors always ask us to speak in the classroom, but how can I speak about the subject I do not know? (R11)

These responses can give an idea about students' low motivation level in English courses. Students are not willing to learn and improve English and there is not enough or correct effort made by the institution. It is not possible to find motivated, eager and prepared students to learn English all the time and extra effort can be necessary to attract students. Otherwise, neither students nor instructors motivate themselves. This can also be observed in students' responses for the question of how they motivate themselves to learn English. Unsurprisingly, twenty-four participants identified exam grades as the main source of their motivation.

I always study if I did not get good mark in the previous exam. When I get high mark, I think that my English is enough and study for departmental courses.

This exam-oriented approach reveals that fear of exam grade increases their motivation to some extent. On the other hand, more than half of the interviewees also stated that they need to learn English in order to find a job after graduation. This number also should be more than twenty, interview sessions showed that the students are quite pragmatic and try to save the day first.

When it comes to the factors increasing their motivation, they do not have clear expectations in their minds. Subjects related to their departments, classroom activities using audio-visual aids, funny teachers, up to date topics, computer-based activities are the most frequently identified factors increasing their motivation. On the other hand, they believe that boring subjects and attitude of instructors are the factors that decrease their motivation.

4.3. Retrospective Motivation

When students are asked about their successes, they all expressed external incentives such as high grades and good exam results. Getting high mark like AA or BA was regarded as a great success by many of the respondents. Apart from marks, some students mentioned applause and acknowledgement from teachers as the successes in their English learning history. Following foreign broadcasts and being able to communicate with foreigners are also considered as success by some of the participants.

When it comes to failures, ten of the participants remembered prep school year because six of them spent two years in prep school and four of them could only pass prep school after summer school. They see the prep school as a waste of time even though most of them still need some basic subjects covered at prep school.

Failing in the prep school was the biggest failure in my education. I was really sad and angry. I had to spend another year, but it did not give me anything. My English is still insufficient! (R17)

The interviewees who failed in prep school stated that they considered giving up learning English. However, this means more than quitting English since they have to leave university in that case; so, they continued to attend classes. This stage can be considered as one of the basic sources of their low motivation because they have seen learning as a compulsory duty rather than necessary skill.

As regards fulfillment of language learning goals, it is obvious that they have not reached their goal yet. They would like to learn English in a level required for business life and they need to use English in global level. However, none of them believe that their current level is enough for international level. Moreover, some of them are quite pessimistic about

learning English. Some participants stated that they have modified their goals after coming to department.

I had had high expectations like getting a high TOEFL score, but I have already forgotten this aim since it is not possible to do it here. I do not think that this university takes me anywhere real my goals. I only want to get high marks and graduate from university with good GPA. (R23)

5. DISCUSSION AND CONCLUSION

This part discusses the conclusions which have been drawn from the results and interpretations of the findings. The conclusions are presented in line with the research questions.

5.1. Students' Favorite Themes

After the quantitative analysis of the student interest survey, it is clear that technology is the most popular topic among students. We live in a century of innovation and university students are those who can adjust themselves to new technology easily. Thus, they would like to have an English instruction including texts, tasks and activities related to elements of technology. According to the results of the interest survey, the internet is the most popular item under technology title. It is clear that the internet means more than an innovation for them and they are always eager to talk about it. It is not only pleasure but also necessity for them since they need to keep track of innovations on the internet to become a member of this technology society.

Another popular topic among students is travelling. This finding is not surprising since young people are generally energetic and curious about what happens in other parts of the world. Since the participants of the interest survey are private university students, their socioeconomic condition is enough to go on holiday regularly. Going holiday means more than relaxing and they see it as a sign of social status. In brief, travelling and holiday choices are the reflection of students' high living standards.

Mysteries of the world is another popular topic among students. It is natural that human being has always been curious about mystery. UFOs is the most popular subtitle under this topic and it may be due to the mystery whether UFOs exist or not. Since there are controversial ideas about this subject, they are willing to study topics regarding UFOs.

Addictions is another popular topic among students. However, when subtitles of addictions are examined, it is clear that students are not interested in classical addiction such as smoking, alcohol or drug. Most of male participants are interested in addiction of computer games since nearly all of them spend many hours on computer games every day. On the other hand, shopping addiction is another popular subtitle. Especially

female participants are fond of shopping and they define themselves as shopaholics. In brief, responses to this item in the survey reflect the results of gender differences.

Unsurprisingly, sports is another topic that students are interested in. Issues in sports are the topics that they have background information since most of them follow at least one popular sports organization regularly. Popular sports is the theme that they would like to focus on under this title since they are always exposed to popular sports activities due to mass media.

The mentioned topics above are the five most popular topics among students and they are used while designing a five-week theme-based syllabus. Apart from them, arts, famous people, humor and relations can also be considered as popular topics. However, topics like gender issues, political issues, work and business, psychology and cultural issues are not preferred by students. It is clear that students' preferences directly reflect the features of their age-group, habits, socio-economic conditions and lifestyles.

5.2. Effectiveness of the Five Week Theme-Based Syllabus

As it was explained in methodology part, traditional main syllabus designed by the institution was used in all sections of the course during the semester. The designed theme-based syllabus based on student interest survey was used during five weeks in one section of the same course. The topics covered in the first ten-week period were related to gender issues, work and business, issues in education, psychology and health. Interviewees had generally negative attitudes towards the topics during this period since they did not find them interesting. Moreover, they complained that they did not have enough background information about these topics. Some of them also complained that it was the third time they read a text on studying abroad. Most of the participants were not happy with the topics and this situation resulted in negative attitudes towards the course. They just came to classes due to absenteeism and they were not active in class. Boring topics also prevented many of them from concentrating on the course and they thought that the course was totally a waste of time.

Developing a negative attitude towards English was another disadvantage of the main syllabus on students. Some students stated that they could not motivate themselves even though the topic of that day was interesting. Interview results revealed that if students developed a negative attitude towards the course at the beginning, it was quite difficult to change the situation no matter how much effort instructors made.

After the implementation of the theme-based syllabus designed for that specific class, students' responses to interview questions revealed that

there was a clear and noticeable increase in student motivation. Most of the participants had positive attitudes towards the topics studied during five weeks and they tried to participate in class activities more frequently. They found the topics covered in this period were quite different from the previous weeks and they were surprised about it. To my surprise, all of the respondents were also included in the interest survey conducted at the end of the first semester but none of them noticed that proposed theme-based syllabus had been prepared considering the result of that survey.

The first reason of the success of the theme-based syllabus in increasing student motivation is up to date and interesting topics. Students do not prefer topics such as health issues, work and business and psychology because these topics are not as attractive as technology, sports and travelling. They do not have serious health problems at that age and they do not want to deal with texts about the heart attack. On the contrary, they want to deal with issues from their own daily lives. As Met (1991) suggests, the most powerful argument for the popularity of theme-based syllabus is its providing a natural setting for language learning and learners tend to focus on topics that they can experience in real life. Thus, thanks to a shift of topics from health problems to technology in the proposed syllabus, students developed intrinsic motivation to participate in the course.

Apart from being interesting, the topics in the theme-based syllabus are not the repetition of a common topics in all coursebooks. In other words, the topics are not cliché for them. Nearly all of the coursebooks contain similar topics and students have to study same topics in their language learning journey. Thus, they lose their motivation. However, when they see that some new themes can be presented in a course, they can develop positive attitude towards the course and their motivation increases.

Another reason of the success of theme-based syllabus is the fact that students have background information about the topics. As it was suggested in the literature, theme-based syllabus enable teachers to build the teaching on the background knowledge of learners (Genesee,1994). Since the syllabus was designed considering the results of the interest survey, most of the students have something to say in the classroom and course can be built on their background knowledge. Therefore, they feel secure and powerful during the course and this situation increases their motivation.

Even though some students thought that it was too late for the change, it was obvious that many participants developed positive attitude towards the course. Interview sessions revealed that that they started to think English as a concept that they could integrate with other parts of their life. For example, one of the respondents stated that writing a paragraph describing the common myths in Turkish culture was the most enjoyable thing that

she did in all English courses so far. Apart from this, many respondents gave positive feedback for the project asking students to prepare an advertisement about an innovation for language teaching.

The results of this study show similarities with other studies carried out in different contexts. They also reached to the conclusion that theme-based syllabus has positive influence on student motivation. For instance, the research carried out by Olgun (2004) at Middle East Technical University reflects nearly the same conclusions with this study. Moreover, the research conducted by Song (2006) also reached to the conclusion that thematic instruction affects student motivation positively. Results of other studies also strengthen the idea that theme-based syllabus is a positive factor in increasing student motivation.

All the feedback from respondents leads to the conclusion that the theme-based syllabus affected students' learning in a positive way since it is more effective, enjoyable, and beneficial for students. Even if it was limited, it could change their attitude towards the course and students started to think that English courses could be more enjoyable. It is obvious that if such a syllabus was used during a whole semester, it would be more effective and help students to develop positive attitude towards English.

REFERENCES

Allen, J.P.B. (1984). *General-purpose language teaching: A Variable focus approach.* In Brumfit, Christopher (Ed), General English Syllabus Design (pp. 61-74). United Kingdom: Pergamon Press.

Alptekin, C. , Erçetin,G.,and Bayyurt, Y. (2007). The efectiveness of a theme- based syllabus for young L2 learners. *Journal of Multilingual and Multicultural Development*. 28, 1-17.

Breen, M. (1987). *Process syllabuses for the language classroom.* In Brumfit, C. (Ed.). General English syllabus design, ELT Document 118. Oxford: Pergamon Press (In association with the British Council) pp. 47-60.

Brinton, D. , Snow, M. and Wesche, M. (1989). *Contnet-based second language instruction*. New York: Newbury House.

Clément, R. and Dörnyei, Z. and Noels, K. A. (1994). Motivation, self-confidence, and group cohesion in the foreign language classroom. *Language Learning 44*, 417-448.

Crandall, J. (1993). Content-centered learning in the United States. *Annual Review of Applied Linguistics*. 13, 111-126.

Cummins, J. (1980). The cross-lingual dimensions of language proficiency: Implications for bilingual education and the optimal age issue. *TESOL Quarterly.* 14, 175-187.

Crandall, J. (1987*). ESL through content-area instruction*. Englewood Cliffs, NJ: Prentice Hall.

Dörnyei, Z. (2003). Attitudes, orientations, and motivations in language learning: Advances in theory, research and applications. *Language Learning 53*: Supplement 1.

Dörnyei, Z & Otto, I. (1998). Motivation in action: A process model of L2 motivation. *Working Papers in Applied Linguistics. 4* (43), 61.

Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. Modern Language Journal,78, 273-284.

Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching 31*, 117-135.

Dubin, F. and Olshtain, E. (1986). *Course design*. United Kingdom: Cambridge University Press.

Gardner, R. C. and Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Newbury House: Rowley, MA.

Gardner, R. C. , Lalonde, R. N. and Moorcroft, R.(1987). Second language attrition: The role of motivation and use. *Journal of Language and Social Psychology, 6*, 29-47.

Genesee, F. (1994). *Language and content: Lessons from immersion programme* (Educational Practice Report No.11). Washington DC: National Center for Research on Cultural Diversity and Second Language Learning.

Graves, K. (2000). *Designing language courses: A guide for Teachers*. U.S.A.: Heinle & Heinle Publishers.

Harmer, J. (2001). *The Practice of English language teaching*. Cambridge: Longman

Kasper,L.F. (1995). Theory and practice in content-based ESL reading instruction. English for Specific Purposes,14, 223-229

Kasper, L.F. (1997). The impact of content-based instructional programs on the academic progress of ESL students. *English for Specific Purpose*.16, 309-320.

Kormos, J. and Menyhárt, A. and Török, D. (2008). *Great expectations:* The motivational profile of Hungarian English language students. *Arts and Humanities in Higher Education,* 7 (1) , 65-82 (2008)

Krashen, S. D. (1985). *The Input hypothesis: Issues and implications*. London: Longman.

Krahnke, K. (1987). *Approaches to syllabus design for foreign language teaching.* Englewood, NJ: Prentice-Hall, Inc.

Kovalik, S. (1997). *Integrated thematic instruction*: The model (Third Edition). Kent: Susan Kovalik & Associates.

McDonough, S. (1981); *Psychology in foreign language teaching*, George Allen & Unwin, London.

Met, M. (1999). *Content-based instruction: Defining terms, making decisions*. Washington, DC: The National Foreign Language Center

Metin, E. (2002). *A suggested advanced speaking course syllabus for the first year students at ELT departments*. Ankara: Hacettepe Üniversitesi, Egitim Bilimleri Enstitüsü (Unpublished Thesis).

Nunan, D. (1981). *Language Teaching Methodology*. United Kingdom:Prentice Hall Regents.

Nunan, D. (1988a) *The Learner-Centered Curriculum*. Cambridge: Cambridge University Pres.

Nunan, D. (1988b). Syllabus. United Kingdom: Oxford University Press.

Olgun, A.A. (2004). The influence of thematic instruction on the motivation of upper-intermediate preparatory school students of English for Academic purposes (EAP) at METU. Ankara: Middle East Technical University, Graduate School of Social Sciences (Unpublished Thesis).

Oxford, R. L., and Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *The Modern Language Journal, 78,* 12-28.

Richards, J. C. (2001). *Curriculum development in language teaching.* Cambridge: Cambridge University Press.

Rogers, D. M. (2006). Developing content and form: Encouraging evidence from Italian content-based instruction. *The Modern Language Journal*. 90, 373- 386.

Snow, M. A. & Brinton, D. M. (1988). *Content-based instruction: Investigating the effectiveness of the adjunct model.* TESOL Quarterly,22, 553-574.

Snow, A. M. (2001). Content-based and immersion models for second and foreign language teaching. In M. Celce-Murcia, (Ed.), *Teaching English as a second or foreign language* (pp. 303-318). Boston: Heinle & Heinle.

Song, B. (2006). Content-based ESL instruction: Long-term effects and outcomes. *English for Specific Purposes.* 25, 420-437.

Stern, H.H. (1984). Review and Discussion. In Brumfit, J. C. (Ed) *General English Syllabus Design* (p.5-12) Pergamon Press.

Stoller, F. L., & Grabe, W. (1997). *A six-T's approach to content-based instruction.* In M. A. Snow and D. M. Brinton (Eds.), *The content-based classroom: Perspectives on integrating language and content*. (pp. 78-94). NY: Addison-Wesley Longman.

Topçu, T. (2005) An investigation of the effectiveness of the theme-based curriculum in the 2003-2004 academic year at the department of basic English at Middle East Technical University. Ankara: Middle East Technical University, Graduate School of Social Sciences. (Unpublished Thesis)

Tremblay, P. F. & Gardner, R. C. (1995). Expanding the motivation construct in language learning. *The Modern Language Journal 79*, 505-518.

White, R. V. (1988). The ELT Curriculum. United Kingdom: Basil. Blackwell Ltd.

Widdowson, H.G. (1984). Educational and pedagogic factors in syllabus design. In Brumfit, J. C. (Ed) *General English Syllabus Design* (p.23-27) Pergamon Press.

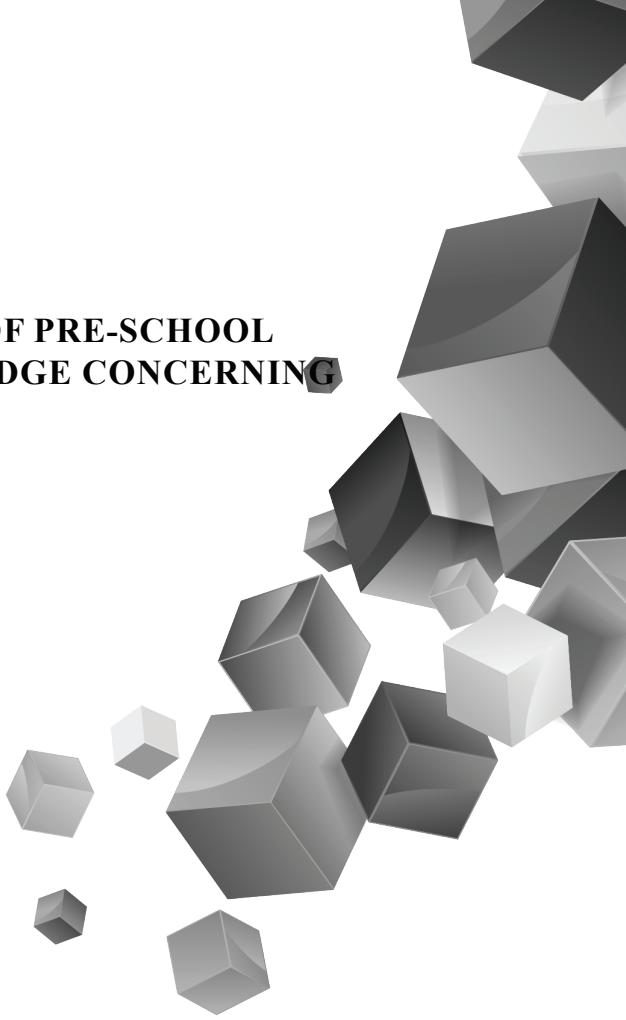
Widdowson, H.G. (1990). *Aspects of language teaching*. United Kingdom: Oxford University Press.

Wilkins, D.A. (1979). *Notional syllabuses*. Great Britain: Oxford UniversityPress.

Williams, M. & Burden, R. (1997). Psychology for language teachers. Cambridge: Cambridge University Press.

Chapter 7

AN INVESTIGATION OF PRE-SCHOOL TEACHERS' KNOWLEDGE CONCERNING QUADRILATERALS



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1. INTRODUCTION

Geometry which has both a theoretical domain and real-life connections, is important to improve learners' spatial thinking and visual skills besides developing deductive reasoning and proving abilities (Battista, 2007; French, 2004; Fujita and Jones, 2007; Presmeg, 2006; Türnüklü, Alaylı & Akkaş, 2013). Teaching and learning of geometry can be supposed more difficult than the other part of the mathematics and this is one of the major problems for mathematics education (Fujita and Jones, 2002). Shape is a fundamental concept in cognitive development and also fundamental idea in geometry (Sarama and Clements, 2009).

Concept formation in geometry is a complex process. Vinner and Hershkowitz (1980) described this process by using the terms "concept image" and "concept definition" about geometrical concepts. Concept image is defined as the cognitive structure which includes mental image, features and process about the concept (Tall and Vinner, 1981). Unlike formal definitions, when creating personal definitions, formal definitions are filtered in person's mind. By using this personal definitions people create their own concept images (Tall and Vinner, 1981; Türnüklü et al., 2013, Türnüklü, 2014; Tsamir, Tirosh, Levenson, Barkai & Tabach, 2015). Some properties of geometric concepts can be used for the formation of the concept image. These properties have been separated into two groups: critical and non-critical attributes (Türnüklü, 2014).

Teaching geometric shapes is one of the basic topics of teaching mathematics in early childhood education and this period is a good time for children to become interested in the subject. Pre-school period is a period that offers important opportunities in terms of mathematics education and is thought to affect the next education life of children. It is stated that the well-structured learning process in early childhood forms the basis of their children's mathematical development (Seefeldt and Wasik, 2006) and is a predictor of their success in the following years (Jordan, Kaplan, Ramineni & Locuniak, 2009; Vandell, Belsky, Burchina, Steinberg & Vandergrift, 2010).

Could the same be true for geometry, which is a sub-branch of mathematics? Studies show that the answer to this question specific to geometry is more positive and remarkable than the general of mathematics. The findings of the researches reveal that children make geometric observations before they start primary school, they form and develop many geometric concepts (Clements, 2001; Clements and Sarama, 2000a Clements and Sarama, 2000b; Clement, Swaminathan, Hannibal & Sarama; Develi and Orbay, 2003; Kesicioğlu, 2013). The education that children will receive in this period depends mostly on the quality of their teachers (Žilková, 2015).

Before young children begin primary school, they are at the first stage of the van Hiele levels and recognize figures by appearance alone but may not realize which attributes are critical. As time goes on some difficulties and failures occur in students' geometric achievement. Here, we need to first focus on early childhood education. In pre-school education period, the pre-school teacher has a very important role in quality of their teaching and children's mathematical learning experiences. If the teacher does not use correct mathematical knowledge and mathematical language even at daily routines, it can lead to misconceptions later on. Because of this, it is crucial that teachers have a good level of subject knowledge (Ball, Hill & Bass, 2005; Fujita and Jones, 2006; Tsamir et al. 2015).

Our research takes place in the Turkish context of geometry teaching in pre-schools. Pre-school education is not compulsory in Turkey. 66% of children in pre-school age are enrolled in primary school. A revised pre-school curriculum for 36-72 months children was introduced in Turkey (MONE, 2013). The expectations for the early years are that children should count, sort, build shapes, detect patterns, measure and predict. It is stated that pre-school mathematics education should focus on two areas, one of which is numbers and operations and the other is geometry and measurement (Cross, Woods & Schweingruber, 2009). Although there are many topics related to mathematics in the curriculum the one related to geometry is only "to recognize geometric shapes". This situation contradicts with the increasing interest in developing geometry skills at at early ages (Yeşil Dağlı and Halat, 2016).

In Turkey, pre-school teachers have to take a four-years training to become a teacher. "Early childhood mathematics education course" is a one-semester course in a total of eight semester. By the end of the course, it is expected that students will have been informed about: Mathematical thought; content, principles, processes and methods for pre-school mathematics programs, materials towards developing mathematical thought. Geometry teaching are also included in this content.

Research Question

Whether children receive education or not from birth, they are also introduced to geometry while perceiving their surroundings. It is known that before primary education, some students receive a formal pre-school education and some do not have this opportunity. It is emphasized that in pre-school period, if the intuitions and habits of children are trained in geometry from well-equipped teachers before they sit down and if children are guided in this process, a positive difference can be made in the following periods (Tsamir et al., 2015). Therefore, it is of great importance to increase teacher qualifications in the pre-school period. For this reason, it is important to determine the level of pre-school teachers' content

knowledge about quadrilaterals. the findings of the research will contribute to increase the quality of mathematics education in the pre-school period. The study aims to reveal how pre-school teachers define quadrilaterals, how their images are and how they classify quadrilaterals. In this context, answers will be sought for the following questions;

1. How do pre-school teachers define quadrilaterals?

2. What are the images of the pre-school teachers belonging to the quadrilaterals?

3. How do pre-school teachers classify quadrilaterals?

2. METHOD

The research was carried out with a qualitative approach. Phenomenology design was preferred as a research design. Phenomenology design is used when it is recognized, but there is no in-depth and detailed understanding about it (Yıldırım and Şimşek, 2011). In this study, it was decided to use the phenomenology pattern to investigate how pre-school teachers define some quadrilaterals, their drawings and the consistency between the definitions and drawings.

Participants

The study was conducted with 23 practicing pre-school teachers; 11 of whom were working at public and 12 of whom were working private schools in İzmir. All the teachers participating in the study are women and they were included in the study with the appropriate sampling method. The appropriate sampling method made it easy for the researcher to reach the participants and carry out the interview (Creswell, 2012). It has been stated that the participation of the participants in the research is voluntary. Teachers who were not willing to participate in the study or who did not want to continue the interview during the study process were informed that they can end the interview whenever they wish.

Data Collection Tool

The data were collected by semi-structured interviews. Semi-structured interview technique provides flexibility to the researcher compared to the structured interview and allows asking additional questions during the interview in addition to the questions prepared before the interview (Türnüklü, 2000; Yıldırım and Şimşek, 2011). The questions in the interview form were determined as a result of the literature review. In the pilot study, the questions collected under three main headings were directed to two teachers, one of whom was working in a private school and the other in a public school. After the application, the form was finalized by taking the ideas of the researchers and a field expert. In order to get the teachers' concept images about quadrilaterals, asked for definition,

drawings and classifications of them. The questions arising as a result of the evaluations and directed to the teachers are as follows;

• Can you define the square, rectangle, parallelogram, rhombus and trapezoid?

• Can you draw an example of each of these quadrilaterals you have defined?

• Classify these quadrilaterals.

Participating teachers were informed that they could leave the interview at any time before starting the interview and their permission was obtained to record the interview with a voice recorder. In addition, in order to make teachers feel comfortable, they were informed that the questions will be used for scientific purposes, not to judge them, before the questions were asked. Each teacher was interviewed for an average of 15 minutes, and all interviews were completed within two weeks. Both the expressions of the teachers in the interviews and their drawings were taken into consideration.

Analysis of Data

The collected data were analyzed by content analysis technique. First of all, the records of the interviews with the teachers were transcribed on computer. The texts transcribed and the drawings made were brought together and analyzed by two researchers. In the comparison made, the inter-rater reliability coefficient was found as about 0.90 and this was found to be a sufficiently large enough (Neuendorf, 2002).

3. FINDINGS

The data of the study, were examined under three headings in parallel with the research questions. Under these headings, pre-school teachers' quadrilateral definitions, quadrilateral drawings and classifications of these quadrilaterals are exemplified and interpreted.

Definition Of Quadrilaterals

In the definitions that are accepted as correct, fulfillment of the necessary and sufficient conditions for the quadrilateral has been taken into account. Although the definitions considered as lacking or exceeding information do not contain any errors, it has been taken into account that the deficiency or excessive feature is counted. The frequency and percentages of the responses of the teachers regarding the definitions of quadrilaterals are given in Table 1.

Table 1. *Frequency (%) of correct definition of quadrilaterals*

	Correct Definition	Definition with lacking or exceeding information	Wrong Definition	Undefined
Square	2(%9)	21(%91)	0(%0)	0(%0)
Rectangle	0(%0)	0(%0)	21(%91)	2(%9)
Parallelogram	1(%4)	5(%22)	9(%39)	8(%35)
Rhombus	3(%13)	6(%26)	3(%13)	11(%48)

As seen in Table 1, teachers mostly failed in the rectangle definitions. Results indicates that; teachers could not identify quadrilaterals exactly especially rectangle. Most of the wrong statements made were those for rectangle. The emphasis on short and long sides draws attention in the wrong definitions of the teachers for the rectangle. An example of such definitions is when a teacher defines a rectangle as «Shape which has two short two long sides and four angles». This reveals that the teachers took into account the typical drawing of the rectangle and they did not see the square as a rectangle.

The shape that teachers had the most difficulty in defining among the quadrilaterals was the rhombus. 48% of the participants could not identify rhombus. On the other hand, rhombus was fully defined by three teachers and partially by six teachers. It is striking that some of the teachers who try to define this shape, which cannot be defined by half of the teachers, as “Quadrilateral which has two equal sides” or “It called quadrilateral with equal sides” is striking. In these expressions, it is understood that the teachers were affected by the naming of the shape. A similar situation is the case for parallelograms that more than one third of the participants cannot define. An example of this is the response of one of the teachers, “I can not define, opposite sides parallel shape”. Most teachers, even though they are not fully aware of the parallelogram and rhombus, have responded influenced by the meaning of words.

Incomplete sentences and metaphors were frequently encountered in the descriptions of teachers. As an example, the expression “Two long sides, two short sides” for the rectangle and the “Shape of the baklava (a dessert name)” expression for the rhombus can be given. The reason for such statements was interpreted as the fact that teachers mostly use some analogies instead of formal definitions at the age level at which they perform their teaching activities, but they do not know the definitions completely. Most of the participants defined square and rhombus in the same way, but the difference could not be fully revealed. As an example of

this situation, one teacher's definition of "Shape comprising line segments which has four equal sides" for a square and another teacher's definition of "It called quadrilateral with equal sides" can be given for the rhombus.

Drawings Of Quadrilaterals

Pre-school teachers participating in this study were first asked to draw a parallelogram, rectangle, square and rhombus. Afterwards, they were expected to make two more drawings that were different from the first rectangles they drew, and to reveal the difference of their new ones. When the drawings were examined, it was observed that although pre-school teachers had difficulties in making definitions, they generally made correct drawings. Teachers made the correct drawing as image but mostly did not pay attention to the notation. As seen in Figure 1, teachers' drawing geometric shapes by comparing frequently given geometric shapes to different objects instead of mathematical details shows that they perceive the shapes as a whole, not with their mathematical relations. This reveals that teachers are still at the first geometric thinking level.

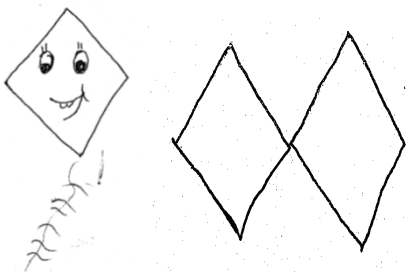

Figure 1. *Correct drawing without paying attention to the notation*

It is seen that pre-school teachers made their drawings parallel to their expressions in the definition process while drawing. The drawings they made are reflections of the images they have in their minds. It was determined that pre-school teachers used prototype drawings for quadrilaterals. In Figure 2, the drawings of a teacher for this are given as an example.

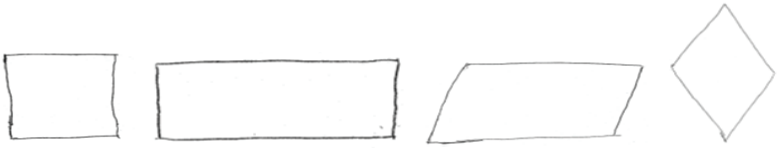

Figure 2. *Prototype drawings for "quadrilaterals"*

In Figure 3, a teacher's square and Figure 4, another teacher's different drawings of the rectangle are given. When the drawings of the participants were examined, it was noticed that the difference in their drawings was mostly created by changing the side lengths and that they rotated their first drawings. In addition to this, another factor that is noticed is that family relations are not reflected in his drawings. The reason for this may be that these shapes are not handled differently in their learning process and they are not aware of the relationships between the quadrilaterals.

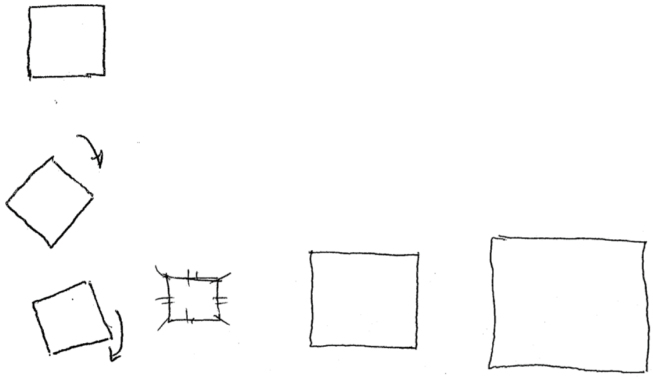

Figure 3. *Different drawings for "square"*

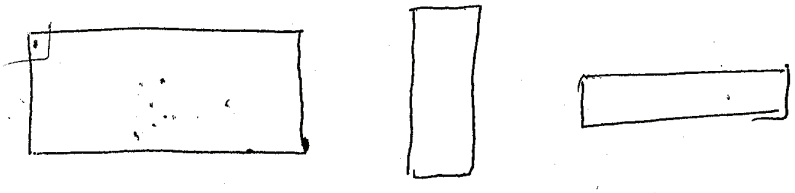

Figure 4. *Different drawings for "rectangle"*

Some of the participants draw parallelogram as two parallel lines or line segments as figure 5. One of the striking points in the teachers' drawings is about the rhombus. Teachers generally had difficulties in defining rhombus and parallelogram. It is seen that some teachers also attempted to define the rhombus based on the meaning of the word and emphasized the equality of the two side lengths while defining the rhombus. When the teachers were asked to draw this figure, it was observed that some of them made drawings similar to Figure 6. Based on this drawing, it can be said that the perception of some teachers about the parallelogram is confused with a shape that cannot be closed with two parallel lines, and the perception of the rhombus with the deltoid.

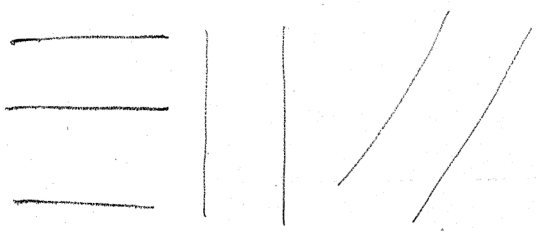

Figure 5. *Incorrect parallelogram drawing*

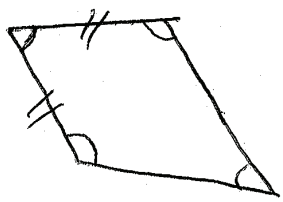

Figure 6. *Incorrect rhombus drawing*

Classification of Quadrilaterals

In the study, it is tried to learn how preschool teachers classify by considering the relationships between quadrilaterals. Most of the teachers have not made any classification. They only said that «All of them has four sides and four angles.». This statement reveals that teachers who attempt to classify also classify by considering limited features. It was not observed any hierarchical classification, but few teachers made partition classification. Considering that teachers are not able to define these quadrilaterals correctly, this result is not considered surprising. When the teachers were asked to classify, it was noticed that they mostly made this evaluation between two quadrilaterals in most of their answers. As an example of these evaluations, "Parallelogram and rhombus look like in terms of angles. Because there is an acute angle between them" and "Square and rectangle looks like in terms of angles" can be given. In addition, a teacher made a statement by considering the three quadrilaterals as "Sometimes parallelogram, square and rectangle looks like in terms of side length". As can be seen from the examples, although the teachers used correct expressions at some points, they did not have correct information about quadrilaterals in general and could not give correct and sufficient answers about classification.

4. RESULTS AND DISCUSSION

When we consider the objects and events, we see around us, we can almost always realize that they are related to geometric concepts. When

our knowledge of these geometric concepts is also structured formally, we expect our daily life and our academic performance to be more qualified. Certain geometric concepts begin to be addressed formally in the pre-school education period. During this first encounter, the teacher's knowledge of these concepts can be considered as an important variable in student's first experiences. This study was designed to examine pre-school teachers' concept definitions, concept images and how they classify quadrilaterals. Findings of the research were evaluated within the framework of three research questions created.

Pre-school teachers' definitions of square, rectangle, parallelogram and rhombus were examined. Results indicate that, teachers were able to identify only square correctly but had difficulties defining other shapes especially parallelogram and rhombus. In addition to this, all participants were misidentified rectangle although being very sure of themselves. It is seen that the responses of the teachers, who show a relatively homogeneous distribution in the definitions of square and rectangle, are more heterogeneous than the others in terms of being correct or not regarding the parallelogram and rhombus. This may be due to the fact that the names of these figures constitute a clue for the definition in Turkish. The research results are similar to the study of Kılıç and Sezer (2018) in which pre-school teachers revealed their deficiencies in defining geometric shapes and using the language of mathematics. Žilková (2015) states that students do not have sufficient geometry knowledge based on the data obtained from primary school teachers. This result may be due to the geometry education students received in pre-school period.

Pre-school teachers were asked to draw examples for each of these quadrilaterals they defined in order to understand the concept images. The results indicate that; teachers have been more successful in drawing unlike the definitions. Some teachers drew parallelogram as only two parallel line segments. This finding can be interpreted as that some of the teachers acted on the basis of the naming of the shape, but could not make the correct drawing because they did not know that the shape in question was a quadrilateral. Teachers made the correct drawing as image but mostly they did not pay attention to the notation. The reason for this situation may be that teachers are not familiar with the specific language of mathematics in general and do not use notation at this age level. This result reveals that some of the teachers who carry out teaching activities at this age level are at the first geometric thinking level called visual level. Clements and Battista's (1992) emphasis on the correct use of mathematical terms while teaching children geometry issues should be considered more important in the pre-school period. It has been observed that teachers generally use prototype shapes in their drawings about quadrilaterals and when they are asked to differentiate the shapes, they first increase the length of the sides

at the same rate or some of them turn the shapes.

The third research question is built on how teachers classify quadrilaterals. It was observed that pre-school teachers had difficulties in classifying quadrilaterals. The findings of the research reveal that most of the participant teachers are not able to make this classification and do not consider the inclusion relations for quadrilaterals. Teachers usually see quadrilaterals independently of each other. Classifications made by a small number of teachers participating in the study are thought to be in accordance with the partition classification made by De Villiers (1994). On the other hand, it was observed that pre-school teachers do not take family relations into account in their drawings.

In Turkey, pre-school teachers in the teaching process does not include all the quadrilaterals. However, knowing all of these quadrilaterals and dealing with related issues in this context will prevent students from falling into misconceptions in the future. The contribution of pre-school teachers at an early age is very important to develop children's geometric thinking (Tsamir et al., 2015). On the other hand, researches reveal that teachers' knowledge about the subject they will teach such as the definition of geometric shapes and concept images is an important factor in structuring the teaching processes (Leikin and Zazkis, 2010; Shulman, 1986). For this reason, the education of teachers who teach at an early age should be considered.

Suggestıons

The results of the research indicate the inadequacy of subject matter knowledge of teachers. In early childhood, teachers need to know basic geometric concepts, their teaching stages and the development of geometric thinking (Žilková, 2015). For this reason, it may be suggested to make arrangements for the training and development of pre-school teachers with in-service training activities for geometry subjects and teaching. The results of this study conducted with in service pre-school teachers require more attention to be given to the education of pre-service teachers who will provide education at this level. For this reason, it may be suggested to include a compulsory mathematics (includes geometry topics) lesson in pre-school teacher training programs before the mathematics teaching lesson. The number of pre-school teachers participating in this study is relatively small. It can be ensured that similar studies are carried out with more teachers with different experiences and preservice teachers. The results revealed the need to present a clearer picture about the geometric thinking levels of teachers. Accordingly, studies can be conducted to determine the geometric thinking levels of pre-school teachers and preservice teachers.

REFERENCES

Ball, D. L., Hill, H. C., & Bass, H. (2005). Knowing mathematics for teaching: who knows mathematics well enough to teach third grade, and how can we decide? *American Educator*, 29, 14–22.

Battista, M. T. (2007). *The development of geometric and spatial thinking.* F. Lester (Ed.), Second Handbook of Research on Mathematics Teaching and Learning (s. 843-908). Charlotte, NC: NCTM.

Clements, D. H., & Battista, M. T. (1992). *Geometry and spatial reasoning*. In D. A. Grouws (Ed.), Handbook of research on mathematics teaching and learning (pp. 420–464). New York: Macmillan.

Clements, D. H., Swaminathan, S., Hannibal, M. A. Z., & Sarama, J. (1999). Young children's concepts of shape. *Journal for Research in Mathematics Education*, 30, 192–212.

Clements, D. H., & Sarama, J. (2000a). Young children's ideas about geometric shapes. *Teaching Children Mathematics*, *6*(8), 482–488.

Clements, D. H., & Sarama, J. (2000b). The earliest geometry. *Teaching Children Mathematics*, *7*(2), 2–86.

Clements, D. H. (2001). Mathematics in the preschool. *Teaching Children Mathematics*, *7*(5), 270–281.

Cross, C., Woods, T., & Schweingruber, H. (2009). *Mathematics Learning in Early Childhood*. Washington: The National Academies Press.

Creswell, J. W. (2012). *Collecting qualitative data. Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research.* (4. Ed). *Boston: Pearson*, 204-35.

Develi, M., & Orbay, K. (2003). İlköğretimde niçin ve nasıl bir geometri öğretim. *Milli Eğitim Dergisi, Sayı 157*.

De Villiers, M. (1994). The role and function of a hierarchical classification of quadrilaterals. For the learning of mathematics, 14(1), 11-18.

French, D. (2004). Teaching and learning geometry: issues and methods in mathematical education. New York, NY: Continuum International Publishing Group.

Fujita, T., & Jones, K. (2002) The bridge between practical and deductive geometry: developing the 'geometrical eye'. Cockburn, A. D. and Nardi, E. (eds.) In *Proceedings of the 26th Conference of the International Group for the Psychology of Mathematics Education (PME26).* PME. pp. 384-391 .

Fujita, T., & Jones, K. (2007). Learners' understanding of the definitions and hierarchical classification of quadrilaterals: towards a theoretical framing, *Research in Mathematics Education*, 9(1and2), 3-20.

Fujita, T., & Jones, K. (2006). Primary Trainee Teachers' Understanding of Basic Geometrical Figures in Scotland. J. Novotana, H. Moraova, K. Magdelena ve N. Stehlikova (Eds). *Proceedings of The 30th Conference of the International Group for the Psychology of Mathematics Education,* V.3, 14-21.

Jordan, N. C., Kaplan, D., Ramineni, C., & Locuniak, M. N. (2009). Early math matters: Kindergarten number competence and later mathematics outcomes. *Developmental Psychology*, *45*(3), 850-867.

Kesicioğlu, O. S. (2013). The effect of gender and computer use variables on recognation of geometrical shapes in preschool children. *International Journal on New Trends in Education and Their Implications*, *4*(3), 48–56.

Kılıç, M., & Sezer, T. (2018). Preschool Teachers' Concept Definitions: The Case of 2d Shapes. International Conference on Mathematics and Mathematics Education kongresinde sunulmuş bildiri, Ordu Üniversitesi, Ordu. pp. 635-636. Erişim adresi: http://theicmme.org/2018/tr2018/icmme_book_of_abstracts.aspx

Leikin, R., & Zazkis, R. (2010). On the content-dependence of prospective teachers' knowledge: A case of exemplifying definitions. *International Journal of Mathematical Education in Science and* Technology, *41*(4), 451–466.

Neuendorf, K. A. (2002). *The content analysis guidebook.* Thausand Oaks,CA: Sage Publications.

MONE (Ministry of National Education] (2013). *Milli eğitim bakanlığı İlköğretim genel müdürlüğü, 36-72 aylık çocuklar için okul öncesi eğitim programı*. Ankara: Milli Eğitim Bakanlığı.

Presmeg, N. C. (2006). *Research on visualization in learning and teaching mathematics*. In A. Gutiérrez & P. Boero (Eds.), Handbook of research on the psychology of mathematics education (pp. 205–235). Rotterdam: Sense Publishers.

Sarama, J., & Clements, D. (2009). *Early Childhood Mathematics Education Research: Learning Trajectories for Young Children*. New York, NY: Routledge.

Seefeldt, C., & Wasik, B. A. (2006). *Early education: three-, four-, and five-year-olds go to School*. Upper Saddle River: Pearson Education.

Shulman, L. S. (1986). Those who understand: knowledge growth in teaching. *Educational Researcher, 15*(2), 4–14.

Tall, D., & Vinner, S. (1981). Concept Image and Concept Definition in Mathematics with Particular Reference to Limits and Continuity. *Educational Studies in Mathematics,* 12(2), 151-16.

Türnüklü, E., Alaylı, F.G., & Akkaş, E.N. (2013). İlköğretim matematik öğretmen adaylarının dörtgenlere ilişkin algıları ve imgelerinin incelenmesi. *Kuram ve Uygulamada Eğitim Bilimleri*, 13 (2), 1213-1232.

Türnüklü, A. (2000). Eğitimbilim araştırmalarında etkin olarak kullanılabilecek nitel biraraştırma tekniği: Görüşme. *Kuram ve Uygulamada Eğitim Yönetimi Dergisi*, *6*(4), 543-559.

Türnüklü, E. (2014). Concept images of trapezoid: Some cases from Turkey. *Education Journal*, 3(3), 179-185.

Tsamir, P., Tirosh, D., Levenson, E., Barkai, R., & Tabach, M. (2015). Pre-school teachers' concept images and concept definitions: triangles, circles, and cylinders. *ZDM*, 47(3), 497-509.

Vandell, D.L., Belsky, J., Burchina, l.M., Steinberg, L., & Vandergrift, N. (2010). Do effects of early child care extend to age 15 years? Results from the NICHD study of early child care and youth development. *Child Development*, 81, 737–756

Vinner, S., & Hershkowitz, R. (1980). *Concept images and common cognitive paths in the development of some simple geometrical concepts. In R. Karplus (Ed.), Proceedings of the fourth international conference for the psychology of mathematics education* (pp. 177–184). Berkeley, CA: Lawrence Hall of Science, University of California.

Yeşil Dağlı, Ü., & Halat, E. (2016). Young Children's Conceptual Understanding of Triangle. *Eurasia Journal of Mathematics, Science and Technology Education*, *12*(2), 189-202. doi: 10.12973/eurasia.2016.1398a

Yıldırım, A. & Şimşek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri* (8. Baskı). Ankara: Seçkin Yayınevi.

Žilková, K. (2015). Misconceptions in pre-service primary education teachers about quadrilaterals. *Journal of Education, Psychology and Social Sciences*, *1*, 2015.

Chapter 8

INVESTIGATING THE EFFECT OF TEACHERS' CLASSROOM DISCIPLINE ON STUDENTS' MOTIVATION AND ACHIEVEMENT

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1. Introduction

This study tries to consider the role of teachers and their class discipline in educational effectiveness, motivation and academic achievement of students. The aim of this chapter is to get acquainted with a summary of the comprehensive and extensive studies done concerning this subject, and includes the findings and achievements of some of the authors. This will pave the way for future research and studies and also, applying previous researches will enrich them. Reviewing previous studies is important because it creates the basis for deduction, generalization and research.

In this chapter, the theoretical and research bases of the subject are discussed. On this basis, the first part dedicates to discipline in the educational environment, in which the categories related to classroom discipline, psychological theories and different educational strategies are discussed. In the second part, the students' motivation and academic achievement are considered, in which the definitions, theories, and influential factors are discussed. And finally, in the third part of this chapter, empirical studies have been presented. They are arranged chronically from new to old.

1.1. The Importance of Standard Educational Context and Structure

Children spend a lot of time at school, nearly one third of their lives. It seems that students' experiences have an important impact on their progress, especially in terms of formal education goals. The school organization is based on a number of general features and processes. Size of classroom and school, using different forms of grouping ability, and varied methods in schools for some aspects of school life, result in important differences in educational outcomes. These kinds of variables are often used for political management and improving success. Perceptions of teacher and student from educational environment are usually based on immediate experiences and emotions influenced by learning and social interactions. One simple criterion for this is the "personalized classroom environment questionnaire" for high school (Fraser, 1986). Included 15 criteria, this questionnaire covers high level of "coherence", "satisfaction" and "purpose" and low level of "disorder" and "friction", indicating they have consistent relationship with success improvement in varied educational results. This view is supported by Rutter, Maughan, Mortimore, & Ouston (1979), which recognized the general ethics of a school as the major feature associated with its visible effect. Achieving such a positive learning situation is an important goal, and the key elements assisting to these levels of school and classroom have been searched.

1.2. Efficiency of School (Do schools make differences?)

Before understanding the characteristics of life in school, the first step is to investigate whether there is a significant difference in effect between

different schools. If so, basics of these effects should be identified, and then, low-efficient schools ought to be improved. This is the foundation of many political projects, such as promotion in school (Department of Education and Employment, England, 1997), arguing that all schools should reach an apparently comparable level of success. This assumption also provides the role of advisor or inspectors, supposed to be part of this improvement process. On the other hand, if there is no real difference between the efficiency of schools, this indicates that any foundation for improvement must lie beyond the existing level and type of presentation. Although it is clear that schools are different, reviewing findings in America, such as Coleman, et al., (1966) and Jencks, et al., (1971), points to the fact that there is only a minimal difference in their effectiveness. Previous studies show that educational outcomes are mainly related to early childhood abilities, family history and cultural resources of the community. Even primary intensive trainings, such as "Initial Start" project, designed to overcome social inequalities, initially seemed to be of little use. This shows that the child's inside is crucial, and more compensatory programs will be a waste of money. In the British Plowden Report (Department of Education and Science, 1967), the findings were also examined and it was agreed that the social class and parent's attitude were the best explanation for the functional changes of children. But, if the effects of family history are very strong, they can cover the weaker (but real) educational effects.

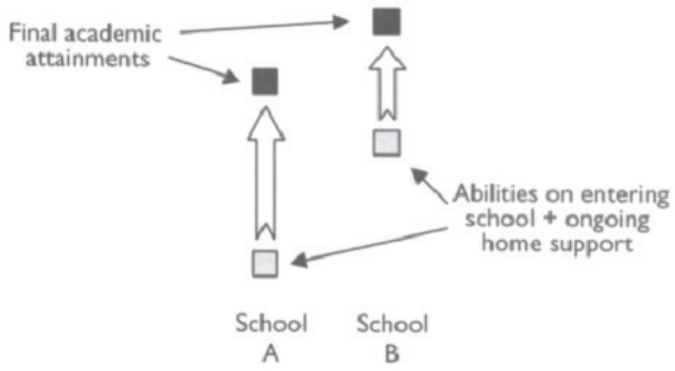


Figure 1-1: Academic progress with different catchments

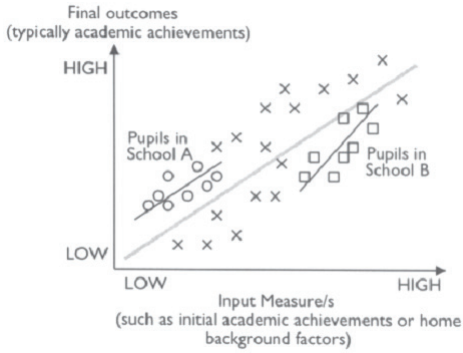


Figure 1-2: Relationship between individual pupils' initial abilities and their final achievements

For example, as shown in Figure 1-1, school students with a weak area may have a good progress; but it is still at a lower level than school-B students, where progress is less, but it has a better field. Although one can do a controlled study of the family background by randomly selecting students from different schools, but apparently this is not feasible. However, there are several studies that try to make a fair comparison by analyzing the background of students or their initial successes, or identifying the factors that are associated with the difference between the schools.

The findings of such studies might be shown by a graph (Figure 1-2), in which the overall relationship between input variables (such as the success and / or background of the home) that can be achieved at the start of education with the student's final achievements related, indicated. The median thick curve is the average of students in schools, and it predicts, or expects, knowing the measurement of input (s). Figure 1-2 is basically the same diagram that was created by the UK Department of Education and Employment (1998), and can be used to examine the impact of "value added" by comparing actual progress with predicted progress. It is also similar to a chart that attempted to equalize their entry into the route, according to the level of free meals in schools. School A students have come up with better results, as expected, with their entry measures, while school children B achieved poorer outcomes than expected. School B students, who initially started at a lower level, had a relatively poor progression, which may mean that schools tend to emphasize the success of well-off students. One of the most recent statistical methods described by Goldstein (1995) is the "multilevel" model, which enables researchers to separate the various effects affecting the student's academic achievement. This approach can be used for initial goals and the evaluation of the variance of final goals that can be assigned to each student, class, administrative level,

and school. Figure 1-2 shows that schools differ in the central curve, and then students, classes, and departments will be different in schools.

1.3. Primary Evidence

At the elementary level, Mortimore, Sammons, Stoll, Lewis, and Ecob (1988) performed the initial form of the multilevel model and selected a group of 2,000 students from 50 schools randomly over a four-year period. After calculating the difference between school members, this study found a significant difference between the educational outcomes of various schools, which were apparently associated with different factors. In general, children were better off in schools where teachers had individual records, work plans were predicted to be maintained, and parents regularly participated in advancement sessions and helped in the classroom. Excessive concentration on basic skills has had a negative impact, such as the emphasis on punishment rather than encouragement as a stimulus. Advances were more striking when teachers talked about working with children, and when they did something without discussion, they explained the purpose. The most effective teachers minimize the disorder (noise and movement), defines stories for children, and regularly listen to children's words.

1.4. High School Evidence

Rutter, Maughan , Mortimore, and Ouston (1979) also looked at the characteristics of effective secondary education. In a study of 12 different schools, they sought to identify those factors that had a significant impact on behavior and educational goals. Although this study did not use multi-level modeling, it attempted to balance the different perceptions by making adjustments based on the students' primary goals. The main finding of this study was that secondary schools have different effects on their students, and this is related to the difference in overall ethics, or the general social characteristics of schools. Schools that were positive were good educational achievements with good student behaviors. Features that have a positive relationship with academic outcomes include the general level of educational emphasis (for example, the amount of homework assignments), the participation of students in school life (for example, the presence of student representatives), student general conditions and employee participation in decision making

School children were more successful in using the library and putting things on the panel. Because this work is part of a group's willingness to work, Rotter et al. Consider it to be part of a public culture that can have more or less favorable effects on academic achievement and will have a significant and long-term impact on student development. Gewirtz (1998) also explains how key staffers in schools with low socioeconomic

perceptions are caught up in the daily pressures of behavioral crises, student turnover and lack of financial support. Accordingly, it was difficult to create positive plans, such as developing curricula or very heavy activities to set up or maintain. Most schools that are considered "failed" or fail to "value-added" actions are schools that have the weakest student perceptions. Indicators such as raising free school meals or even early scientific achievements are just part of the reasons for the advancement of children. There are many effective factors, such as student motivation and self-image, as well as membership in peers and family backgrounds.

1.5. Volume of School Effects

As mentioned earlier, although the research on complex statistics has shown that there is a significant difference between the effects of schools, if this difference is not significant, then it is not so significant. If schools have a large difference with the projected average, as shown in (Figure 1-3), then one should know that a student's school can be a good predictor of how much its "value added" progresses. However, if schools are generally close to the mean, as shown in (Figure 1-4), then this means that there is little difference between schools and they generally have the same effect.

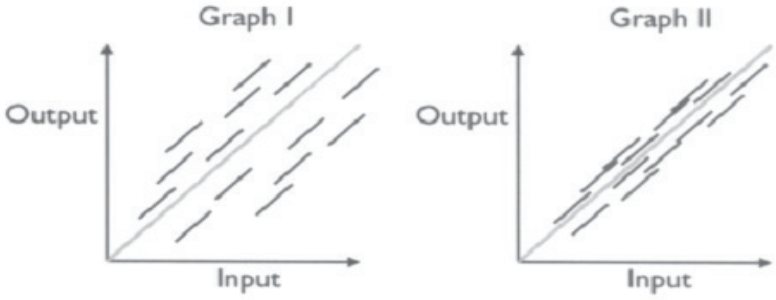


Figure1-3: Apparent effectiveness of different schools

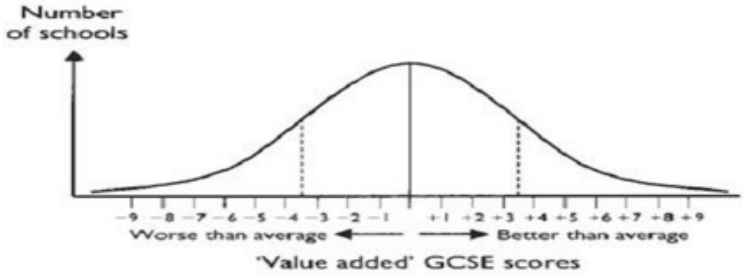


Figure1-4: Value added effects for the range of secondary schools Source

Based on data from Mortimore and Whitty (1997) schools are somewhat different, they usually indicate that their impact is low and the overall impact of schools is determined by student characteristics. Mortimore and Whitti (1997) argue that any real effort to improve educational standards should take into account the social context of children and blame schools for community problems is unfair and useless.

1.6. Improving the Training

Saying that schools do not differ greatly, does not mean that they have no effect at all. Meta-analysis studies by Cooper, Nye, Charlton, Lindsay , and Greathouse (1996) showed that if the apparent effects of the order of the various schools are relatively small, the overall goals are largely due to the nature of their members, then the blame of the schools for their problems is useless and we must try to bridge them with the other schools that seem to be more successful. Improved however, if the balance of the members is important, then a possible approach would be to ensure that each school has a "critical mass" of good students. This can be achieved by limiting the choice of parents and transferring students to achieve a balance between members. Unfortunately, this is politically impossible and has a great contradiction with current ideologies. In turn, Sharp and Hutchinson (1997) found that schools with lower balance among members have more problems to handle and more resources should be allocated to them, so that key personnel are free to manage other crises in order to further implement programs and development, as well as teachers. They can spend more time teaching directly so that they can cope with additional stress and prepare for more effective methods. Again, it does not seem politically possible, since it involves a huge increase in educational budgets, or the transfer of money from schools to more prosperous members.

1.7. Layout and Charm

Although the overall impact of schools (and teachers) is usually relatively small due to the educational difference, some physical and structural factors have shown that they have a significant relationship with the student's progress. This involves the methods that schools should design and organize on their own if, of course, there is a decent level of available resources. The study of Rutter, Maughan , Mortimore, and Ouston (1979) from secondary schools showed that the overall school physical scheme (site division, the life of buildings) is generally not considered to be a difference in academic achievement. However, changes in core and decoration of buildings, including cleaning and Room decorations and the use of plants, posters and illustrations are associated with positive results. The general conditions of students also have a positive relationship with educational outcomes. These features include: Students are allowed to use buildings during their leisure time, have access to the phone, and hot drinks

are available. The problem here is that although the findings have a solid correlation, these environmental characteristics do not necessarily lead to good results; in fact, the interpretation of Rutter et al. was that they are part of the overall moral code of the school. It seems that the positive attitude of some schools can lead to a wide range of effects, including better care of the building and giving students the privilege. Schools usually have a basic level of furniture and decoration that is lower than the level children and adults experience in many other aspects of their lives (Wollin & Montagne, 1981).

1.8. Noise and Student Progress

Most teachers find that excessive noise is inappropriate for learning, and they often try to create very calm conditions to prevent student distress. In other words, the noise is a sign of little engagement, because if students talk about something else or discuss directly with each other, noise is generated. Instead, some teachers target lower levels, that is, accepting "job buzz" as part of an active classroom work. In small group work, such as scientific research, there is expected to be a certain amount of noise for learning. Students need to discuss their strategies, assign responsibilities, and analyze and coordinate the work. Short-term exposure to noise with moderate levels in the school has limited effects. In a theoretical study, Slater (1968) compared the performance of the seventh grade students in the comprehension test that answers were to be written under three different conditions. These three conditions were: in a quiet classroom with 45-55 dB, in an average classroom with 55-70 dB, and in a very loud classroom with 75-90 dB. Surprisingly, the performance of children over a period did not show any difference in any of the three classes; this suggests that such interference sounds can be "silent" when needed. However, when external noise is abrupt, it can significantly limit progress. For example, Bronzaft and McCarthy (1975) found that there was a significant reduction in literacy scores, students who were in the classroom along the railroad, with the train noise that was every four and a half minutes for it was interfering for about 30 seconds. Silencing the room by installing sound tiles, which was accompanied by improvement in reading, indicates that the noise level is interfering with learning. Perhaps more importantly, the findings of Seetha, et al., (2008) suggest that the noise level in conventional classes is 60-65 dB, which is higher than the natural sound level of many teachers. Most classrooms also have vibrational effects that interfere with students' perceptual intelligence. Since most of the classroom learning involves teacher guidance and verbal interactions such as questioning, it's important that teachers' lectures are significantly longer than background noise, generally at least 15 dB. Unfortunately, speaking at this level can cause damage to audio, and Seetha, et al. are fan of portable wireless microphones and amplifiers (2008). A review of their use has shown that

they improve learning and behavior and are also of interest to teachers and students.

1.9. School Size

Rutter, Maughan , Mortimore, and Ouston (1979) looked at the effect of the school's overall size (in a study, from about 450 to about 2000 students) in their study of the effectiveness of the school. Although the process of working in smaller schools is that they have better academic and behavioral outcomes, but this was not significant, and the sample size 12 might not be large enough to show any effect. The possible interpretation of these results is in a study by Department of Education and Science (1967) found that as school grows, the participation of people in school affects, which has a negative impact on educational outcomes. Younger schools are likely to suffer from limited expertise and reduced educational diversity. In spite of these acceptable findings, the general review of the results of the 618 United Kingdom scholarship received by the Budget Agency for Schools (1998) showed that at first there was little difference in the school routine, although the general tendency of schools Smaller to the weaker results. However, Mortimer et al. (1988) found that there was the greatest impact on middle-to-lower secondary schools with around 160 students or less, which means that there is at least one class for each section. Larger schools have less integration and participation of employees, and more diversity in the actions of teachers.

1.10. General School Structure

In general, most secondary schools have a separate educational and spiritual structure, which can be organized by "peer groups" or "home". Rotter et al. (1979) did not find any difference between them in terms of academic achievement or behavioral outcomes, and both systems can seem to be effectively managed. However, continuity is important. Mortimer et al. (1988) showed that there is a significant scientific excellence in primary schools where children are merged between the ages of 5 and 11, rather than being segregated into adolescents and mentors.

1.11. Time of Day and Training

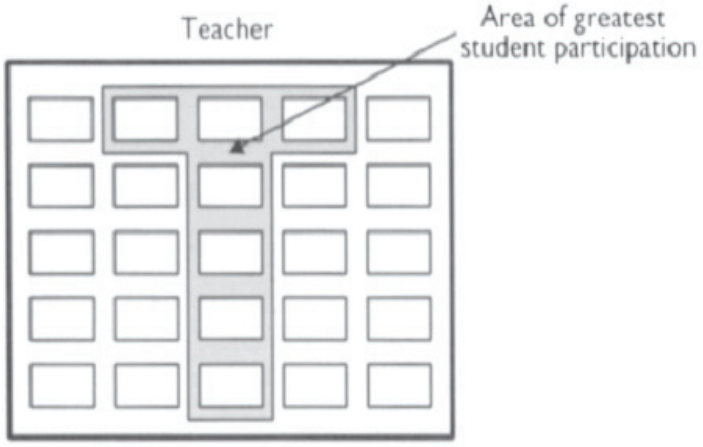
Most teachers believe that learning children is more efficient at noon. According to these beliefs, learning is related to motivation and mental performance indicates that the student's learning reaches the peak in the late afternoon. Daily variations, such as body temperature, go through a cycle in which a slow growth begins in the morning, after a lunch, a slope becomes shorter, and then reaches a higher level during the afternoon and eventually falls at night.

Jones, George, Edwards, and Atkinson (2008) summarizes a method

in which such a stimulus index corresponds to the change in actual learning ability. In a theoretical study, Folkard et al. (1977) examined the ability to learn 12- and 13-year-olds who were read to them from 9:00 or 3:00 PM. After that, the afternoon's children showed uprightness and perceived excellence, and maintained about 8% of meaningful cases. In the morning's series, the only limited benefit is in terms of maintaining a low level of information. Jones, George, Edwards, and Atkinson (2008) found that one of the growing reasons for teachers to believe in such a belief was that the children had less vigilance in the morning and had more control and, consequently, more acceptance. Although students are more intruded in the afternoon and have the ability to learn more, their control is more difficult and less involved in formal education. After them, older students become more motivated, afternoon teaching sessions become more effective. This is supported by Skinner (1983) findings; the findings indicate that the results of college exams were better than when they were in the morning when the class was held in the afternoon.

1.12. Student Class Position

Deletes and Jackson (1972) found that roughly 64 percent of students participating in scientific discussions were those who sat in the front row or in the central ring, in the classroom, in the classroom. Teachers also seem to encourage students to take part in the discussion, but this effect can be reciprocal. Finn, Pannozzo, and Achilles (2003) found that when students were moved to these chairs, they would be more likely to spend time doing homework, and were more likely to become more popular with teachers.



1.13. Seating Chairs

In most elementary classes, students tend to sit in groups of four or six around the table and work on teacher-defined exercises. In the United

Kingdom, Haghighi and Jusan (2012) report explained that the chairs were placed in such a way that it would allow students to learn from each other through discussion and collaboration. However, Wollin and Montagne (1981) argued that when the seat arrangement changes, the work style becomes largely solitary, giving students the opportunity to divert their minds. Wollin and Montagne (1981) examined a number of classes for two weeks during which the children disassociated, and then, before returning them to the main group pattern, they changed seats for two weeks to the traditional level and examined them. His main finding was that students, when routed in a row, had an increase of about 15 percent in work-related behavior, and dropped the same when they returned to the round table. The performance of some children in rows increased by more than 30%, and even a few were complaining about returning to group mode. Despite such findings, Galton, John Michael , and Jean (1999) found that most of the middle school classes continued to sit in 1996, although some classes were more flexible in terms of student placement, given the nature of their work. Also, the use of a "wasting area" to bring children together in the event of a training or discussion of the whole class will increase significantly.

1.14. Training in Group

Many studies have shown that with proper organization, joint student education can be more effective than individual education. Johnson, Scholes, and Whittington (2008), for example, reviewed 122 studies and concluded that participatory learning, social outcomes, self-confidence, and better learning than individual training and competitive situations. Factors that appear to be important were the exchange of information between members of the group and the use of other views of children. Children also gained a sense of value as a result of helping the group and improved ability to communicate with other children. Although the use of grouped chairs is very popular, most classroom work does occur on an individual basis. Galton et al. (1999), observing cross-school classes, showed that children work most independently and only 13.5 percent spend time on work-centered balance with other students. These interactions are mostly limited to practical tasks and are mostly short, and are simply giving and receiving information. Students also interact with teachers as part of a group for 3.7% of the time, but this is a major way of receiving information and does not need to engage with other members of the group. A large amount of normal classroom work is also competitive, with specific work and compared with other students' work. Not only does this not have an improvement effect, it is also likely to reduce motivation, and can also increase the negative interaction between students. Johnson, Scholes, and Whittington (2008) found that students often try to discourage them from having a weak relationship with their classmates, and try to hide information from each other.

1.15. Effect of Class Size

Smaller classes lead to more effective learning. If teachers have more time for children, then they can more closely monitor their progress and adapt their assignments to the needs of each student. The result is that class sizes should be as small as possible. Nevertheless, these costs are substantial, because wages are the biggest cost in education. Therefore, these issues are in addition to educational and political issues and are at the forefront of public and specialized attention. A comprehensive review, (Downey, 1995), based on the National Child Development Study on 18,300 babies born in a week from March 1958. Information about it was collected at the age of 7, 11, 16, 21, 31 and 37 years old. This study covered the whole of Britain and looked at the link between success and size of the class after trying to control the size of the school, the length of education, the interest of parents and the job.

Surprisingly, larger student students seemed to have a better performance than younger students. Like all studies on the association of results, this research focused on the things that had already happened, and therefore, many factors that were not assumed to be able to produce such an outcome. For example, students with low achievements are often placed in smaller groups, and maybe the class with more capable students has less disadvantages for students and, therefore, are larger. For this reason, the lack of positive findings may be due to the limited scope and design of such research. Therefore, some of these studies use official empirical views, or appear to be affected by these mistakes.

2. Classroom Teaching and Management Styles

2.1. Formal Progressive Styles

Although teachers use several methods to organize and manage their work, it seems that the styles are largely opposed and based on a very different philosophy, the traditional, highly structured and largely-based formal approach based on the educational guidance-teacher's processes. For example, since they have recently developed more, advanced methods are mostly adopted by younger teachers. Therefore, any difference between the results of the use of the two methods may be due only to the extent of the experience of the teachers. A key study by Bennett (1976) attempted to correct the involved structures and compare the achievements of the students. Bennet first used 468 primary teachers to identify 12 different teaching styles through a questionnaire. Because teachers use style combinations, this division seems to be spread across the formal-informal chain. The study then looked at student progress over more than a year, and compared 12 formal classes with 13 unofficial classes. The main findings were that students in the group with formal teaching showed significant gains in literature, mathematics and

English. However, the achievements of an organized class were unofficially opposed to this trend and showed the highest success rate. It was found that the teacher of this class used regulatory structures and processes that enabled him to emphasize the educational achievement of children. This means that the structure and supervision of the distinction between formal and informal are more important. Bennett's study was criticized for making false statistics, and the use of misleading groupings from teachers. Subsequently, in a reanalysis of data by Bennett et al. (1975), they found that there was no significant difference between the educational outcomes of the informal teachers group and the teachers using official methods. Bennet also found that regardless of the teaching style, there is a great deal of variation among teachers, and this shows that there are other important aspects other than the formal distinction for education.

2.2. Direct versus Exploratory Learning

Most research tends to isolate certain aspects of educational processes and styles in order to examine their effect (Bruner, 1961) . One of the most important features of progressive techniques is their emphasis on child-centered approaches, in which the student is seen as an active and independent learner, and to the teacher as facilitator of his learning. The most important child-centered approach is the use of exploratory learning, which emphasizes that students must have experiences that lead them to find key concepts for themselves. Bruner (1961) has argued, in particular, that learners should build their own perceptual system, and such an education would be the result of limited ability to use knowledge in new situations. Based on this view, as the child progresses through different stages, exploratory learning will automatically match education with the child's development. Bruner argues that when their students see their field of study again and as a snail, their information will be developed.

Guided exploration is a combination of these approaches, and includes a teacher who sets learning conditions in such a way that students are allowed to "discover" the purpose of knowledge or education. This method takes more time than direct training, but it has shown that it leads to better engagement, long-term sustainability and transition. In students who achieved a higher level of abstract thinking, Rowell and McKay (1969) found that direct verbal instruction leads to quick learning and long-term good maintenance. This means that personal experiences are not always necessary, but when the students do not have the first bases of knowledge and perception, it can be the most important issue.

2.3. Training the whole Class versus Group Work

In an effort to raise standards, the main emphasis by the British government is on the use of classroom education. This is particularly

supported by the analytical paper "Three Wise Men" by Alexander and colleagues (1992) (Alexander, Rose, Jim, & Woodhead, 1992), which is the foundation of a series of reforms in elementary education. A review by Galton et al. (1999) found that elementary teachers generally respond positively to such incentives, since the total time spent teaching the whole class increased from 15.1% in 1976 to 31.3% in 1996. Further development by implementing state-designed state-of-the-art strategies for literacy and math skills is also a major element of the overall class intervention. The DfEE (1998) guidance for the "Literacy Hour" indicates that 40 minutes should be based on activities such as reading and writing the entire class, and continuing with a general final session.

Similarly, in the National Computational Skills Strategy for Elementary Schools (DfEE, 1998), it is recommended that mathematics education should cover a daily lesson of between 45 and 60 minutes, and teachers should increase the productivity of this time to the whole class teaches. It seems that the logic of such a prescriptive approach is based on research supporting the effectiveness of the direct teaching methods discussed above, as well as the process of linking classroom instruction. In a study by Brophy and Good (1986), a high-added group was taught through class-less classes. This started with a clear presentation of the whole class by the teacher and continued with the training phase and feedback. The high-level classes also did work in small groups, but it was mainly limited to practicing basic skills. In a similar study by Brophy and Good (1986), they also found that children are making a lot of progress through the entire classroom system. However, this method was also used by some teachers whose students had the slightest progress. In these classes, classroom education seems to have been more educated and with limited student involvement. Classes emphasized on work in a small group have progressed moderately and continuously.

These findings support the belief that classroom education can be more effective than working in small groups, but it needs to be done in the right way. Brophy and Good (1986) found that what is needed for good class management include: high speed with clear instructions, and high level of student positive participation. The last factor can be the use of questions and feedback, as well as tutorials that are encouraged and responsive to student hobbies.

However, it is important to know that these effects are relatively low and only can be compared by the effectiveness of the teachers with the disparity. Other studies, such as the study of the teacher's initial assessment (Lieberman, 1990), found that although student intervention is generally higher during activities performed by the teacher, this also means that the content and the speed for the able students is enough, but for students with

low abilities it is high. In Galton et al. (1999), students were more involved when they were part of the entire class activity, but some students, called "comforting", decided their use of avoidance techniques. Students were worried about little impact, but it seemed difficult at the time of work and in the overall classroom situation for the teacher to figure out what had happened. In many assessments, it is difficult to know what to compare and what the outcome will be. Both classroom and group training can run well or badly, or they may be more appropriate for certain topics or learning goals. For group training, students can be placed in powerful groups, as they do in mathematics education, or they can be grouped into collaborative research groups, which are often used in science. Both types of groups can be very effective in their subject areas and enable the teacher to adapt to the ability of students and encourage more active learning styles.

However, it is unlikely that shared and segregated groups would be used in the most effective way, because they wanted to prepare the teacher at the time, and there are problems with classroom management. Therefore, at present, many group activities in classes are likely to be based solely on shared activities or parallel work. Most research that supports the use of direct classroom education is usually based on content that emphasizes the development of true knowledge and skill development. Therefore, it may be appropriate to train the whole class for certain aspects of mathematics or to increase initial literacy, but not the most effective way to create higher levels of perception. Unfortunately, moving towards increasing the use of testing to evaluate educational outcomes that encourages true knowledge and the use of general and direct classroom education.

2.4. Fulfill the Contents and the Views

School textures seem to be an important factor in learning children (Malone & Paul, 2003). However, the assessment of the effectiveness of different schools and school variables depends on the ability to differentiate between students' general standards. The techniques that help us depend on the relationship between student input and output scales and then compare successes with the average (predicted) success. A more complex method, known as a multi-level model, can form variance in the achievements of the various levels of the educational system. Such analyzes found that there is a significant difference between primary and secondary schools and are related to the factors involved in the organization and delivery of education (Illeris, 2007). However, the size of these differences is relatively small, and is usually only about 10 percent of the variance of student success. These small effects are usually greatly enhanced by changes in student abilities and their initial goals, such as the continuing effects of family backgrounds. But schools have to have an absolute impact, and can be improved by actions such as the balance of the members and the displacement or increase of resources (Illeris, 2007).

The physical environment of schools can have some minor but important effects, with the overall design and facilitating students' progress (Stadler-Altmann, 2015). Open-plan initiatives can improve interventions and attitudes, but their effects on limited goals. Although schools generally have a high concentration of children, education has a negative impact on high density and more activities, which are called crowded. Sounds like noise, unless it's abrupt also have limited effects. Some studies of the impact of school size also indicate that larger schools are more effective, but when these students are fully controlled, these findings are ineffective (Stadler-Altmann, 2015).

Although the core types of organizational structures can be equally effective, there is evidence that learning can be improved in an environment with fewer students (Suleman, 2014). Also, if students sit in a place that receives more attention from the teacher or are at a level that receives at least distraction from other students, they will make better progress. Groups can be organized to develop collaborative work, which can improve success, though difficult to implement and rarely implemented. This is more common when separating students based on their abilities, and when this is done, classes can be directed towards an adapted work. However, when used to set different classes, separating according to ability can lead to negative effects, and its benefits only to capable students. It's a common belief that small-sized classes are better for children to learn. Despite the belief, reducing the size of classes from their normal limits has only limited effects. It may be more beneficial to focus on effective classroom teaching methods and work with small groups (less than six students) when specific support is required (Suleman, 2014).

According to the result of studies (Ahmed, Ali, & Ali Shah, 2019) increased support and the use of classroom education also showed that there are limitations in research findings, but this is just one aspect of effective education and is probably more suitable for activities that benefit from direct education. Although it is obvious that teachers are an important part of the learning process, the differences between them make up only a small fraction (about 4%) of variation in student progress. This issue is probably due to a variety of resource constraints and educational roles, such as the effects of student abilities, goals, and family background (Ahmed, Ali, & Ali Shah, 2019). Teachers can only improve their work if they receive very special training and support. Teacher assessment has limited credibility based on observations and personal knowledge, although the fact is that they are increasingly used to determine the important outcomes for teachers and schools (Early, et al., 2016).

2.5. Student Achievement Success

Paola and Scoppa assume that student success in the field of study is one of the hallmarks of the school's effectiveness (2015, p. 79). The manner

in which student success is measured is often subjective. Given that we are currently living in the age of standards and accountability; no child should be left behind. As a result, many states apply standard tests to assess school performance. Over the years, research has shown that math success and reading have been a good indicator of student success, as well as some of the criteria for school effectiveness, although they are only reliable indicators that prove to be reliable, (Gunz & Heslin, 2005). Managers, teachers, board of directors, educational researchers, and policymakers, all identify the characteristics of schools that improve student success. This task, which has remained vague for decades seems reasonable enough.

Hoy (2012) concluded in his study that the characteristics of a school have little significance with only a negligible impact on student success. He further stated that changes in student learning are a product of social factors. According to this study, one of the main factors influencing student's learning, is different backgrounds of family, and economic and social situations also have an important effect on learning. The discussion resulted from this study was immediate and long-term (Edmonds, 1979). Edmonds was one of the first scholars who claimed that success was influenced by factors other than the economic and social status (1979). He revealed that six characteristics of effective schools that he believes will affect student achievement include: strong leadership, a regular learning environment, high expectations for students, emphasis on basic skills, and continuous assessment of knowledge, and learners' input. Edmonds (1979) stated that good schools were the result of good managers and leadership. He also concluded that student learning is a necessity. So it was the basis for success in the future. Edmonds assumes more that student learning should take precedence over all school activities if schools want to increase student achievement. The list of features of his effective schools is the basis for the school's effectiveness movement, which seeks to highlight the importance of school features in improving student performance (Lee, Bryk, & Smith, 1993). Although this connection may seem simple, Edmonds (1979) showed the direct effect of executive supervision on the success of a student who was previously unclear (Lee, Bryk, & Smith, 1993).

Strong leadership created strong schools at the same time, "the empirical demonstration of this direct relationship between managerial leadership and student achievement is ambiguous" (Pan, Nyeu, & Chen, 2015, p. 511). A consistent finding with the school's influence on the strong influence of the economic and social status on success was when schools are controlled as a unit of analysis (Lviox, 2015, p. 81; quoted Pan, Nyeu, & Chen, 2015).

Student education is aimed at improving their academic performance. Studying the factors affecting academic achievement is a multidimensional

problem, because as a multi-dimensional element it is extremely sensitive to the physical, social, cognitive and emotional growth of the students. The purpose of educational progress is to make progress in the acquisition and learning of a series of subjects that are presented to students as a lesson during a school year (Javanmard, & Pour Ghahremani, 2015, p. 32; Quoted by Habib & Seif El Din, 2017). Every year, a huge amount of national and human capital is wasted by a number of factors, such as a student's academic failure that occurs in the form of repetitions or renewals. It is entirely reasonable that the educators and practitioners seek to identify factors that affect the academic achievement of students in order to apply these factors in a desirable manner (Habib & Seif El Din, 2017, p. 32).

2.6. What is Motivation?

Motivation refers to psychological processes leading us to perform special things. The common sense of motivation tends to see it as a single factor that we can see less or more, and take energy from what students are doing (Kelley, 1967). They found that in addition to the impact of motivation as a personal ability and personality, the level of motivated students was independently about 20 percent of the variance of reading success. Although motivation can be viewed as a general quality in a variety of ways, it is relatively specific (Seifert, 2004). A student who has little interest in schoolwork and lack motivation may spend a lot of time and energy into a complex computer game. Similarly, some students may be more involved and more successful than others in relation to a particular field of study. There are many reasons why we are involved in a particular activity or not, and the implications for motivating capture a complete range from perspectives of psychology. Perhaps the best way to understand the motivation is to see it not as a single quality, but as a process that plays a role when it comes to work. Even if the students just chat with their friends, or they look at the windows and fantasize, we can also explain why they engage in such intrinsic motivation - inherently for their own sake. The problem for teachers is that such behaviors are unlikely to lead to scientific advances. For this reason, motivational educational definitions tend to focus on academic achievement and its relevance to school assignments. This can include external forms of motivation that are external factors for students themselves (Demir, 2011). However, we should be aware that this issue is not necessarily a high priority for some students in their own programs (Demir, 2011).

The extent to which students learn to succeed depends largely on their own efforts and participation. For example, McGee and colleagues (1986) found that when they start school, the decline in focus and attention is noticeable on academic progression. At all stages of training, progress on a particular topic is determined primarily by the students' primary goals.

2.6.1. Self-efficacy and Internal Motivation

The Motivation is a type of psychological state and appears when a person possesses the necessary qualifications and perceptual of self-control. Scholars have divided motivation into two main groups, i.e. internal and external. Internal motivation creates the required drive for doing an activity, while a person influenced by an external motivation implements the given tasks based on an independent purpose (Soleimani & Hanafi, 2013; Shabani, 2013: 87).

Kadivar believes that self-efficacy judgments play a significant role in internal motivation (2003). Internal motivation develops when a person attempts to achieve exciting criteria. In this way, a potential self-efficacy perception would be created individually to achieve these criteria, and in case of achieving results, the person captures a positive self-assessment. This internal interest in long term endeavors leads human without any environmental rewards. If one feels that external rewards and self-assessment rewards are inadequate or when perceived self-efficacy of a person is so low that it is impossible to achieve a positive result, it is much more difficult to maintain motivation. In addition, low self-efficacy can neutralize the effect of most desirable results. Concerning the role of self-efficacy in promoting internal motivation of learners, teachers can enhance both students' motivation towards learning and also performance level through splitting tasks into smaller parts, monitoring performance and providing proper and stimulating feedback (Kadivar, 2003-05: 49).

If motivation for students` progress is based on teacher's behavior, students' understanding and reasoning will increase. Some studies revealed that girls prefer teachers' social supportive environment and are more interested in establishing positive relations with teachers, and consider this type of communication essential for their growth and scientific improvement (Fisher, Fraser , & Rickards, 1997).

When in their own age level, adolescents face with problems in interpersonal relationships, maturity, education and so on, all of which make it necessary to create required skills for effectively and efficiently addressing current and future challenges, reinforcing adaptability and reducing internal risky behaviors (Ghezeljeh, Khalatbari , & Ghorban Shiroudi , 2020).

Summarized studies by Spaulding (1992) showed that motivation and successes are reduced by teachers who not only emphasize on assessment rather than informative role but also harshly monitor on behavior and performance of students. The high level of teacher`s control may catapult with interventions and short-term goals of students, but doesn't seem to produce long-term advantages. In a survey about various types of pre-

school programs, Miller and Dyer (1975) (Miller & Jean L. Dyer, 1975) found that highly structured formal approaches are associated with the greatest cognitive achievements. However, after going to elementary school, students confronted with highest number of cognitive failures. It is worth noting that, although educational system has a high value for literacy, (Whitehead, 1916) found that at the age of 14, 36% of children did not selectively complete any book.

Mahdinejad, Hasanzadeh, Mirzaian, and Ebrahimi, (2012) studied the relation between motivational orientations (internal, external and no motivation) and educational achievement in English language among 354 female students of first, second and third levels of high school. Their study was descriptive-correlational. Data were gathered using motivational orientations scale of Nolz et al` (2000). Results showed that there is a significantly positive correlation between internal motivation and its components and educational achievement of students in English language. Moreover, there is a very weak positive correlation between external motivation and its components and educational achievements of students in terms of English language. Another finding was that a significantly negative relation exists between non-motivational orientation and educational achievement in terms of English language. These researchers also pointed that internal motivation has the most significant role in predicting educational achievement of students in English language.

Mahmoudi Kahriz, Bagerian, and Heidari (2014) conducted a study entitled "Self-Regulating Role in Students' Social Adjustment" that found that adolescents were better placed to regulate their compromised relationships with their social environment than all aspects of self-regulation, need to have information and target setting for communication. In this way, the agency, influence and independence of the adolescent should be considered more and the traditional view of family domination and limiting role should be adjusted.

In a study by Habibi, et al., (2018) entitled "Studying the school-based learning environment and its relevance to school effectiveness," the results showed that the relationship between learning-centered learning and school effectiveness was significant.

Jez and Wassmer (2013) in an article entitled " The Impact of Learning Time on Academic Achievement ", showed that the education program's achievement significantly increases the attitude toward school, learning how to succeed in school, the academic performance and social compatibility. The results of this study showed that this program could be used as a supplementary program to improve the performance of secondary school students.

Daraei and Ghaderi, (2012) studied motivation and its influence over progress of Persian learners. Through using Vermont (1998) questionnaire for learning strategies, Daraei and Ghaderi considered relation between type of motivation, achievement, nationality and gender of Persian learners. He included 70 foreign Persian learners studying Leaning Persian Language in an International University. Considering mean scores of two semesters, he studied the relation between educational achievement and kind of motivation. Findings suggest that there is significantly positive correlation between educational achievement and internal motivation of learners. Also, to evaluate relation between nationality (first language) of Persian learners and their motivation for learning another language, Daraei and Ghaderi divided language learners into two group, Arabic language learners and non-Arabic learners. Results showed that non-Arabic learners had more motivation in learning Persian language comparing Arabic learners.

In his dissertation, Rahimi, Karkami, and Hosseini, (2015) challenges the role of classroom discipline of English language teachers in their professional success and the motivation to learn the language of the students, and after questioning from 1,484 middle school students, they concluded that from the perspective of knowledge Students, female English teachers use their male colleagues to deal with abusive behaviors of punitive measures, violence, and further discussion. But from the point of view of male and female teachers, they are on the level of professional success in teaching English. Also, there is a significant relationship between the use of punitive measures and violence by the teacher and the motivation of students in reverse, while the use of disciplinary measures such as student participation, encouragement, advice and guidance with the teacher's professional success in the positive direction communication is in addition, violence and punishment are positively related to the professional success of the language teachers in the negative, and there is a positive and significant relationship between the professional success of the English language teachers and the learning motivation in this lesson.

According to Sullivan, Johnson, Owens, and Conway (2014) when low-level behavior and lack of participation occurs continuously in classrooms, teachers face difficulty in managing them. There are also less offensive and antisocial behaviors, and teachers can improve classroom ecology, academic achievement and student behavior.

In their research paper, Di Jang et al. (2008) pursued the goal of how friendship and extroversion, self-efficacy in classroom management, and various discipline strategies affect the relationship between teacher and student. For this purpose, 120 elective teachers of elementary school were evaluated by the questionnaire. The results indicated that there was a

significant relationship between different strategies of regulation and the relationship between teacher and student, and these relationships became more prominent with regard to gender, but also among all strategies (encouragement, rewards, suppressive , emotional, indifference, student behavior and non-interventionist strategies), the strategy encourages and rewards the teacher and student for greater dependence, and this sense of trust leads to the effectiveness of teacher teaching and effectiveness. The use of emotional strategy does not fit well with the student's attitude and does not work well enough.

Lampert, Beasley, Ghousseini, Franke, and Kazemi (2010) has challenged the patterns of discipline in rural schools and argued that there are better discipline alternatives for physical punishment. These non-greedy and child-centered strategies can be more successful if classroom discipline is to be improved, if the total community of school and family also contributes to the application of behavioral principles based on counseling, convincing, and agreeing on different roles. Proper deprivation should also be emphasized against offenders.

Gonzales et al., (2011) studied motivational orientations among Philippine learners in course of learning a foreign language. He considered age and gender variables among learners. The statistical society consisted of 150 students from three main universities of Metromanila, including 80 female students (53.3%) and 70 male students (46.7%), among whom 26 students (17.3%) were learning Chinese, 40 students (26.7%) were learning French, 50 students (33.3%) Japanese and 34 students were learning Spanish. Results showed that age, gender and educational field affect on motivational orientations, in a way that comparing to adult learners, young learners were of more motivation in terms of cultural understanding, cultural cohesion and satisfaction. Also, female learners had more motivation concerning communication, dependency and self-efficacy than male learners. Moreover, results indicated that Japanese learners were more interested in job and economic development. While French learners had motivational orientation in terms of dependency on foreigners, Spanish learners were better in self-efficacy.

Minnard (2002) examined students 'perceptions of teacher-student relationships in relation to teachers' compulsory and supportive behaviors. The researchers found that the teachers' bullying behavior was associated with lower levels of teacher dependency, while the teachers' supporting behavior was tied to higher levels. Contrary to the general theory of interpersonal power (France, Bottrell, & Armstrong, 2012), Minnard and his colleagues did not find meaningful correlations between the teachers' compulsory behavior and student-teacher relationship based on the effect, not the teachers' teacher support behavior.

Segalo and Rambuda (2018) examines the management of classroom discipline in elementary schools in South Africa, and states teachers around the world have a lot of responsibilities in classroom management and student behavior in schools. In order for teachers to carry out these responsibilities, it is necessary to implement effective learning and education through the preservation of a regular non-punishable class. This is difficult in view of the fact that some students have particular attitudes in the classroom, but it is possible for teachers to be equipped with contemporary discipline strategies, which are in line with the needs of the Ministry of Education. Findings of the research states that teachers, through the help of the Ministry of Education, should familiarize themselves with legal documents for managing in order to shape and maintain positive management in the classroom.

Bishara (2017) concluded that "the study of the relationship between school effectiveness and student success" shows teachers' perceptions of school effectiveness rankings were significantly related to the student's success. Regression analysis showed that time was one of the strongest and most principled predictions of this achievement among schools' effectiveness rankings after controlling the percentage of poor students in schools, which had a negative relationship with success.

Hubenthal, O'Brien, and TaberJ (2011) challenged the impact of classroom management duties on the discipline of second-level learners in South Africa, saying that teachers were not convinced of disciplinary discipline. Current discipline actions do not lead to successful outcomes. In fact, teachers feel stressed and impolite. As a result of many reasons for classroom inaccuracies, teachers feel that they are not able to manage the classroom.

Watts (2009) concluded in a research entitled "The relationship between empowered school structure and concentration of knowledge about giving teachers" the results of which are dependent on a strong school structure and a concentration of consciousness.

In his study about learning English language, (Dörnyei & Ushioda, 2009) concluded that more motivation of students towards learning language would lead in less anxiety. He also showed that a significant relation exists between motivation and learning a language, because having no internal motivation for learning a new language (which requires drastic investment in time, energy and probably money) will contribute to reduction of learning desire and process. On the other hand, if a student has motivations and respects a lot for learning a foreign language, he or she will allocate more time and energy for learning that language. This finally leads in educational achievements.

Jordan, Schwartz, and McGhie-Richmond, (2009) explored the impact of classroom discipline on social skills, concluding that 69% of the class faced social behavior improvement, 19% maintaining good social skills during the year before the study and the current year, and 12 percent of the students did not develop any social behavior.

Zimmerman and Kitsantas, (2005) in their research hypothesized the importance of responsible accountability for important variables, such as the quality of doing homework and the sense of self-efficacy for academic success, and the results of the research also confirm this.

According to Johnson, Scholes, and Whittington (2008), discipline is a process through which teachers work with students in an attempt to take responsibility for their activities, while Jones, George, Edwards, and Atkinson, (2008) see the order as the activity of implementing classroom standards and Developing collaborative patterns to maximize learning and minimize disturbances. According to Johnson et al., (2008) and Jones et al., (2008), discipline should be considered as a corrective action that encourages students to behave properly-not because they are scared but because they recognize the negative effects of their behavior. Students demonstrate their subjective behaviors in an attempt to avoid negative consequences. The same argument expresses the concept of zero tolerance. These scholars regard order with an external imposed strategy to produce an optimal effect. Such a view is linked to the notion of teachers who see order as a set of rules to restrict student behavior in school. The order in school indicates the rules that inform students about correctness and misconduct and prevent negative outcomes. In such a strategy, the severity of the outcome is a powerful mechanism for controlling non-standard behavior.

CONCLUSION

The first fulfilled requirement of this study was to extend research concerning teaching at schools and between teacher and students. Different authors during last century showed that motivation has a significantly positive correlation with academic achievement of students in all levels. However, there is not enough extensive research in order to confirm this correlation. This study tries to confirm this correlation and develop another criterion for efficiency of teacher and his or her classroom strategies.

Regarding necessity of this subject and effect of classroom discipline strategy of teachers, motivation and lack of motivation on academic achievement relying on mediatory role of teacher, the author attempted to implement this plan to identify correlation of the given factors.

REFRENCES

Ahmed, F., Ali, S., & Ali Shah, R. (2019). Exploring Variation in Summative Assessment: Language Teachers' Knowledge of Students' Formative Assessment and Its Effect on their Summative Assessment. *Bulletin of Education and Research, 41*(2), 109-119.

Alexander, R., Rose, Jim, & Woodhead, C. (1992). Curriculum organisation and classroom practice in primary schools : a discussion paper. *Department of Education and Science*.

Bennett, N. (1976). *Teaching Styles and Pupil Progress.* Harvard: Harvard University Press.

Bennett, S. N., & Jordan, J. (1975). A typology of teaching styles in primary schools. *British Journal of Educational Psychology, 45*, 20-28.

Bishara, S. (2017). School Effectiveness and Student Achievement. *International Journal of Contemporary Research and Review, 8*(2), SS 20171-20188. doi:http://dx.doi.org/10.15520/ijcrr/2017/8/02/123

Bronzaft, A. L., & McCarthy, k. (1975). The effect of elevated train noise on reading ability. *Environment and Behavior, 7*, 517-527.

Brophy, J., & Good, T. (1986). Teacher behavior and student achievement. In M. C. Wittrock, *Handbook of research on teaching (3rd ed.).* New York: McMillan.

Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review, 31*, ,21–32.

Coleman, J., Campbell, E., Hobson, C., McPartland, J., Mood, A., Weinfeld, F., & York, R. (1966). *Equality of Educational Opportunity.* Washington, DC: US: Government Printing Office.

Cooper, H., Nye, B., Charlton, K., Lindsay , K., & Greathouse, S. (1996). The effects of summer vacation on achievement test scores: a narrative and meta-analytic review. *Review of Educational Research, 66*(3), 227-268.

Daraei, M. .., & Ghaderi, A. (2012). Impact of education on optimism/pessimism. *Journal of the Indian Academy of Applied Psychology 38(2):*, 339-343.

Deletes, T., & Jackson, B. (1972). Teacher-pupil interaction as a function of location in the Classroom. *Psychology in the schools, 9*, 119-123.

Demir, K. (2011). Teachers' Intrinsic and Extrinsic Motivation as Predictors of Student. *e-Journal of New World Sciences Academy, 6*(2), 1397-1409.

Department for Education and Employment. (1998). *Statutory target setting in schools.* Retrieved from http//www.open.gov.uk/dfee/targets/index.htm

Department of Education and Science. (1967). *Children and their Primary Schools:A Report of the Central Advisory Council for Education (England).* London: Her Majesty's Stationery Office.

Downey, D. B. (1995). When Bigger Is Not Better: Family Size, Parental Resources, and Children's Educational Performance. *American Sociological Review, 60*(5), 746-761 .

Dörnyei, Z., & Ushioda, E. (2009). *Motivation, language identity and the L2 self.* Bristol: Multilingual Matters.

Early, D. M., Berg, J., Alicea, S., Si, Y., Aber, J., & Deci, E. (2016). The Impact of Every Classroom, Every Day on High School Student Achievement: Results From a School-Randomized Trial. *JOURNAL OF RESEARCH ON EDUCATIONAL EFFECTIVENESS*, 3-29.

Edmonds, R. R. (1979). Effective Schools for the UrbanPoor. *Educational leadership, 37*, 15-27.

Finn, J., Pannozzo, G., & Achilles, C. M. (2003). The "Why's" of Class Size: Student Behavior in Small Classes. *Review of Educational Research, 73*(3), 321-368.

Fisher, D., Fraser , B., & Rickards, T. (1997). Gender And Cultural Differences in Teacher-Student Interpersonal Behavior. *Annual Meeting of the American Education Research Association.* Chicago.

Folkard, S., Monk , T., Bradbury, R., & Rosenthall , J. (1977). Time of dayeffects in school children's immediate and delayed recall ofmeaningful material. *Br J Psychol*, 45-50.

France, A., Bottrell, D., & Armstrong, D. (2012). *A political ecology of youth and crime.* London, UK: Palgrave MacMillan . Retrieved from http://dx.doi.org/10.1057/9781137291486

Fraser, B. (1986). *Classroom Environment.* London: Croom Helm.

Galton, M., John Michael , G., & Jean , R. (1999). *The Impact of School Transitions on Pupil Progress and Attainment.* Cambridge : Transitions and Transfers: A Review.

Gewirtz, S. (1998). Can all schools be successful? An exploration of the determinants of school 'successes. *Oxford Review of Education, 24*, 439-457.

Ghezeljeh, M. N., Khalatbari , J., & Ghorban Shiroudi , S. (2020). Investigate the model of predicting competitive anxiety based on perfectionism by considering the mediating role of psychological hardiness in national team athletes. *Razi Journal of Medical sciences, 27*(9).

Goldstein, H. (1995). *Multilevel Statistical Models.* London: Arnold.

González, A., Pozo, M., Manuel, C., & Owen, E. (2011). Centrality in directed social networks: A game theoretic approach. *Social Networks,, 33*, 91-200.

Gunz, H., & Heslin, P. (2005). Reconceptualizing Career Success. *Journal of Organizational Behavior, 26*(2), 105-111.

Habib, D., & Seif El Din, A. (2017). Effectiveness of cognitive behaviour therapy in schoolchildren with depressive symptoms in Alexandria, Egypt. *EMHJ - Eastern Mediterranean Health Journal, 13*(3), 615-624. Retrieved from https://apps.who.int/iris/handle/10665/117291

Habibi, A., Mukminin, A., Najwan, J., Sofwan, M., Harto, K., & sirozi, m. (2018). Investigating EFL Classroom Management in Pesantren: A Case Study. *Qualitative Report, 23*(9), 2205-2123.

Haghighi, M. M., & Jusan, M. (2012). Exploring Students Behavior on Seating Arrangements in Learning Environment: A Review. *Procedia - Social and Behavioral Sciences, 36*, 287 – 294.

Hoy, W. K. (2012). School characteristics that make a difference for the achievement of all students : A 40-year odyssey. *Journal of Educational Administration, 50*(1), 76-97.

Hubenthal, M., O'Brien, T., & TaberJ, J. (2011). Posters that foster cognition in the classroom: Multimedia theory applied to educational posters. *Educational Media International, 48*(3), 193-207. doi:10.1080/09523987.2011.607322

Illeris, K. (2007). *how We Learn: Learning and non-learning in school and beyond.* London and Newyork: Routledge.

Jang, E., McDougall, D., Pollon, D., Herbert, M., & Russell, P. (2008). Integrative Mixed Methods Data Analytic Strategies in Research on School Success in Challenging Circumstances. *Journal of Mixed Method Research, 2*(3).

Jencks, C., Smith, M., Ucland, H., Bane , M., Cohen, G., Ginitis, H., . . . Michelson, S. (1971). *Inequality: A Reassessment of the Effects of Family and Schooling in America.* New York: Basic Books.

Jez, S., & Wassmer, R. (2013). The Impact of Learning Time on Academic Achievement. *Education and Urban Society, 47*(3), 284-306.

Johnson, G., Scholes, K., & Whittington, R. (2008). *Exploring Corporate Strategy. (8th Ed.).* New York: Prentice Hall.

Jones, H., George, K., Edwards, B., & Atkinson, G. (2008). Effects of Time of Day on Post-Exercise Blood Pressure: Circadian or Sleep-Related Influences? *Chronobiology International, 25*(6), 987–998. doi:0.1080/07420520802548044

Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). (2009). Preparing teachers for inclusive classrooms. *Teaching and Teacher Education, 25*(4), 535-542.

Kadivar, P. (2003). *Educational Psychology.* Tehran: SAMT.

Kelley, H. H. (1967). Attribution theory in social psychology. *In D. Levine (Ed.), Nebraska Symposium on Motivation, 15*, 192–240.

Lampert, M., Beasley, H., Ghousseini, H., Franke, M., & Kazemi, E. (2010). Using Designed Instructional Activities to Enable Novices to Manage

Ambitious Mathematics Teaching. In *Instructional Explanations in the Disciplines* (p. unit 8). LTP.

Lee, V. E., Bryk, A., & Smith, J. (1993). The Organization of Effective Secondary Schools. *Review of Research in Education, 19*, 171-267.

Lieberman, M. (1990). Understanding How Groups Work: A Study of Homogeneous Peer Group Failures. *International Journal of Group Psychotherapy, 40*(1), 31-52. doi:10.1080/00207284.1990.11490582

Mahdinejad, G., Hasanzadeh, R., Mirzaian, B., & Ebrahimi, S. (2012). Motivational orientations and students' English language learning: The case of Iranian EFL learners. *European Journal of Social Sciences, 32*(2), 239-250.

Mahmoudi Kahriz, B., Bagerian, F., & Heidari, M. (2014). The role of Self-mregulation in Social Adjustment of Students. *Developmental Sycology*, 383-392.

Malone, K. A., & Paul, T. (2003). School Grounds as Sites for Learning: Making the most of environmental opportunities. *Environmental Education Research, 9*(3). doi: 10.1080/13504620303459

Mcgee, G., KrantzL, P., & McClannahan, L. (1986). An extension of incidental teaching procedure to reading instruction for autistic children. *Journal of Applied Behavior Analysis, 19*(2), 147-157.

Miller, L. B., & Jean L. Dyer. (1975). Four Preschool Programs: Their Dimensions and Effects. *JSTOR*, 1-170.

Minnard, C. (2002). A strong building: Foundation of protective factors in school . *Children & Schools, 24*(4), 233-246. Retrieved from http://dx.doi.org/10.1093/cs/24.4.233

Mortimore, P., & Whitty, G. (1997). *Can school Improvement Overcome the Effects of Disadvantage?* London: Institute of Education.

Mortimore, P., Sammons, p., Stoll, L., Lewis, D., & Ecob, R. (1988). *School Matters: The Junior Years.* Wells: Somerset: Open Books.

Pan, H.-L. W., Nyeu, F.-Y., & Chen, J. (2015). Principal instructional leadership in Taiwan: lessons from two decades of research. *Journal of Educational Administration, 53*(4), 492-511.

Paola, M. D., & Scoppa, V. (2015). Procrastination, Academic Success and the Effectiveness of a Remedial Program. *Journal of Economic Behaviour and Organization*, 4-24.

Rahimi, M., Karkami, & Hosseini, F. (2015). The Role of Teachers' Classroom Discipline in Their Teaching Effectiveness and Students' Language Learning Motivation and Achievement: A Path Method. *Iranian Journal of Language Teaching Research, 3*(1), 57-82.

Rowell, C. H., & McKay., J. (1969). An acridid auditory intcrneurone. II. Habituation, variation in response level, and central control. *J. Exp. Biol, 50*, 247-260.

Rutter, M., Maughan, B., Mortimore, P., & Ouston, J. (1979). *Fifteen Thousand Hours: Secondary Schools and Their Effects.* Wells: Somerset: Open Books.

Seetha, S., Karmegam, K., Ismail, M., Sapua, S., Ismail , N., & Tamil Moli, L. (2008). Effects to teaching environment of noise level in school classrooms. *Journal of Scientific & Industrial Research, 63*, 659-664.

Segalo, L., & Rambuda, A. (2018). South African public school teachers' views on right to discipline learners. *South African Journal of Education, 38*(2).

Seifert, T. (2004). Understanding student motivation. *Educational Research, 46*(2), 137-149. doi:10.1080/0013188042000222421

Shabani, M. (2013). EFL Learners' beliefs about Language Learning in Iran. *International Journal of Language Learning, 4*(4), 88-101.

Sharp, C., & Hutchinson, D. (1997). How do season of birth and length of schooling affect children's attainments at Key Stage 1? A question revisited. *Annual Conference of the British Research Association.* University of York.

Skinner, B. F. (1983). Intellectual management in old age. *American Psychologist, 38*, 239–244.

Slater, P. (1968). Effect of noice on pupil performance. *Journal of Education Psychology, 59*, 235-249.

Soleimani, H., & Hanafi, S. (2013). Iranian Medical Students' Attitudes towards English Language Learning. *International Research Journal of Applied and Basic Sciences., 4*(12), 3816-3823.

Spaulding, C. (1992). Motivation in the classroom (E. B. Mohamadreza Naeenian, Trans.). Tehran: Madreseh.

Stadler-Altmann, U. (2015). Learning Environment: The Influence of School and Classroom Space on Education. In J. M. C. Rubie-Davies, *The Routledge International Handbook of Social Psychology of the Classroom* (pp. 547-571). London: Routledge.

Suleman, Q. (2014). Effects of Classroom Physical Environment on the Academic Achievement Scores of Secondary School Students in Kohat Division, Pakistan. *International Journal of Learning and Development, 4*(1), 71-82. doi:10.5296/ijld.v4i1.5174

Sullivan, A., Johnson, B., Owens, L., & Conway, R. (2014). Punish Them or Engage Them? Teachers' Views of Unproductive Student Behaviours in the Classroom. *Australian Journal of Teacher Education, 36*(9).

Watts, M. (2009). Power and Education. *SAGE JOURNALS: Education*.

Whitehead, A. N. (1916). *The Aims of Education : A Plea for Reform.* England: OT.

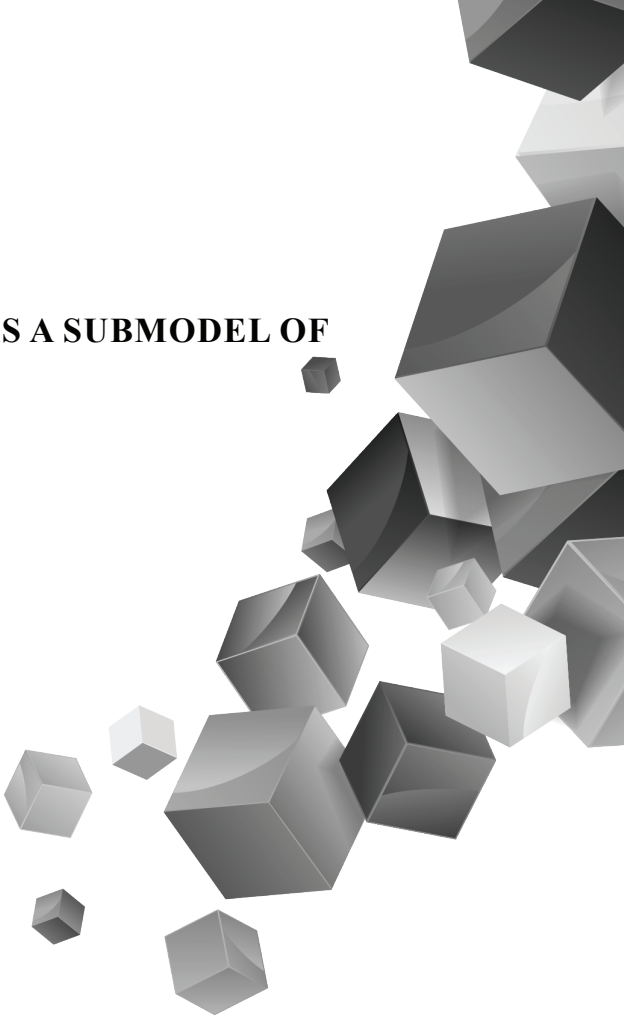
Wollin, D., & Montagne, M. (1981). College classroom environment. *Environment and Behaviour, 13*, 707–716.

Wollin, D., & Montagne, M. (1981). College classroom environment. *Environment and Behaviour, 13*, 707–716.

Zimmerman , B., & Kitsantas, A. (2005). Homework practices and academic achievement:The mediating role of self-equacy and perceived responsibility beliefs. *Contemporary Educational Psychology, 30*, 397–417.

Chapter 9

FLIPPED LEARNING AS A SUBMODEL OF BLENDED LEARNING



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INTRODUCTION

The biggest problem for distance education is the lack of motivation (motivation) in students due to the lack of social interaction. Face-to-face teaching has its drawbacks, such as lack of time flexibility and being in the classroom three or four days a week. This situation has pushed education researchers to develop a new model (Yolcu, 2015). Researchers have introduced a new teaching model called blended learning, which combines the effective aspects of both models (face-to-face and distance learning). Undoubtedly, efforts in this direction are based on the effort to create a more effective and productive teaching environment.

In blended learning environments, the superior aspects of both face-to-face and online learning environments are brought together and the teaching process is tried to be planned in the most effective way. However, there is no single and correct roadmap in terms of time and technology in the process of combining different features of different environments. Various variables such as topics covered in face-to-face and online environments, activities selected and frequency levels differ according to the instructors who apply them. The most important aim of blended teaching is to bring together the strengths of these two different environments and provide an active, guided and flexible learning opportunity for students. It should not be forgotten that this blending process may have many benefits as well as difficulties in terms of time and technology.

In flipped learning, ss a sub-model of blended learning, some courses are taught outside of the classroom setting using video or other presentation modes, such as screen video recording, so students can access content whenever, wherever and as often as they want.

2. BLENDED LEARNING

Blended learning is a learning approach that combines face-to-face teaching with online learning. The blended learning model emerged in the early 2000s. With the development of technology and the discovery of the Internet, the extraordinary increase in the ease of access to information has raised the possibility that face-to-face learning environments will decrease in importance over time. Thereupon, researchers designed electronic learning environments, even some universities and institutions implemented programs that would only carry out their education with electronic learning and investigated whether this possibility would be correct. However, it was observed that web-based learning applications, especially distance education, had some shortcomings and disadvantages. Thereupon, web-based learning started to be used with face-to-face learning model in the classroom. Thus, blended learning model emerged.

The Blended Learning model supports the collaboration of students, especially in project-based studies. Online interaction requires verbal participation. It has been observed that this model plays an important role in the formation of awareness that supports active learning such as brainstorming, multiple thinking, critical thinking and decision-making mechanisms in the Covid-19 pandemic distance education process. Regardless of the teacher, it was possible for students to monitor factors such as determination, assertiveness, willingness and skill, and to evaluate their academic development. Undoubtedly, all these observations make it necessary that preliminary preparation and acquisition-oriented infrastructure studies should be designed in advance for the needs. It is again the teacher's responsibility to create the curiosity or need for learning in an online environment. The diversity of the skills students will offer in line with their abilities also ensures the continuity of learning skills. Under all circumstances, leading the education without interruption, supporting technology-use skills, emphasizing the importance of task-responsibility relationship, maintaining assertiveness, regular reporting of student status and feedback should be taken as a basis by the teacher.

In this way, it will be possible for the student to take responsibility for his learning, to evaluate goal planning and self-achievements, and to stabilize the concept of autonomy. In the lifelong learning process, the teacher is no longer the only source of knowledge. This is an important strategy of the Blended Learning approach. The educational purpose of the materials used in modeling should be conveyed to the students in advance and to raise awareness about its necessity, to consensus with the students to change or enrich the content according to their learning levels when necessary, and especially to design activities that can maximize their creativity together will increase the educational quality. The perception that the classroom environment is not the only place for learning should be instilled in students, and the fact that this perception can be applied in any situation that threatens public health should be encouraged.

2.1 Blended Learning Environments

As in all learning environments, the main purpose in blended learning environments is to increase student learning. With the use of online technologies in blended environments, some course time used in the classroom for any activity can be wasted. For example, by putting a Powerpoint presentation to be presented in the classroom on the website in advance, students can be made ready for the lesson by browsing the presentation. Thus, instead of the time spent to make presentations in the classroom, the opportunity to examine the subject in depth and to solve the case studies and problems related to the subject will be caught. From this point of view, we can say that thanks to various online environments,

there will be time to use richer and different learning-teaching methods in the classroom.

The blended learning environment provides learners with many advantages such as being able to work from anywhere, at any time, as long as they want, and instantly receiving feedback, correction and reinforcement through the web-based teaching environment, while at the same time it offers discussing in a face-to-face learning environment, interacting and communicating directly with teachers and learners. Providing flexibility and convenience in the learning environment creates positive effects on the learning level and success, the rate of retention of knowledge, interest in learning and motivation towards the lesson. It also offers benefits such as the learners' ability to learn at their own pace and control this process, and ease of review and correction. Thanks to an active learning environment, it also allows learners to flexibly access course-related resources from wherever and whenever they want. Students can also participate in the learning environment from their homes. Recorded information contents can be shared without time and place limitations. Blended learning addresses different learning styles. It supports self-learning, controls learning with evaluations of learning goal (attainment), and ensures complete learning. It is a model that supports 21st century skills.

2.2 Sub-models of Blended Learning

There are sub-models of Blended Learning such as Face-to Face Model, Rotation Model, Station Rotation Model, Laboratory Rotation Model, Flexible Model, Online Laboratory Model, Individual Model, Online Model, The Inverted or Flipped Classroom Model.

Among all blended learning models, Face-to-Face Learning Model is a kind of training under the supervision of teachers in educational environments such as classrooms, workshops, laboratories, training units of enterprises for the training of theoretical and applied courses foreseen in the curriculum, except for the course duties within the scope of vocational training and internship in enterprises.

In Rotation Model version of blended learning, students alternate between different stations - working online or spending time face-to-face with the teacher according to a certain schedule. The rotation model is used more in primary schools. It is so common in some countries that 80 percent of primary schools in California using the blended learning approach follow the rotation model.

In the station rotation model, students work at different learning stations, at least one of which is online, for a certain period of time in a particular course or subject. At other stations, activities such as small group or whole class teaching, group projects, personal lesson and pencil and

paper assignments can be carried out. In some implementations, the entire classroom is switched between activities, while in some implementations the class is divided into two small group rotations. In the Station Rotation Model, students work at all stations.

In the laboratory rotation model, students switch between the classroom and the computer lab for a certain period of time. The classroom is usually devoted to other learning activities. The difference between the Laboratory rotation model and the Station rotation model is that in the station rotation model, students work between stations in the classroom, while in the laboratory model, they rotate by going to a learning laboratory outside the classroom where they do their online learning.

Schools that support a large number of non-traditional and at-risk students often prefer the flexible blended learning model. In this approach, material is first delivered online. Teachers are in the classroom to provide support when necessary, but learning takes place primarily under the guidance of students, as they learn independently and practice new concepts digitally. While online learning in the flexible model sometimes leads students to office work, it is the backbone of a student's learning, and students can switch between different learning models in order to optimize their learning experience according to their specific needs. In fact, every student has a unique, fluent schedule among learning patterns. The teacher is in the classroom, and the teacher or other adults provide flexible and adaptable face-to-face support, as needed, through small group teaching, group projects and individual tutoring. Some applications include significant face-to-face support, while others include minimal face-to-face support.

As schools are facing increasingly stringent resource constraints, Online Laboratory Model is a viable option to help students complete their classes, including those not taught at school. In this scenario, students learn entirely online but go to a specific computer lab to complete the course work. The laboratory is under adult supervision, but these adults are not teachers. This model not only enables schools to teach classes that normally have no teachers or where the number of teachers is insufficient, but also enables students to work on a topic at their own pace without affecting the learning environment of other students.

Individual Model, which is popular in high schools, gives students the opportunity to take courses outside of school. These individuals will be in a traditional school setting, but they also choose to supplement their learning with online classes taught remotely. In order for this blended learning method to be successful, students' self-motivation must be very high. The individual model is ideal for students who want to take Advanced Placement courses or are interested in a field not included in the school program.

The online model is the exact opposite of the face-to-face model. This blended learning model is a model in which students work remotely and material is first delivered online. Face-to-face participation is optional, but students often meet their teachers online when they have questions. This blended learning model is ideal for students who want their daily schedule to be more flexible and independent.

The Flipped Classroom or Inverted Learning Model is a learning approach in which technology is used to reverse traditional time spent in the classroom. If in the past classroom time was used to teach students, now in a reverse model, this time is used to encourage individual learning and to help students one-on-one and to improve student-teacher interaction. Teaching content can still be delivered in the classroom, but this content is mainly designed for access outside the classroom, and this is a great way for students who struggle in class to learn at their own pace.

3. FLIPPED LEARNING AND FLIPPED CLASSROOM

Rapidly developing science and technology make the change and development in the social structure of societies inevitable and reveals the obligation of educational institutions to keep up with this change (Davis & Shade, 1994). On the other hand, while the continuous development of technology makes the integration of technology into education compulsory, education systems also require continuous development and change in order to meet the needs of the age in every field from pre-school education to university, and to adapt to the era. Depending on these changes, a paradigm change from "behavioral" approach to "constructivist" approach is tried to be caught in the education system (Kertil, 2008). This change enabled the emergence of new approaches to teaching and learning, and brought up the applicability of the Flipped Classroom System, which is a new education strategy in the teaching-learning process.

Pedagogical foundations of Flipped Classroom are based on constructivist learning theory. According to this theory, students do not receive information as it is in the learning process. Rather, students receive information as active constructive participants in the learning process. The process of structuring knowledge is accomplished with active learning strategies such as problem-based learning, simulation, and match-share. Out-of-classroom learning in the flipped classroom is based entirely on self-controlled learning. In-class learning activities are high-level cognitive activities that use active learning techniques such as decision-making and problem solving that students perform by interacting with each other, and at this point, the flipped classroom model fits with the social constructivist learning theory. Constructivist theory does not deny the role of the teacher in the learning process. According to the constructivist theory, the instructor is not the wise who knows everything on the stage, but is the person who

is next to the student in the learning process in cooperation with the student. In the flipped classroom, the instructor does not teach, but acts as a facilitator in the active learning process in the classroom. It is student-centered, and the responsibility for learning lies entirely with the student. It has been suggested that the flipped learning model is also suitable for Kolb's experiential learning, adult learning and activity theories.

In short, the flipped learning model consists of doing what is traditionally done inside the classroom out and what is done outside the classroom in (Bergmann & Sams, 2012; Herreid & Schiller, 2013). The essence of the flipped learning model is to take the direct teaching / course outside the classroom and to provide students with active learning opportunities in the classroom (Bergmann & Sams, 2012; Brunsell & Horejsi, 2013). In traditional teaching, the courses are teacher-centered and are an effective method to provide information to students. Flipped learning turns the classroom into a student-centered classroom (Valenza, 2012). Pierce and Fox (2012), the reverse face learning model; He states that it reduces the time devoted to direct teaching in the classroom, increases the time allocated to active learning activities in the classroom, and allows teachers to engage students in putting their higher-order thinking skills to work.

3.1 The Advantages and Disadvantages of Flipped Classroom

Flipped Classroom has advantages as well as disadvantages. As shown in table 1, It allows the students to learn at different times depending on their skills, to learn in advance the information that will be used in the activities, to take responsibility in learning activities, to work actively with their peers in applications. In addition, it improves their ability to comment, provides access to information at any time to the sick or absent student, offers families the opportunity to follow the lessons and help their children more. As for the disadvantages, one of them is that it can be difficult for teachers to check whether the student is watching the videos and learning the subject. However, there is a possibility that students who do not have individual learning characteristics will have problems in the learning process. In addition, students are required to have a strong internet connection along with the computer. In the Flipped Classroom system, Duerden (2013) argued that the student may have difficulties in the process of working outside the classroom without interacting with the teacher and other students, and that the student may have difficulties because they cannot ask questions while learning the lesson, cannot establish a meaning relationship between the subjects, and this may cause disconnection in their learning. According to Miller (2012), the educational platform is not prepared for the needs while using this system, the student is not active in the listening process, and not creating an environment in which he can speak while learning the subject and his reaction can be measured, causes

a decrease in learning efficiency. In addition, the additional time spent on correcting the wrong information is seen as a disadvantage in terms of the applicability of this system, as well as the possibilities such as the student misleading the information and not understanding the wrong learning.

Table 1: The advantages of Flipped Classroom in terms of students and teachers

In terms of students, Flipped Classroom	In terms of teachers, Flipped Classroom
• allows students to learn at different times depending on their skills. • improves the student's ability to comment • it allows the student to learn in advance the information that will be used in the activities. • provides access to information at any time to the sick or absent student. • offers families the opportunity to follow the lessons and help their children more • allows the student to take responsibility in learning activities • allows students to work actively with their peers in applications.	• provides the teacher with the opportunity to guide the team, not the wise ones in the classroom • enables the teacher to help students more in classroom practice. • helps to reduce problems with student behavior in classroom management due to interactive activities with students. • allows the teacher to work individually and in small groups. • allows the teacher to save time on lecturing and repeating the topic • allows the teacher to work collaboratively while preparing material • it allows the communication between teacher and student to improve.

3.2 Flipped Classroom in Literature

According to Bergman and Sams (2012), there is no one guaranteed, easily copied recipe for the inverted class implementation. Flipped classroom is the philosophy of transitioning from an instructor-centered practice to a learning-centered practice. For this purpose, it can be applied using different tools and methods according to need.

Wong, T.H., Ip, E.J., Lopes, I. And Rajagopalan (2014); Moraros, Islam, Yu, Banow and Schindelka (2016); Pierce and Fox (2012); Mortensen and Nicholson (2015); Marshall, Nykamp and Momary (2014); Street, Gilliland, McNeil and Royal (2015); Love, Hodge, Grandgenett and Swift (2014) argue that while flipping classroom practice has been found to increase learning, it has been observed that there is not much change in exam results.

Moraros et al (2016) has stated in their studies that students who do not receive education in their mother tongue appreciate the flipped classroom

model more, as video lessons provide opportunities such as repetition or pause and rewind, it also provides an advantage for students who learn slowly or who do not receive education in their mother tongue.

Due to the fact that it is a new model, almost all of the studies in the literature have frequently questioned whether the students liked or perceived the flipped classroom model. It can be seen in all the articles on the subject that the students easily adopted the flipped classroom practice, were satisfied with it, and always preferred it more than the traditional classroom (Abeysekera, and Dawson 2015; Tan, Brainard and Larkin (2015), Wong et al (2014); Phillips and Trainor (2014); Tune, Sturek and Basile (2013); Ramar, Hale and Dankbar (2015); Simpson and Richards (2015); Asef-Vaziri (2015); Periyakoil and Basaviah (2013); Street et al (2015).

Lage, Glenn and Treglia (2000) interpreted the evaluations of students and faculty members about this educational model with questionnaires and open-ended questions and published their results. This model they developed has been highly accepted by both students and faculty members. The interesting aspect of this study is that in the 2000s, they planned the reverse classroom application in such detail and provided a rich learning environment. Considering today's technological developments, it has become much easier to create these opportunities. Unfortunately, this first application by Lage et al did not receive enough attention.

In order to achieve the expected performance from active learning activities to be carried out in inverted classrooms, it is a prerequisite for students to have sufficient prior knowledge and to do preliminary studies (Hao, 2016a). It is seen as one of the most critical problems while carrying out learning activities in the learning model (Hao, 2016b; McLaughlin, Griffin, Esserman, Davidson, Glatt, Roth and Mumper, 2013; Öztürk, Karademir, Karaoğlan, Yılmaz and Yılmaz, 2015; Sun, Wu and Lee, 2016; Yılmaz, 2017).

Perhaps the most valuable feature of the flipped learning model is that it is a system that can be applied in different types of educational institutions or levels. In this regard, it can be applied to students of different socio-economic levels and living in different geographies and lead them to success (Johnson & Renner, 2012). Because in the reverse-faced learning model, open-to-access educational content resources or course materials are digitally shared with learners on a common platform by teachers. Learners examine the uploaded files before they come to the school and make preparations for the lesson. The teacher examines the requests and suggestions and feedback from the students before coming to the class and takes the necessary measures. In this way, the parts that are not understood or cause uncertainty are clearly identified and explained. Students have the

opportunity to reinforce what they learned in the classroom while using multimedia tools such as videos, lecture presentations, teaching method systems outside the classroom (Çakır, 2017; Fulton, 2012). As a matter of fact, according to LaFee (2013), the flipped learning model allows students to effectively adjust their working time outside of class. In this way, teachers have more time in the classroom atmosphere where students benefit from their readiness levels. This model aims to learn the theoretical subjects at home by the student before the lesson and to achieve more permanent learning by making plenty of practice in the lesson (Karaca & Ocak, 2017).

Considering the studies in the literature, it appears that the flipped learning approach is widely used and has positive effects on student achievement. However, the opposite situation is experienced in some countries (Bolat, 2016). However, with the increase of web-based interactive learning platforms, online video sites and open access resources, the reverse-face learning model continues to be up to date. Thanks to the flipped learning model, individuals can easily carry out information access activities in appropriate time periods and increase their level of participation in the course. Therefore, examining the effect of the flipped learning model on the participation of individuals in the lesson appears to be a topic worth researching. One of the strengths of the study is that it is trying to determine the effect of the flipped learning model on the academic success of students rather than affective, behavioral and cognitive engagement (Kaya, 2018).

4. RESULT

The main purpose in education is to enrich student learning. In this context, blended learning, which requires the use of more than one learning approach or teaching technologies, enables the student to learn from different sources and by comparing by enriching the ways of accessing information through books, web-supported materials and activities (Dağ, 2011).

With blended learning, time and space limitations are eliminated and student-student and student-teacher communication and interaction are maintained both in the classroom and online. In addition, the student can find the opportunity to transform the knowledge into an experience by discussing and asking without forgetting the learned information.

Blended learning facilitates the transition from teacher-centered teaching approach to student-centered teaching approach. In this way, the student is enabled to organize his / her own learning without relying solely on teacher guidance and increases the selection areas for individual learning preferences.

With the opportunities offered by online environments, blended learning enables some processes such as pre-learning and evaluation of the teaching process to be carried out on the web, thus shortening the face-to-face learning process and directing this period to more efficient education and training processes.

With blended learning, the alternatives offered for learning are increasing and thus students can realize their learning in line with their needs and needs.

From an institutional point of view, blended learning is a learning-teaching approach that is less costly, easily updated, and fast and eliminates the disadvantages of geographic location with the opportunities offered by e-learning.

The application of the flipped learning model in educational institutions of all levels is increasing rapidly. However, it appears that some problems related to how to integrate technology in the process of designing the courses according to the flipped learning model emerged in the process. Because the flipped learning model is a relatively new model, it is just emerging in the problems arising from practice. One of these problems is related to the low interest and participation of students in the process of studying outside or at home, which is the first stage of the model, which is also referred as the online course phase.

Students can come to the course in the classroom environment, which is the second stage of the model, without watching the lecture videos or preparing for the lesson. This may hinder the functioning of active learning methods to be applied in the classroom environment, which is the second stage of the model (Yılmaz and Karaoğlan Yılmaz, 2019). Because, for the students who come unprepared for the course, the teacher may have to recount the course subjects, and this may lead to a decrease in the time allocated for the main purposes of the face-to-face lesson. For this reason, it is important to find solutions for students to prepare for the course at home.

REFERENCES

1. Abeysekera, L. & Dawson, P. (2015) Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research HERD 2015;34:1-14
2. Asef-Vaziri, A. (2015). The flipped classroom of operations management: A not-for-costreduction platform. DSIJE. 2015; 13: 71-88
3. Bergmann J, Sams A. (2012) In Flip your classroom; Reach every student, in every class, every day. ISTE Washington USA, 2012.
4. Bolat, Y. (2016). Ters yüz edilmiş sınıflar ve eğitim bilişim ağı (EBA). Journal of Human Sciences, 13(2), 3373-3388.
5. Brame, C., (2013). Flipping the classroom. Vanderbilt University Center for Teaching. Retrieved from http://cft.vanderbilt.edu/guides-sub-pages/flipping-the-classroom/.
6. Brunsell, E. & Horejsi, M. (2013). Flipping your classroom. Science teacher (Normal, Ill.) 78(2)
7. Çakır, E. (2017). Ters yüz sınıf uygulamalarının fen bilimleri 7. sınıf öğrencilerinin akademik başarı, zihinsel risk alma ve bilgisayarca düşünme becerileri üzerine etkisi. Yayınlanmamış yüksek lisans tezi, Ondokuz Mayıs Üniversitesi, Eğitim Bilimler Enstitüsü, Samsun.
8. Dağ, F. (2011). Harmanlanmış (Karma) Öğrenme Ortamları ve Tasarımına İlişkin Öneriler. Ahi Evran Üniversitesi Eğitim Fakültesi Dergisi, Cilt 12, Sayı 2, Haziran 2011 Özel Sayı, Sayfa 73-97
9. Davis, B.C., & Shade, D.D. (1994). Integrate, don't isolate! Computers in the early childhood curriculum [ERIC digest]. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
10. Duerdan, D. (2013). Disadvantages of a Flipped Classroom. http://www.360- edu.com/commentary/disadvantages-of-a-flipped-classroom
11. Fulton, K. (2012). Upside down and inside out: Flip your classroom to improve student learning. Learning & Leading with Technology, 39(8), 12-17.
12. Hao, Y. (2016a). Exploring undergraduates' perspectives and flipped learning readiness in their flipped classrooms. Computers in Human Behavior, 59, 82-92.
13. Hao, Y. (2016b). Middle school students' flipped learning readiness in foreign language classrooms: Exploring its relationship with personal characteristics and individual circumstances. Computers in Human Behavior, 59, 295-303.
14. Herreid, C. F.& Schiller, N. (2013) Case Studies and the Flipped Classroom. Journal of College Science Teaching 42(5):62-66

15. Johnson, L. W. & Renner, J. D. (2012). Effect of the flipped classroom model on a secondary computer applications course: Student and teacher perceptions, questions and student achievement. Unpublished doctoral dissertation, University of Louisville, Louisville.

16. Karaca, C. & Ocak, M. A. (2017). Algoritma ve programlama eğitiminde ters yüz öğrenmenin üniversite öğrencilerinin akademik başarısına etkisi. International Online Journal of Educational Sciences, 9(2), 527-543.

17. Kaya, D. (2018). Matematik Öğretiminde Ters Yüz Öğrenme Modelinin Ortaokul Öğrencilerin Derse Katılımına Etkisi. Sakarya University Journal of Education, 8(4), 232-249.

18. Kertil, M. (2008). Matematik öğretmen adaylarının problem çözme becerilerinin modelleme sürecinde incelenmesi (Master Thesis). Obtained from YOK Thesis Centre. (Thesis No. 221516)

19. LaFee, S. (2013). Flipped learning. Education Digest, 79(3), 13-18.

20. Lage MJ, Glenn JP, Treglia M. (2000). Inverting classroom: A gateway to creating an inclusive learning enviroment J of Economic Education 2000;1;30-43

21. Love, B., Hodge, A., Grandgenett, N. & Swift, A.W. (2014). Student learning and perceptions in a flipped linear algebra course 2014; 45: 317-324

22. Marshall, L.L., Nykamp, D. L. & Momary, K.M. (2014). Impact of abbreviated lecture with interactive mini-cases vs traditional lecture on student performance in the large classroom. Am J Pharm Educ. 2014; 15;78:189

23. McLaughlin, J. E., Griffin, L. M., Esserman, D. A., Davidson, C. A., Glatt, D. M., Roth, M. T. & Mumper, R. J. (2013). Pharmacy student engagement, performance, and perception in a flipped satellite classroom. American Journal of Pharmaceutical Education, 77(9), 196.

24. Miller, A. (2012). Re: Five Best Practices for the Flipped Classroom [Edutopia]. Retrieved from: http://www.edutopia.org/blog/flipped-classroom-best-practices-andrew-miller.

25. Moraros, J., Islam, A., Yu, S. Banow, R. & Schindelka, B. (2016). Flipping for success: evaluating the effectiveness of a novel teaching approach in a graduate level setting. BMC Med Educ. 2015; 28; 15:27.

26. Mortensen, C.J.& Nicholson, A.M. (2015). The flipped classroom stimulates greater learning and is a modern 21st century approach to teaching today's undergraduates. J Anim Sci. 2015; 93:722-31

27. Öztürk, T., Karademir, T., Karaoğlan Yılmaz, F.G., Yılmaz, R. (2015). Examining flipped classroom model from students' point of view. Proceedings of the 7th international conference on education and new learning technologies, Barcelona - 6th - 8th of July 2015.

28. Pierce, R. & Fox, J. (2012). Vodcasts and active-learning exercises in a “flipped classroom” model of a renalpharmacotherapy module. Am J Pharm Educ. 2012; 76:196

29. Periyakoil, V.S. & Basaviah, P. (2013). The flipped classroom paradigm for teaching palliative care skills. Virtual Mentor. 2013; 15: 1034-1037.

30. Phillips, C.R. & Trainor, J.E. (2014). Millennial students and the flipped classroom. Proceedings of ASBBS 2014; 21:519-530

31. Ramar, K., Hale, C.W. & Dankbar, E.C. (2015). Innovative model of delivering quality improvement education for trainees - a pilot project. Med Educ Online. 2015; 20: 28764.

32. Simpson, V. & Richards, E. (2015). Flipping the classroom to teach population health: Increasing the relevance. Nurse Educ Pract. 2015; 15: 162-7.

33. Street, S.E., Gilliland, K.O., McNeil, C. & Royal, K. (2015). The flipped classroom improved medical student performance and satisfaction in a preclinical physiology course. Med Sci Edu 2015; 25: 35-43

34. Sun, J. C. Y., Wu, Y. T., & Lee, W. I. (2016). The effect of the flipped classroom approach to OpenCourseWare instruction on students’ self-regulation. British Journal of Educational Technology, 48(3), 713-729.

35. Tan, E., Brainard, A. & Larkin, G.L.(2015). Acceptability of the flipped classroom approach for in-house teaching in emergency medicine. Emerg Med Australas. 2015; 27: 453-9.

36. Tucker, B. (2012). The flipped classroom. Education Next, 12(1), 82. Retrieved from http://educationnext.org/the-flipped-classroom/

37. Tune, J.D., Sturek, M.& Basile, D.P. (2013). Flipped classroom model improves graduate student performance in cardiovascular, respiratory, and renal physiology. Adv Physiol Educ. 2013; 37: 316-320

38. Valenza, J. (2012. August 14). The flipping librarian [Web log post]. Retrieved from http://blog.schoollibraryjournal.com/neverendingsearch/2012/08/14/the-flippinglibrarian/

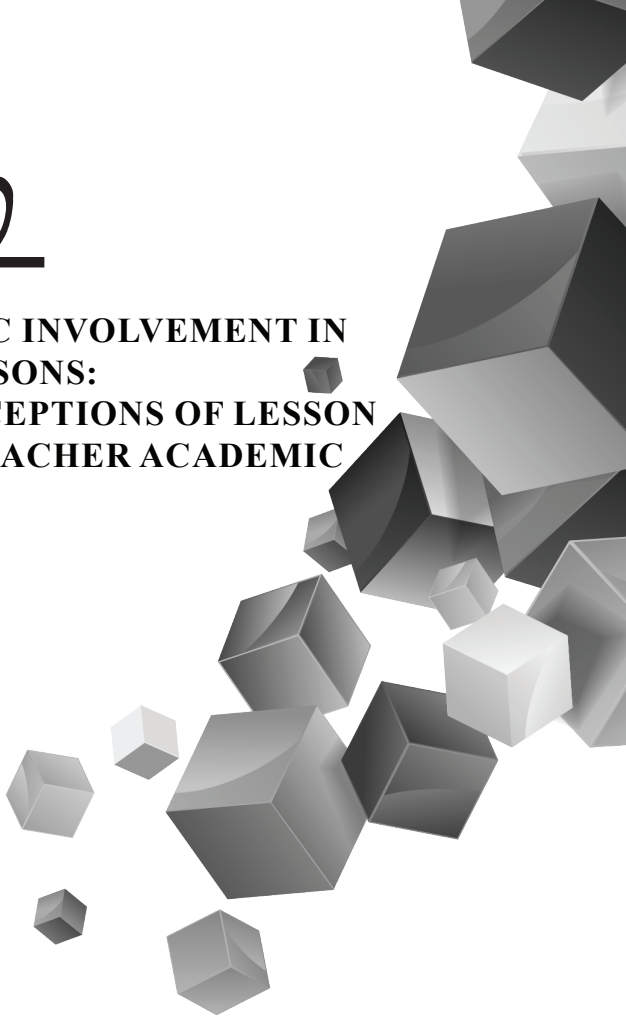
39. Wong, T.H., Ip, E.J., Lopes, I. & Rajagopalan V. (2014). Pharmacy students’ performance and perceptions in a flipped teaching pilot on cardiac arrhythmias.Am J Pharm Educ. 2014; 78:185.

40. Yılmaz, R. & Karaoğlan Yılmaz, F. G. (2019). Ters Yüz Öğrenme Modeli: Uygulamada karşılaşılan sorunlar ve çözüm önerileri. (II. International Symposium of Academic Studies on Education and Culture) I-SASEC 2019

41. Yolcu, H. (2015). Harmanlanmış (Karma) Öğrenme ve Uygulama Esasları. The Journal of Academic Social Science Studies. Number: 33 , p. 255-260, Spring I 2015

Chapter 10

PARENTAL ACADEMIC INVOLVEMENT IN SOCIAL STUDIES LESSONS: THE EFFECT OF PERCEPTIONS OF LESSON IMPORTANCE AND TEACHER ACADEMIC INVOLVEMENT[1]



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Şahin DÜNDAR[3]

1 This study was produced from the first author's master thesis titled "Examining the relations between parents' views on the importance of the social studies lesson, their perceptions of teachers' academic involvement in the social studies lesson, and parents' own academic involvement in the social studies lesson", which was completed in 2019 at Trakya University, Social Sciences Institute under the supervision of the second author.

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INTRODUCTION

With its interdisciplinary and multidisciplinary structure, the social studies lesson has an essential and important role in schools in teaching children knowledge, skills, and values pertaining to civic competence and social aspects of life (National Council for the Social Studies, NCSS, 1994; Turkish Ministry of National Education [MoNE/MEB], 2017, 2018). However, it is crucial to ensure the academic involvement of the parents in the education of the child in order to benefit from the formal education at school at the maximum level (Binicioğlu, 2010; Çelenk, 2003; Hill et al., 2004; Keçeli-Kaysılı, 2008; Yonson, 2016).

There is no consensus on the definition of the concept of parent or, in other words, family involvement in the education of a child; it is defined differently by different authors (Wilder, 2014, p. 378). For instance, Yonson (2016) defines parental involvement as parents' "assistance in school-related works and activities of their children" (p. 187). According to Jeynes (2007), parental involvement is "parental participation in the educational processes and experiences of their children" (p. 83). Hill et al. (2004) define it as "parents' work with schools and with their children to benefit their children's educational outcomes and future success" (p. 1491). As for Régner, Loose, and Dumas (2009), parental involvement is parents' support, help, and behavioral control in their children's education, that is, school-related works (pp. 264-265).

Although definitions of parents' academic involvement vary or different points are emphasized in the definitions (Wilder, 2014), studies show generally consistent results in terms of the beneficial effect of parents' academic participation with students. It is well-established that parental involvement in students' school-related works has a positive influence on achievement (Chen, 2005; Dotterer & Wehrspann, 2016; İflazoğlu Saban & Şeker, 2010; Kılıç, 2010; Lam & Ducreux, 2013; Özkarslı, 2009; Powell, Son, File, & San Juan, 2010), academic self-concept (Dündar, 2017; Özcan, 2012; Prince & Nurius, 2014), academic self-efficacy (Fan & Williams, 2010), skill development (Ekici, 2017; Kılıç, 2010), interest in lessons and self-confidence (Kılıç, 2010), motivation (Fan & Williams, 2010; Gonzalez-DeHass, Willems, & Doan Holbein, 2005; Kılıç, 2010), engagement (Dündar, 2017; Fan & Williams, 2010; Marks, 2000; Virtanen, Lerkkanen, Poikkeus, & Kuorelahti, 2014), achievement goals (Régner et al., 2009), and in preventing undesirable behaviors (Hill et al., 2004; Powell et al., 2010).

In an action research conducted in the context of the social studies lesson, Türe (2018) showed that social studies lessons can be carried out in various environments (e.g. home, school, out of school environments) with family participation. Also, Türe found that parental involvement

in social studies had many positive influences on students, such as supporting effective learning, increasing student interest and attention, enabling repetition of the subjects, positively influencing family-teacher-student relations, creating an environment of cooperation, supporting the development of knowledge, skills (e.g. research, empathy) and values, and providing permanent learning (Türe, 2018). Furthermore, Dündar (2017) found that perceived academic involvement of parents in social studies had a positive effect on students' social studies academic self-concepts and engagement in social studies.

As can be seen, in order for students to be successful in their lessons or to reach the goals of the curriculum in different dimensions (knowledge, skills, etc.), parental academic involvement is of great importance in addition to the support of the teacher and the students' own efforts (Dündar, 2017; Régner et al., 2009). However, studies (Deveci, 2008; Dundar & Rapoport, 2012) indicate that there may be some problems in academic participation of parents in social studies lessons. In their study, Dundar and Rapoport (2012) found that students had the perception that their teachers and parents value the mathematics lesson more than social studies. Deveci (2008) found that the academic participation of parents in the social studies lessons was unsatisfactory, and the parents did not have enough information about the social studies curriculum and subjects.

Purpose of the Research

This research examines the relations between parents' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson. In particular, the research focused on the following research questions:

1. Are there significant relationships between parents' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson?

2. Do parents' perceptions of the teachers' academic involvement in the social studies lesson predict their views on the importance of the social studies lesson?

3. Do parents' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson predict their own academic involvement in the social studies lesson?

METHODOLOGY

Research Model

This study was carried out using a correlational design. In this design, without manipulation as in experimental research designs, the researchers "predict scores and explain the relationship among variables" using the correlation statistical test (Creswell, 2008, p. 356).

Participants

The data was gathered from the parents of fourth grade students in nine primary schools chosen according to their socioeconomic level within the city of Edirne in the second semester of the 2017-2018 academic year. A total of 824 parents participated in the research. Of the parents, 430 (52.2%) were mothers, and 394 (47.8%) were fathers.

Data Collection Tools

The data in the study were collected through two scales. The validity and reliability analysis of the data collection tools were performed on the main data set of 824 participants.

Exploratory Factor Analysis (EFA) and Cronbach's alpha reliability coefficient (α) were performed with the SPSS program and Confirmatory Factor Analysis (CFA) with AMOS program. Detailed information about the scales is given below.

1. Importance Scale for the Social Studies Lesson: In order to measure parents' views on the importance of the social studies lesson, the acquisitions in the fourth grade social studies curriculum (MoNE/MEB, 2017) were used. For this, the acquisitions required in the fourth grade social studies curriculum (MoNE/MEB, 2017, pp. 17-19) were listed, and parents were asked to indicate their opinions on the importance of these acquisitions on a 5-point Likert scale (1 = *not at all important*, 2 = *not important*, 3 = *moderately important*, 4 = *important*, 5 = *very important*). Higher scores obtained from the scale are interpreted as mothers and fathers thinking more positively about the importance of the social studies lesson.

After the scale was prepared, the opinions of a classroom teacher, a parent of a fourth grade student, and a faculty member about the scale were consulted. Feedback received in these consultations indicated that the scale was clear and understandable.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were performed to determine if the data obtained with the Importance Scale for the Social Studies Lesson are appropriate for the EFA. The KMO measure was found as .96 and Bartlett's Test of Sphericity was found statistically significant [X^2 (528) =

15373.45, $p < .001$]. These results suggested that EFA could be conducted (Büyüköztürk, 2014; Çokluk, Şekercioğlu, & Büyüköztürk, 2012; Field, 2009) on the data obtained with the Importance Scale for the Social Studies Lesson. In the first EFA conducted using Principal Component Analysis, four factors were observed producing eigenvalues greater than 1. However, the variance explained by the first factor (41.37%) explained about 6 times more variance than the second factor (7.34%).

In addition, the lowest factor load value in the first factor was .54 (fourth item/acquisition). These findings showed that the scale could also be used as a single factor (Büyüköztürk, 2014; Çokluk et al., 2012). Considering the purpose of the research and the findings of the first analysis were also suitable, the EFA was repeated by fixing the factor number to 1. The communalities obtained in the second factor analysis ranged from 29% (item 4) to 53% (item 30). Finally, Cronbach's alpha reliability coefficient for the Importance Scale for the Social Studies Lesson was found to be .95.

2. Parental and Perceived Teacher Academic Involvement Scale-Social Studies-Mother and Father: This scale was modified from the social studies version (Dündar, 2017) of the Turkish adaptation (Dündar, 2014) of the Perceived Parental and Teacher Academic Involvement Scale (Régner et al., 2009).

The Perceived Parental and Teacher Academic Involvement Scale was originally developed by Régner et al. (2009) to measure parents' and teachers' academic involvement as perceived by students and adapted into Turkish by Dündar (2014). This scale consisted of four factors (perceived parental academic monitoring, perceived parental academic support, perceived teacher academic monitoring, perceived teacher academic support), and a total of 16 items, with four items in each factor (Dündar, 2014; Régner et al., 2009).

The Perceived Parental and Teacher Academic Involvement Scale (Dündar, 2014; Régner et al., 2009) was later modified by Dündar (2017) as the Perceived Parental and Teacher Academic Involvement Scale-Social Studies to measure perceived parental and teacher academic involvement in social studies, and its validity and reliability were tested (Dündar, 2017). In the current study, the items in the Perceived Parental and Teacher Academic Involvement Scale-Social Studies (Dündar, 2017) were modified by arranging them to be filled by the parents to measure parents' academic involvement and their perceived teacher academic involvement in social studies. However, modifications in the current study produced two different sub-scales. The first scale measures parents' own academic involvement in the social studies lesson (Parental Academic Involvement Scale-Social Studies-Mother and Father); on the other hand, the second one measures parents' perceived teacher academic involvement in the

social studies lesson (Perceived Teacher Academic Involvement Scale-Social Studies-Mother and Father). Therefore, in order to verify the two-factor structure (Academic Monitoring and Academic Support) of these two different scales, CFA was performed separately for both scales.

In assessing the CFA results, Chi-Square Goodness of Fit (X^2), X^2/df, Root Mean Square Residual (RMR), Goodness of Fit Index (GFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were used as fit indexes. In order for the CFA results to be considered acceptable, X^2 should not be significant ($p > .05$); X^2/df should be smaller than 3; RMR and RMSEA should be smaller than .08; GFI, NFI, IFI, and TLI should be larger than .90; CFI should be larger than .95; and SRMR should be smaller than .10 (Bayram, 2010; Byrne, 2001; Hu & Bentler, 1999; Çokluk et al., 2012; Meydan & Şeşen, 2011; Schermelleh-Engel, Moosbrugger, & Müller, 2003). The fit indexes obtained in CFA are given in Table 1.

Table 1 *CFA results for sub-scales of the Parental and Perceived Teacher Academic Involvement Scale-Social Studies-Mother and Father*

$X^2(19)$	p	X^2/sd	RMR	GFI	NFI	IFI	TLI	CFI	RMSEA	SRMR
Parental Academic Involvement Scale-Social Studies-Mother and Father										
161.97	< .001	8.53	.02	.95	.95	.96	.94	.96	.10	.03
Perceived Teacher Academic Involvement Scale-Social Studies-Mother and Father										
197.81	< .001	10.41	.01	.94	.97	.97	.96	.97	.11	.03

As seen in Table 1, fit indexes except for X^2/df and RMSEA produced very good results. These results confirmed (Bayram, 2010; Byrne, 2001; Hu & Bentler, 1999; Çokluk et al., 2012; Meydan & Şeşen, 2011; Schermelleh-Engel et al., 2003) the two-factor structure of both scales as *Academic Monitoring* and *Academic Support.*

According to CFA results, factor loadings of *Academic Monitoring in Social Studies-Mother and Father* ranged from .78 and .85, and Cronbach's alpha reliability coefficient for this factor was found to be .89. Further, factor loadings of *Academic Support in Social Studies-Mother and Father* ranged from .60 and .78, and Cronbach's alpha reliability coefficient for this factor was found to be .80. For the whole scale (*Parental Academic Involvement Scale-Social Studies-Mother and Father*), Cronbach's alpha reliability coefficient was found as .89.

Factor loadings of *Perceived Teacher Academic Monitoring in Social Studies-Mother and Father* ranged from .85 and .93, and Cronbach's alpha reliability coefficient for this factor was found to be .95. Factor loadings of *Perceived Teacher Academic Support in Social Studies-Mother and Father*

ranged from .82 and .88, and Cronbach's alpha reliability coefficient for this factor was found to be .91. For the whole scale (*Perceived Teacher Academic Involvement Scale-Social Studies-Mother and Father*), Cronbach's alpha reliability coefficient was found as .95.

In the scale, 5-point Likert was used as the response options for items (1 = *strongly disagree*; 2 = *disagree*; 3 = *undecided*; 4 = *agree*; 5 = *strongly agree*).

Data Analysis

Data analysis was conducted with the SPSS program. During the analysis, $p < .05$ criterion was used as the significance level. For the relationships between variables, Pearson correlation calculations and simple and multiple regression analyses were used (Büyüköztürk, 2014; Field, 2009; Morgan, Leech, Gloeckner, & Barret, 2004), and analyses were performed separately for mothers and fathers.

FINDINGS

The results of Pearson correlation analysis between mothers' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson are given in Table 2.

Table 2 *Correlations for mothers' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson (*n = *430)*

Variable	*M*	*SD*	1	2	3
1. Importance of the social studies lesson	4.20	.49	–		
2. Perceptions of the teachers' academic involvement in the social studies lesson	4.46	.59	.41**	–	
3. Academic involvement in the social studies lesson	4.47	.48	.49**	.57**	–

** $p < .01$.

As observed in Table 2, mothers' views on the importance of the social studies lesson were positively and significantly correlated with their perceptions of the teachers' academic involvement in the social studies lesson ($r = .41$, $p < .01$) and their own academic involvement in the social studies lesson ($r = .49$, $p < .01$). Moreover, mothers' perceptions of the teachers' academic involvement in the social studies lesson and their own academic involvement in the social studies lesson were also significantly and positively correlated ($r = .57$, $p < .01$).

Table 3 shows the results of Pearson correlation analysis between fathers' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson.

Table 3 *Correlations for fathers' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson (*n = *394)*

Variable	*M*	*SD*	1	2	3
1. Importance of the social studies lesson	4.18	.51	–		
2. Perceptions of the teachers' academic involvement in the social studies lesson	4.45	.61	.42**	–	
3. Academic involvement in the social studies lesson	4.33	.54	.43**	.49**	–

** $p < .01$.

As seen in Table 3, fathers' views on the importance of the social studies lesson were positively and significantly correlated with their perceptions of the teachers' academic involvement in the social studies lesson ($r = .42$, $p < .01$) and their own academic involvement in the social studies lesson ($r = .43$, $p < .01$). In addition, as is the case with mothers, fathers' perceptions of the teachers' academic involvement in the social studies lesson and their own academic involvement in the social studies lesson were also significantly and positively correlated ($r = .49$, $p < .01$).

Table 4 displays the results of simple regression analysis performed to find if mothers' perceptions of the teachers' academic involvement in the social studies lesson significantly predicted their views on the importance of the social studies lesson.

Table 4 *Regression analysis for mothers' perceptions of the teachers' academic involvement in the social studies lesson predicting their views on the importance of the social studies lesson*

Predictor Variable	*B*	*SE B*	β	*t*	*p*
(Constant)	2.68	.17		16.09	<.001
Perceptions of the teachers' academic involvement in the social studies lesson	.34	.04	.41	9.22	<.001
$R^2 = .17$, $F(1, 428) = 85.05$, $p < .001$					

As observed in Table 4, mothers' perceptions of the teachers' academic involvement in the social studies lesson positively and significantly predicted their views on the importance of the social studies lesson ($\beta = .41$, $t = 9.22$, $p < .001$). Mothers' perceptions of the teachers' academic involvement in the social studies lesson explained 17% of the variance in their views on the importance of the social studies lesson [$F(1, 428) = 85.05$, $p < .001$].

The results of simple regression analysis performed to find out whether fathers' perceptions of the teachers' academic involvement in the social studies lesson significantly predicted their views on the importance of the social studies lesson are given in Table 5.

Table 5 *Regression analysis for fathers' perceptions of the teachers' academic involvement in the social studies lesson predicting their views on the importance of the social studies lesson*

Predictor Variable	*B*	*SE B*	β	*t*	*p*
(Constant)	2.61	.17		15.14	<.001
Perceptions of the teachers' academic involvement in the social studies lesson	.35	.04	.42	9.18	<.001
R^2 = .18, F (1, 392) = 84.35, p < .001					

As observed in Table 5, fathers' perceptions of the teachers' academic involvement in the social studies lesson positively and significantly predicted their views on the importance of the social studies lesson (β = .42, t = 9.18, p < .001). Fathers' perceptions of the teachers' academic involvement in the social studies lesson explained 18% of the variance in their views on the importance of the social studies lesson [F (1, 392) = 84.35, p < .001].

Table 6 shows the results of multiple regression computed to find if mothers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson predicted their own academic involvement in the social studies lesson.

Table 6 *Regression analysis of mothers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson predicting their own academic involvement in the social studies lesson*

Predictor Variable	*B*	*SE B*	β	*t*	*p*
(Constant)	1.55	.18		8.83	< .001
Importance of the social studies lesson	.31	.04	.32	7.72	< .001
Perceptions of the teachers' academic involvement in the social studies lesson	.36	.03	.44	10.81	< .001
R^2 = .41, F (2, 427) = 146.53, p < .001					

As observed in Table 6, mothers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson positively and significantly predicted their own academic involvement in the social studies lesson [F (2, 427) = 146.53, p < .001]. Both variables together accounted for 41% of the variances in

mothers' academic involvement in the social studies lesson. On the other hand, the influence of mothers' perceptions of the teachers' academic involvement in the social studies lesson (β = .44, $p < .001$) was higher than that of their views on the importance of the social studies lesson (β = .32, $p < .001$).

The results of multiple regression analysis performed to find whether fathers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson predicted their own academic involvement in the social studies lesson are given in Table 7 below.

Table 7 *Regression analysis of fathers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson predicting their own academic involvement in the social studies lesson*

Predictor Variable	*B*	*SE B*	β	*t*	*p*
(Constant)	1.65	.21		7.79	< .001
Importance of the social studies lesson	.28	.05	.27	5.75	< .001
Perceptions of the teachers' academic involvement in the social studies lesson	.34	.04	.38	8.11	< .001
$R^2 = .30$, F (2, 391) = 83.90, $p < .001$					

As shown in Table 7, fathers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson positively and significantly predicted their own academic involvement in the social studies lesson [F (2, 391) = 83.90, $p < .001$]. Both variables together explained 30% of the variance in fathers' academic involvement in the social studies lesson. On the other hand, as is the case with the mothers, the influence of fathers' perceptions of the teachers' academic involvement in the social studies lesson (β = .38, $p < .001$) was also higher than that of their views on the importance of the social studies lesson (β = .27, $p < .001$).

DISCUSSION

In this research, the relations between parents' views on the importance of the social studies lesson, their perceptions of the teachers' academic involvement in the social studies lesson, and their own academic involvement in the social studies lesson were investigated.

There were found to be positive and significant correlations between both mothers' and fathers' views on the importance of the social studies lesson, their perceived academic involvement of the teachers in the social studies lesson, and their own academic involvement in the social studies lesson. Moreover, both mothers' and fathers' perceptions of the teachers'

academic involvement in the social studies lesson were found to be a positive and significant predictor of their views on the importance of the social studies lesson, which suggests that the more parents perceived teachers' academic involvement in the social studies lesson, the more they thought the social studies lesson was important.

The research also showed that both mothers' and fathers' views on the importance of the social studies lesson and their perceptions of the teachers' academic involvement in the social studies lesson were positive and significant predictors of their own academic involvement in the social studies lesson. This finding suggested that the more parents thought the social studies lesson was important and the more they perceived teachers' academic involvement in the social studies lesson, the higher parents' academic involvement was in the social studies lesson. On the other hand, in both groups, the effect of perceptions of the teachers' academic involvement in the social studies lesson was greater than the views on the importance of the social studies lesson.

This finding shows that teachers should convey to parents their positive understanding of the importance of the social studies lesson and the support and help they offer to students in social studies lessons. As emphasized by Dündar (2017), "teachers can monitor and support their students in their work on social studies lessons because of their direct interaction with students; but they also have the power to guide parents on how to support their children" (p. 625).

On this viewpoint, it appears that communication between teachers and parents should not be limited to the fact that parents only talk to the teacher when invited to meetings and/or want to evaluate their children's progress and success (Erdoğan & Demirkasımoğlu, 2010). It should be carried out in a wider spectrum that also includes the content of the curriculum, lesson features and the implementation of the curriculum. In this respect, teachers' practices such as inviting parents to social studies classes from time to time, which is a way of providing parents with the opportunity to observe their own actions and communication with students; discussing and explaining the social studies curriculum and its purpose and the importance of the lesson to parents; learning the mothers and fathers' thoughts about social studies lesson activities to be applied and reflecting them in the lessons; planning activities with family participation in the social studies lesson both at home, at school and outside of school, and getting the help of parents in the activities to be performed; informing parents about what they do in the lessons; and determining the opinions of parents about the social studies lessons and their own teaching by applying questionnaires and evaluating them with the parents (Deveci, 2008; Hersan, 2008; Kılıç, 2010; Türe, 2018) can give parents the opportunity to see their own support

and assistance for their students, as well as help parents better understand the importance of the social studies lesson, which, in turn, can increase the academic participation of parents in their children's social studies lessons.

This research yielded important results showing the relations between parents' views on the importance of a lesson and parental and teacher academic involvement from the parents' viewpoint in the context of the social studies lesson. Conducting similar studies by adapting this research to learn the perspectives of students and/or teachers may help to better understand the relationship between parental and teacher academic involvement in social studies lessons and their views on the importance of the social studies lesson. Similar studies can also be adapted to different lessons and the relationship between these three variables can be examined in the context of other lessons.

REFERENCES

Bayram, N. (2010). *Yapısal eşitlik modellemesine giriş AMOS uygulamaları* [Introduction to structural equation modeling AMOS applications]. Bursa: Ezgi Kitabevi.

Binicioğlu, G. (2010). *İlköğretimde okul-aile iletişim etkinlikleri: Öğretmen-Veli Görüşleri* [School-family communication activities in elementary education: Family and teacher's opinions] (Yayınlanmamış yüksek lisans tezi). Eskişehir Anadolu Üniversitesi, Eskişehir.

Büyüköztürk, Ş. (2014). *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni SPSS uygulamaları ve yorum* (19. Baskı) [Data analysis handbook for social sciences: Statistics, research design, SPSS applications and interpretation]. Ankara: Pegem Akademi.

Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* Mahwah, NJ: Lawrence Erlbaum Associates.

Chen, J. (2005). Relation of academic support from parents, teachers, and peers to Hong Kong adolescents' academic achievement: The mediating role of academic engagement*. Genetic, Social, and General Psychology Monographs, 131*(2), 77–127. https://doi.org/10.3200/MONO.131.2.77-127

Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd Ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

Çelenk, S. (2003). Okul başarısının ön koşulu: Okul aile dayanışması [The prerequisite for school success: Home-school cooperation]. *İlköğretim Online E-Dergi, 2*(2), 28-34. http://ilkogretim-online.org//fulltext/218-1596610955.pdf?1607344030

Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2012). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları* [Multivariate statistics for social sciences: SPSS and LISREL applications] (2. Baskı). Ankara: Pegem Akademi.

Deveci, H. (2008). Learning from parents and learning with parents in social studies. *World Applied Sciences Journal, 3*(5), 715-724. http://www.idosi.org/wasj/wasj3(5)/3.pdf

Dotterer A. M., & Wehrspann E. (2016). Parent involvement and academic outcomes among urban adolescents: Examining the role of school engagement. *Educational Psychology, 36*(4), 812–830. http://dx.doi.org/10.1080/01443410.2015.1099617

Dundar, Ş., & Rapoport, A. (2012). *Elementary students' attitudes toward social studies, math and science* (pp. 97-101). The International Society for the Social Studies Annual Conference, March 1-2, 2012- Orlando, FL.

Retrieved from ERIC database. (ED531864). https://files.eric.ed.gov/fulltext/ED531864.pdf

Dündar, Ş. (2014). Algılanan anne-baba ve öğretmen akademik katılım ölçeğinin Türkçeye uyarlanması [The adaptation of the perceived parental and teacher academic involvement scale into Turkish]. *Eğitim Bilimleri Araştırmaları Dergisi-Journal of Educational Sciences Research, 4*(1), 369-382. https://dergipark.org.tr/tr/download/article-file/697079

Dündar, Ş. (2017). Sosyal bilgiler dersinde algılanan anne-baba ve öğretmen akademik katılımının öğrencilerin akademik benlik kavramlarına ve sosyal bilgiler dersine bağlılıklarına etkisi [The impact of perceived parental and teacher academic involvement in social studies on students' social studies academic self-concept and engagement]. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 17*(2), 608-635. https://dergipark.org.tr/tr/download/article-file/321854

Ekici, F. Y. (2017). Okul öncesi Eğitim kurumlarındaki aile katılım çalışmalarına katılan ve katılmayan ailelerin çocuklarının sosyal beceri ve problem davranışları arasındaki ilişki [The relationship between social skills and problem behaviours of the children that their families involve and do not involve in the family involvement activities implemented in preschool education institutions]. *Hitit Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 10*(1), 543- 562. http://dx.doi.org/10.17218/hititsosbil.299033

Erdoğan, Ç., & Demirkasımoğlu, N. (2010). Ailelerin eğitim sürecine katılımına ilişkin öğretmen ve yönetici görüşleri [Teachers' and school administrators' views of parent involvement in education process]. *Kuram ve Uygulamada Eğitim Yönetimi, 16*(3), 399-431. http://dergipark.gov.tr/download/article-file/108223

Fan, W., & Williams, C. M. (2010) The effects of parental involvement on students' academic self-efficacy, engagement and intrinsic motivation. *Educational Psychology, 30*(1), 53-74. https://doi.org/10.1080/01443410903353302

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage Publications.

Gonzalez-DeHass, A. R., Willems, P. P., & Doan Holbein, M. F. (2005). Examining the relationship between parental involvement and student motivation. *Educational Psychology Review, 17*(2), 99-123. https://www.jstor.org/stable/23363897

Hersan, E. (2008). *2004 yılı ilköğretim 5. sınıf sosyal bilgiler öğretim programına ilişkin veli görüşleri* [Parents' points of view about the new social studies curriculum of fifth grade launched in 2004] (Yayınlanmamış yüksek lisans tezi). Marmara Üniversitesi, İstanbul.

Hill, N. E., Castellino, D. E., Lansford, J. E., Nowlin, P., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Parent academic involvement as related to school behavior, achievement, and aspirations: Demographic variations

across adolescence. *Child Development, 75*(5), 1491-1509. https://doi.org/10.1111/j.1467-8624.2004.00753.x

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

İflazoğlu Saban, A., & Şeker, M. (2010). İlköğretim 5. Sınıf öğrencilerinin performans görevlerindeki başarıları ile ailelerinin eğitim-öğretim çalışmalarına katılım düzeyleri arasındaki ilişkinin belirlenmesi [An investigation on the relation between the success of fifth class' students' on performance works and the rate of their family support on educational–teaching works]. *Ç. Ü. Sosyal Bilimler Enstitüsü Dergisi, 19*(3), 361-390. https://dergipark.org.tr/en/download/article-file/50635

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education, 42*(1), 82-110. https://psycnet.apa.org/doi/10.1177/0042085906293818

Keçeli-Kaysılı, B. (2008). Akademik başarının arttırılmasında aile katılımı [Parent involvement to improve academic achievement]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, *9*(1), 69-83. http://dergiler.ankara.edu.tr/dergiler/39/1100/13082.pdf

Kılıç, Z. (2010). *İlköğretimde hayat bilgisi dersinde aile katılımı çalışmaları* [Parent involvement studies in social studies course in primary education] (Yayınlanmamış yüksek lisans tezi). Anadolu Üniversitesi, Eskişehir.

Lam B. T., & Ducreux E. (2013). Parental influence and academic achievement among middle school students: Parent perspective. *Journal of Human Behavior in the Social Environment, 23*(5), 579–590. https://doi.org/10.1080/10911359.2013.765823

Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal, 37*(1), 153-184. https://doi.org/10.3102/00028312037001153

Meydan, C. H., & Şeşen, H. (2011). *Yapısal eşitlik modellemesi AMOS uygulamaları* [Structural equation modeling AMOS applications]. Ankara: Detay Yayıncılık.

Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barret, K. C. (2004). *SPSS for introductory statistics: Use and interpretation* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

National Council for the Social Studies [NCSS] (1994). *Expectations of excellence: Curriculum standards for social studies.* Silver Spring, Maryland: National Council for the Social Studies.

Özcan, Ç. (2012). *Okul öncesinde aile katılımı ile çocukların akademik benlik saygısı düzeyi arasındaki ilişkinin anne-baba görüşlerine göre incelenmesi*

[The examination of the relationship between the family participation in the pre-school education and the level of the academic self-respect of children based on parental view] (Yayınlanmamış yüksek lisans tezi). Abant İzzet Baysal Üniversitesi, Bolu.

Özkarslı, N. (2009). *Aile ve öğretmen destekli yapılandırmanın 5. sınıf fen bilgisi dersinde başarı ve kavram öğrenmeye etkisi* [The effects of constructivism in elementary school 5. class science lessons with family and instructor support] (Yayınlanmamış yüksek lisans tezi). Marmara Üniversitesi, İstanbul.

Powell, D. R., Son, S.-H., File, N., & San Juan, R. R. (2010). Parent–school relationships and children's academic and social outcomes in public school pre-kindergarten. *Journal of School Psychology, 48*(4) , 269-292. https://doi.org/10.1016/j.jsp.2010.03.002

Prince, D., & Nurius, P. S. (2014). The role of positive academic self-concept in promoting school success. *Children and Youth Services Review, 43*, 145-152. http://dx.doi.org/10.1016/j.childyouth.2014.05.003

Régner, I., Loose, F., & Dumas, F. (2009). Students' perceptions of parental and teacher academic involvement: Consequences on achievement goals. *European Journal of Psychology of Education, 24*(2), 263-277. https://doi.org/10.1007/BF03173016

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, *8(*2), 23-74. https://www.dgps.de/fachgruppen/methoden/mpr-online/

Turkish Ministry of National Education [MoNE/MEB] (2017). *Sosyal bilgiler dersi öğretim programı (İlkokul ve ortaokul 4, 5, 6 ve 7. sınıflar)* [The social studies curriculum (Elementary and middle schools 4th, 5th, 6th, and 7th grades)]. http://mufredat.meb.gov.tr/Dosyalar/20177171429439 0405SOSYAL%20B%C4%B0LG%C4%B0LER%204-7.pdf

Turkish Ministry of National Education [MoNE/MEB] (2018). *Sosyal bilgiler dersi öğretim programı (İlkokul ve ortaokul 4, 5, 6 ve 7. sınıflar)* [The social studies curriculum (Elementary and middle schools 4th, 5th, 6th, and 7th grades)]. http://mufredat.meb.gov.tr/Dosyalar/201812103847686-SOSYAL%20B%C4%B0LG%C4%B0LER%20%C3%96%C4%9ERET%C4%B0M%20PROGRAMI%20.pdf

Türe, H. (2018). *Sosyal bilgiler dersinde aile katılımına dayalı etkinliklerden yararlanma: Bir eylem araştırması* [Using family involvement activities in the social studies course: An action research study] (Yayınlanmamış doktora tezi). Anadolu Üniversitesi, Eskişehir.

Virtanen, T. E., Lerkkanen, M.-K., Poikkeus, A.-M., & Kuorelahti, M. (2014). Student behavioral engagement as a mediator between teacher, family, and peer support and school truancy. *Learning and Individual Differences, 36*, 201-206. http://dx.doi.org/10.1016/j.lindif.2014.09.001

Wilder, S. (2014). Effects of parental involvement on academic achievement: A meta-synthesis. *Educational Review*, *66*(3), 377-397. https://doi.org/10.1080/00131911.2013.780009

Yonson, D. L. (2016). Level of parent involvement in the elementary and secondary levels. *The Normal Lights,10(*1), 182-203. https://po.pnuresearchportal.org/ejournal/index.php/normallights/article/view/178/139

Chapter 11

TRANSFORMATION OF SCHOOLS TO PROFESSIONAL LEARNING COMMUNITIES

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INTRODUCTION

Technological and scientific progress leads to transformations in organizations' constructions and in employee's roles and duties. The urgency of transformation of our schools to professional learning communities is inevitable and irreversible in this fast changing and developing course to get at advanced civilization level. Social and political developments, technological improvements, steady and fast changes in environment and developing chances of reach to information force educational societies to change and development such as other communities. In every part of the society, parallel with the changes in every organization, schools have been naturally affected by the information age and have felt the need to continually shape their studies towards the future.

Building learning communities calls for a shift from the paradigm of schools as bureaucracies to a vision of schools as communities. Teachers in learning community schools do business and study in teams where, collaboratively, through sustained reflection and inquiry, they learn by sharing professional practices. Seeing that educators collaboratively engage in conversation and deliberate about teaching and learning, they gain new knowledge and discover original ways to resolve instructional issues. In the process they develop a shared vision and strengthen their ability to achieve the vision that they want for their schools.

Organizations, such as human beings, must be able to learn to adapt to changing recent conditions. Twenty first century prefers learning community structure where people renovate themselves consistently, human resources are developed, humans are appreciated and opportunities are presented for individuals to prove their creativity to classical community structure. The ones who stand out against this change and improvement process chuck away their efficiency or don't survive.

One of the most significant developments relating to community approaches in recent years is that mechanical community approach (thinking community like a machine) was abandoned and communities are thought such as living organisms. According to this approach, communities are living systems that live in a broad environment they are dependent to meet various needs. Certain community types orient themselves to certain environment conditions as in the example of polar bears which live in polar region, camels which live in deserts and crocodiles which live in swamps (Morgan, 1998).

Organizations change their behavior types according to the changing conditions such as other living organisms, that is, communities develop their learning capability, that is to say; it is stressed that communities have learning capability like living organisms (Güçlü, 1999). We can mention

learning community about only if we put an end to thinking communities like a machine. Machines don't have learning capability. Learning come about among people. Learning which is an important element in terms of its effect on the change of individual, organizational and social structures will occur more effectively when the institutions in social structure turn into learning organizations.

Learning individuals are the basis of the learning communities. The one who will build learning teams and finally learning community is the learning individual (Bozkurt, 2000). Senge (2003) point out that learning communities learn by means of learning individuals, but individual learning doesn't guarantee organization's learning and organizational learning doesn't occur without individual learning.

LEARNING COMMUNITIES

Learning community approach that has been on the agenda and gain more and more importance since the last quarter of the twentieth century was talked about for the first time in the studies of Chris Argryis and Donald Schön (cited from 1978 by Bayraktaroğlu & Kutanis, 2002: 51) and this approach was analyzed in detail and systematically in Peter Senge's book of "Fifth Discipline" which was published in 1990. Learning community notion is based on the system thinking. The system thinking that is featured as a fifth discipline appraises management as a whole which differentiated pieces influence each other constantly and which includes more than the total of these pieces (Senge, 2003).

There are a lot of definitions for learning community notion. (Senge, 2003) defines learning organizations as "a place where people find out how they created their own facts and how they can change them" and defines learning community as dynamic structure which continuously changes, evolves and renews itself.

Calvert, Mobley and Marshall (1994) also defines learning community as a "living organisms which renews themselves, which aims to enable organization-group consistency and individual's accommodation to the changes, which prepare every kind of environment for the learning that supports necessary individual experiences and which motivates individuals.

When we mention about learning organization, we understand "an atmosphere where individuals redound their capacities constantly, where new ideas are fostered, where common dreams are discussed freely and where learning together are practiced all the time" (cited from Ensari, 1998: 99 by Güçlü & Türkoğlu, 2003: 2). The shortest definition is that learning community is an community which expands its capacity continuously (Tüz, 1996: 36).

The managements which are active in today's world find themselves in change process which is gaining more and more acceleration. Continual success in a changing world requires searching new resources and taking advantage of both success and failures (Eren, 2001). Both changing and developing technology, and pervading global trade and harshness of competition require training and improving facilities for personnel to be permanent. For this reason, today's organizations inevitably must be learning communities in order to compete and to survive in the market (Barutçugil, 2002:52).

BUILDING LEARNING COMMUNITIES

The studies of Peter Senge in the United States suggest the five disciplines providing vital support for the creation of learning communities. Senge believes that these five disciplines improve learning community by becoming more associated with each other. These five disciplinary developed independently from each other and they began to have a significant impact in interdisciplinary success. Experts in the field come to an agreement as regards to be a guiding community of these five disciplines in order to progress towards becoming learning communities (Senge, 2003):

Personal Mastery:

It is discipline of seeing truth objectively, throwing light on horizon of the individual's personal vision continuously and deepen it, focalization of individual's energy and improving patience, this is the cornerstone of learning communities.

Internal preparation of personal mastery requires not only having a personal vision, but also perception of the best previous reality well. To do this may be possible with the creation of a force called as creating tension in the communities themselves Naturally, tensions want to reach a solution and the solution of this tension is accessing goal that the individual wants (Senge et al., 1994). Even if personnel mastery considers individual's vision as impossible to reach, it should not undervalue (Fritz, 1989). As a result, personal mastery teaches the individual to choose and choosing is an act of courage (Senge et al., 1994).

Mental Models

Mental Models are about changing and improving the assumptions that firmly fixed and ingrained in mind influencing and the assumptions that affects individual's understanding of the world and his/her actions. Changes in mental models speeds up learning in the organization. Individuals often are not aware of mental models which are effective on the behaviors. Existing education and training structure are planned within

the framework of mental model of schooling whose output is trained individuals This model facilitates the creation of learning communities spreading in the community as a pre-agreed, coherent arrays. This is a change to be considered from learning to be learned and from school being thought as an organizational phenomenon to learning being thought as a natural process (Conzemius and Conzemius, 1996).

Shared Vision

If there is a true and shared vision, they want to surpass oneself and learn because they want themselves, not because someone said to them. But when there is an opportunity to choose, most individuals always prefer to go to pursue a lofty goal, not just in times of crisis. it isn't "a cookbook" which is lacking here, but it is a discipline to be converted to individual vision and a bundle of guiding applications and principles. Implementation of a shared vision improves the ability to unearth "shared pictures towards future ". This picture enables employees to be connected to communities, that is, it provides the vision of the future. Shared vision (Özdemir, 2000);

- creates a sense of collective existence.
- create a permanent sense of purpose.
- includes a measure of success.
- provides to overcome daily issues.
- It has a legitimate meaning both at the present and in the future.

Learning in Teams

Team learning is defined by Senge as a process of creation and implementation of the degree of realization of the desired outcomes by the members of organization. Team learning is founded on personal mastery in talented teams and shared vision. The team learning is a discipline to move in a real sense of togetherness by suspending assumptions of a group. The basic unit of learning in modern communities is teams, not individuals. According to Willard (1994), "teamwork culture" must be established for the formation of organizational learning within the organization. This teamwork culture will be a critical step for creating a continuous learning environment. As a team, learning discipline requires to be able to practice dialogue and discussion which are two separate ways of teams' speech. Discussion and dialogue on learning team are inseparable two parts.

The synergy created through collaborative work by team members provides give feedback to each other for individuals to use knowledge more effectively and access to the desired outcomes ultimately (Gordon, 1991). The team potentially has a great intelligence than individual intelligence. Learning in teams is process of developing the adequacy to achieve

desired outcomes of members and is founded on discipline of developing a common vision. However, a common vision and ability is not enough, it is also necessary that the way of working together is to be known (Malhotra, 1996).

System Thinking

Senge (1990) stated that the system thought directs people to comprehend the wholeness of life's parts and to be able to think the whole rather than parts. System thinking which is more appropriate approach to analyze complex and changing systems assumes that action-reaction will emerge in cyclical processes. For example, the population explosion can be both the cause of poverty and the result of poverty. In addition, many causes or poverty, such variables like lack of education may be related to each other. System thinking gives the opportunity to see events, actions as a network and plaits more clearly, interrelated and help them change in the most effective way.

Development of these five disciplines altogether has a vital importance for Senge, but it is difficult because new tools to integrate with each other are much more difficult rather than implementing each of them separately. Communities which have learned learning are social institutions which stand up to difficulties and know the reward for their great effort spent on this issue (Düren, 2002).

BUILDING LEARNING SCHOOLS

Schools differ from other organizations in terms of their community structures, products, working conditions, administrators, teachers and students. This difference is very important in terms of shaping the forthcoming generations and directing them.

Significant changes have emerged in our schools which are structured according to the industrial revolution from past until today. In order to be able to cope with the rapid developments and to fulfill the requirements of the information society, the school must give up the concept of teaching community and must embrace the concept of learning community (Küçükoğlu, 2005).

Schools, together with the concept of learning community are trying to convert themselves from traditional teaching school to learning school. Learning school refers to the school that learning activity is in the foreground not the school that teaching activity is important (Fındıkçı, 1996). In our age learning which students are active replaces school's traditional task of teaching students. The task of the education system in the information society is to train individuals who learn learning and the task of school administrators is to transform schools to the learning schools (Başaran, 2000).

Learning school is managed with values. The values in learning schools are carefully chosen in order to promote a different vision about capacity resources. The purpose of education is to elicitate not passive but active learners. Learning school may be a critical step in creating effective learners (Töremen, 2001). Learning plays a role in producing knowledge and when managing organizational knowledge, learning school is more equipped than a school that couldn't learn learning. Schools can manage information by strengthening individual learning and with the ability to convert the knowledge to valuable knowledge, but this alone does not constitute a learning school (Kale, 2004).

In order to create organizational learning in schools, first we need to improve learning in schools. Here are some of the principles of organizational learning development in schools (Michell and Sackney, 1998):

1. Organizational learning is to do a thing when needed rather than do the same thing in a different way.

Organizational learning develops within collaborative school culture. Management of the rules is associated with the concept of school culture. Sackney and Dibski (1994) make a distinction between individual and collaborative culture. Exclusion of teachers from others, suppression of important information, and protection of the current situation is at the forefront in individual culture. Collaborative culture, the opposite of this, includes a climate that collective planning, trust, support, professional interaction, creative and reflective thinking are norms.

This cultural understanding and characteristics are the supporters of organizational learning rather than characteristics of the individual culture. Cooperative culture arises when teachers follows the certain process standards at the school. Collaborative culture takes place when every individual takes responsibility in maintaining psychological security, participating school activities and being respectful to the differences between them in group works.

2. Organizational learning requires actual involvement in determination process of school operations based on collaborative leadership.

Power sharing between teachers shapes the school. Many of the teachers who participate actively in collaborative decision-making processes at the school under the leadership of leader show respect for every teacher's individual contribution and knowledge, bring forth issues that affect teaching and learning, feel free himself\herself in suggesting ways to improve school operations and carries a sense of ownership about school decisions (Sacney and Dibski, 1994).

3. Organizational learning requires a culture that improves dialogue and that includes diversity and richness.

Valuing diversity among workers has an important role in the development of organizational learning culture. Valuing diversity provides teachers to express their views and environment that analyze options which are not thought beforehand.

4. Organizational learning involves the complex interplay between cognitive and affective processes.

Conscious thinking and speech are connected with organizational learning (Senge, 1990). Affective processes create a safe climate to discuss issues not discussed (Argyris, 1983). Efforts to establish effective organizational learning require raising awareness for both cognitive and affective areas. There is a close connection between thought and speech.

5. Organizational learning opportunities require effective communication in teachers' working life.

Learning requires professional interaction among teachers. The creation of learning opportunities may not be possible without interaction.

The reasons claimed by (Karashi, 1995) require schools to be created as learning communities.

- valuing the idea of obtaining superiority based on competition,
- wanting to improve relations with the school environment,
- trying to better understand the risks and differences,
- valuing the idea of innovation,
- wanting to increase the quality of employees,
- having a tendency to overcome disputes.

Hipp and Huffman (2003) explain school as professional learning organizations with five basic dimensions: (1) Shared and supportive leadership, (2) Shared values and vision, (3) Collective learning and application, (4) Shared personal practice and (5) Supportive conditions and relationships-structures.

Shared and supportive leadership dimension, the initial of the five dimensions, can be explained with three critical attributes: Nurturing leadership among staff; shared power, authority and responsibility; and last of all, broad-based decision-making for commitment and accountability. This dimension affects all the others as it serves to guide the creation and delivery of the school's important decisions. This dimension addresses whether the principal is the sole leader, or whether teacher leadership is in

place, thus determining how decisions are made and carried out. In order to create professional learning communities, school administrators must participate democratically with teachers by sharing power, authority, and decision-making, and promoting and nurturing leadership among staff (Hipp & Huffman, 2003).

Secondly, shared values and vision dimension includes four critical attributes: espoused values and norms; focus on students, high expectations; and shared vision guides teaching and learning. In professional learning communities staff shares visions for school improvement that have an undeviating focus on student learning. Shared values also support norms of behavior that guide decisions about teaching and learning (Hipp ve Huffman, 2003).

Visions activate the creativity of individuals and make them see the opportunities in advance. The vision shared in the school environment activates the employees' imaginations and motivates them. Schools, being aware of this significance in the information age produce accurate and rational visions and direct their studies accordingly. The visions formed by schools are their first steps for the change.

Collective learning and application dimension includes five critical attributes: shared information and dialogue; collaboration and problem solving; and application of knowledge, skills, and strategies. As teachers share information and develop processes whereby they can work collaboratively, they become more successful in applying strategies that work well for students. In professional learning organizations, staff at all levels of the community search, find knowledge, skills and strategies and share. They also apply this new learning to their work (Hipp & Huffman, 2003).

The third and fourth dimensions are closely interrelated. In shared personal practice dimension, the process in third dimension is developed. This is possible by allowing and encouraging teachers to interact, provide feedback, and share results of student learning experiences. The critical attributes in this dimension include: observation and encouragement; shared outcomes of new practice and provide feedback; and analysis of student work and related practices (Hipp ve Huffman, 2003).

The fifth dimension, supportive conditions (relationships-structures) impacted all the earlier dimensions. The critical attributes fall into two categories, collegial relationships and structures. Collegial relationships include five critical attributes: caring relationships; trust and respect, recognition and celebration; risk taking and a unified effort to embed change. Structures include three critical attributes: resources; facilities; and communication systems (Hipp & Huffman, 2003).

CONCLUSION

Leaders in learning communities are also a designer, administrator and teacher (Senge, 2003). Today, management of the knowledge is the basis of management art. Governed not only people, the actual information they are carrying. Therefore, leaders have the most active role in achieving the vision of a learning community (Yazıcı, 2001). Leader's role in creating a learning community begins with a curious and creative leadership which is ready to create a vision and ready to start a dialogue about the gap between current reality and the vision. Leader is open to employees who want to try new ideas, is the creator of an suitable environment and supervisor of learning process, changing attitudes, behaviors and work process (Rosen, 1996).

Building a learning school and learning society must be the fundamental vision of education system and the school administrator must be a leader administrator who builds a culture of learning, designs, develops and creates a continuous learning environment (Çalık, 2002). School administrators have a significant role and duty as instructional leader in fact in transforming schools to a learning community in the process of organizational learning.

It is impossible for schools to give sufficient knowledge that will be adequate throughout their lives to the graduates. Instead, students have to acquire the ability to learn knowledge they need to, that is the ability of learning to learn. Teachers must teach to learn rather than the traditional teaching approach (Özden, 2000). New philosophy and approaches in education and the implementation of these require educators see themselves as supportive and guide person rather than a person who see themselves as judgmental and knowledge transmitter (Özdemir, 2000).

Students are encouraged about learning is a valuable and important process in learning school. First thing to be achieved for students in learning school is to establish desire and enthusiasm for learning (Çalık, 2002). New values about teaching and learning require adjustment of learning as student-centered. The emphasis is not on the transfer of knowledge but on the student. The important thing is to use knowledge and produce new knowledge from it rather than acquiring knowledge. For this, teachers must transform themselves from the position which reproduces knowledge to the person who learns when teaching (Özdemir, 2000).

Individuals must be encouraged to build team spirit, learn, share and collaborate collectively for schools to acquire the ability of learning community (Çalık, 2002). In the process of organizational learning, the basic role and mission of the school administrator, teacher and the student at school is to with collective intelligence try in order to build learning schools.

REFERENCES

Argyris, C. (1993). *On organizational learning.* Cambridge, UK: Blackwell Publishers.

Barutçugil, İ. (2002). *Eğitimcinin eğitimi*. İstanbul: Kariyer.

Başaran, İ. E. (2000). *Eğitim yönetimi - Nitelikli okul.* Ankara: Feryal Matbaası.

Bayraktaroğlu, S. & Kutanis, R. Ö. (2002). Öğrenen Kamu Örgütlerine Doğru. *Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 3*(1), 51-65.

Bozkurt, A. (2000). Yönetimde çağdaş yaklaşımlar uygulamalar ve sorunlar. In Elma, C. & Demir, K. (Eds.) *Öğrenen Örgütler* (43-61). Ankara: Anı Yayıncılık.

Calvert, G., Mobley, S., ve Marshall, L. (1994). Grasping the learning organization. *Training and Development, 48*(6), 38–43.

Conzemius, A., & Conzemius, W. C. (1996). Transforming schools into learning organizations. *Adult Learning,* 7, 23–25.

Çalık, T. (2002). Öğrenen Örgütler Olarak Eğitim Kurumları. Retrieved from <http://yordam.manas.kg/ekitap/pdf/Manasdergi/sbd/sbd8/sbd-8-09.pdf> in 28.02.2012.

Çelik, V. (2000). *Eğitimsel liderlik.* Ankara: Pegem.

Düren, Z. (2002). *2000'li yıllarda yönetim.* İstanbul: Alfa.

Eren, E. (2001). *Örgütsel davranış ve yönetim psikolojisi.* İstanbul: Beta.

Fındıkçı, İ. (1996). *Öğreten okuldan öğrenen okula.* Yeni Turkiye, 7 (Eğitim Ozel Sayısı).

Fritz, R. (1989). *The path of least resistance: Learning to become the creative force in your own life.* New York: Fawcett Columbine.

Garvin, D. A. (1993). Building a learning organization. *Harward Business Review, 71*(4), 78.

Gordon, J. R. (1991). *A diagnostic approach to organizational behavior.* Boston: Allyn and Bacon.

Güçlü, N. (1999). Öğrenen örgütler. *Kastamonu Eğitim Dergisi*, *7* (2), 117-226.

Güçlü N. & Türkoğlu, H. (2003). İlköğretim okullarında görev yapan yönetici ve öğretmenlerin öğrenen organizasyona ilişkin algıları. *Türk Eğitim Bilimleri Dergisi, 2*(1), 137-161.

Hipp, K. A. & Huffman, J. B. (2003). Professional learning communities: assesment-development-effects. Paper presented at the International Congress for School Effectiveness and Improvement. (January, 5-8), Sydney, Australia.

Kale, M. (2004). Resmî ve Özel Fen Liselerinin Örgütsel Öğrenme Açısından Karşılaştırılması, *Türk Eğitim Bilimleri Dergisi, 2*(4), 159 -177.

Karash, R. (1995). *Why a Learning Organization.* Retrieved from <http://world.std.com/~lo/WhyLO.html> in 10.02.2012.

Küçükoğlu, A. (2005). Örgütsel öğrenme ve öğrenmenin engelleri. Retrieved from <http://yayim.meb.gov.tr/dergiler/166/index3-kucukoglu.htm in 24.02.2012.

Malhotra, Y. (1996). Organizational Learning and Learning Organizations: An Overview. Retrieved from <http:// www.brint.com/papers/orglreng.htm> in 24.02.2012.

Michell, C. ve Sackney L. (1998), Learning about organizational learning, In K. Leitewood &, K. S. Louis (Eds). *Organizational Learning in Schools.* Taylor & Francis

Morgan, G. (1998). *Yönetim ve örgüt teorilerinde metafor.* (Çevi. Gündüz, B). İstanbul: MESS.

Özdemir, S. (2000). *Eğitimde örgütsel yenileşme.* Ankara: Pegem Yayınları.

Özden, Y. (2000). *Eğitimde dönüşüm: Yeni değerler ve oluşumlar.* Ankara: Pegem.

Rosen, R. H. (1996). *İnsan yönetimi*. (Çev. Bulut, G. ve Dicleli, Z.). İstanbul: MESS Yayın.

Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Doubleday.

Sackney, L. E. ve Dibski, D. J. (1994). School-based management: a critical perspective. *Educational Management and Administration, 22*(2), 104-112.

Senge P., Kleiner, A., Roberts, C., Ross, R. B. & Smith, B. J. (1994). The fifth discipline fieldbook:

Strategies and tools for building a learning organization. New York: Doubleday.

Senge, P. (2003). *Beşinci disiplin.* (Çev. İldeniz, A. & Doğukan, A.) İstanbul: YKY.

Töremen, F. (2001). *Öğrenen okul.* Ankara: Nobel Yayın Dağıtım.

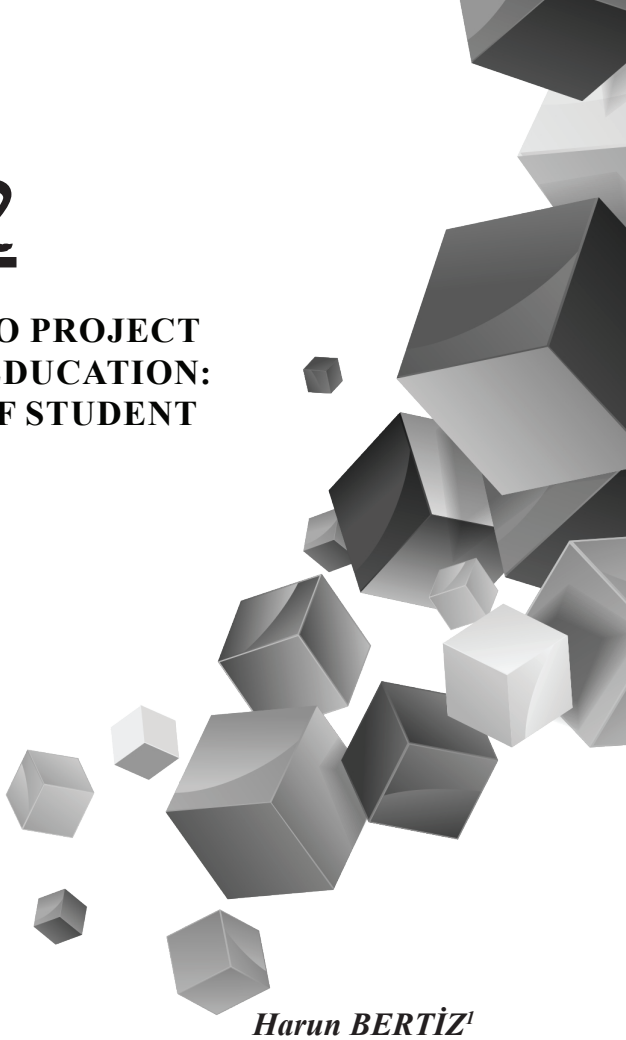
Tüz, M. V. (1996). *Kriz döneminde işletme yönetimi.* Bursa:.Ekin Yayınları.

Willard, B. (1994). *Annual leadership development prework.* IBM Canada, Leadership Development.

Yazıcı, S. (2001). Öğrenen organizasyonlar. İstanbul: Alfa Basım Yayım.

Chapter 12

FROM HOMEWORK TO PROJECT DESIGN IN SCIENCE EDUCATION: A STUDY IN TERMS OF STUDENT EXPECTATIONS



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Introduction

Homework contributes significantly to the learning environment. In schools, teachers make use of homework for students' development and meaningful learning experiences. Homework improves student achievement, while reducing the difference in success between high and low achievement students. It enables students to use the skills learned in the classroom creatively. Self-regulation skills such as taking responsibility for learning and time management develop, cope with difficulties and gain good learning habits (Brock, Lapp, Flood, Fisher & Keonghee, 2007; Bembenutty, 2011; Cooper, Robinson & Patall, 2006; Cooper, 2007 Corno, 2000; Keith, 1982). In this context, homework aims to prepare students for new topics and facilitate their learning, to review and reinforce what has been learned, to transfer them to daily life and to ensure active learning, and to develop students' language, mental, social and physical skills (Güneş, 2014). However, over time, students' perspectives towards homework became negative. In this sense, although homework becomes unnecessarily repetitive and annoying for students, students also avoided doing homework given to them above level (Güneş, 2014). Students may be reluctant to do homework that is against their will. Again in this parallel, students can see their homework as an obligation determined by the teacher. In eliminating all these reluctance, homework can be arranged in such a way that students can apply to life and include areas of interest. This problem can be overcome with design assignments that will increase students' interest and motivation. In particular, creativity, which is among the basic skills of the 21st century, may be a more prominent concept in the homework given to students. The knowledge and skills acquired in the classroom can be expanded, made meaningful and transferred to different problem situations with a more design and innovative perspective. So much so that although the responsibility for homework belongs to the student in general (Epstein, 2001), some parents do the homework themselves. Although this creates the concept of passive students who are not involved in the process, it can take homework out of purpose. A homework that is sometimes perceived as difficult and sometimes boring becomes meaningless with a process involving parents. Homework that is carried away from the student experience in this way can often lose its functionality for this reason.

Homework is based on its purpose, 'preparation homework, application assignment, project performance homework; According to the method of research, observation, etc.; class assignment, homework, library homework, etc.; It can be classified as daily, monthly, term homework according to duration, individual homework according to the number of people, group assignment, cluster assignment, written, oral, visual assignments according to the presentation style (Güneş, 2014). According to this classification,

different types of homework can be given to students. Design-oriented assignments that enable students to think creatively and critically, which they put into practice by embodying what they think, and where they can transfer their knowledge to different situations, can undoubtedly be seen as more qualified for the century we live in. Project-type assignments can be evaluated within the scope of more qualified homework in this sense. In project assignments, students are generally responsible for their own learning (Kılıç & Özel, 2015). According to Korkmaz and Kaptan (2001), the project is the solution of the problems with an approach that resembles life under natural conditions individually or as a group. With the project assignments, it can be ensured that students access information, use it and reveal their creativity. In terms of science education, helping students to solve the problems they encounter in terms of 21st century basic skills (Korkmaz & Kaptan, 2001) can be shown as one of the most important goals of science education. With project assignments, in the individual who is prepared for the future with 21st century skills; Many improvements can be achieved, such as critical thinking, problem solving, communication, collaboration, information and technology literacy, and flexibility and adaptability (Partnership for 21st Century Skills, 2009). The main purpose of the project assignments is to provide students with the ability to access information rather than convey information. With projects, students can be taught the efficient use of time. It is essential for a person to know himself well in order to manage the necessary work in the time period (Ökdem, 2019).

The aim of this study is to investigate student expectations and approaches towards project assignments from homework given in the science course. This study also tries to reveal the student's expectations from out-of-school learning processes. In other words, the relationship between the student's expectation and the current situation is examined. Accordingly, the problem sentence of the research was determined as "What are the current situation, student expectations and approaches in the direction from homework given in the science course to project homework? However, four sub-research questions were determined to deepen the study. These;

1) What types of homework do students encounter in science classes?

2) What are the ways and feelings of the students while doing their homework?

3) Do students consider the homework given for science lessons useful in terms of contribution?

4) How do students want the homework given for science lessons to be more effective?

5) Do students want the homework given for science lessons to be more designed and flexible in project style?

Method

Research Model

Qualitative research approach was used in the study. The sensitivity it provides to the natural environment, its ability to reveal the perceptions, and the fact that it has an inductive analysis with a holistic approach are important features of qualitative research. Interview technique used in qualitative research; It can be divided into three as structured, semi-structured and unstructured (Yıldırım & Şimşek, 2016). In this study, the interview form prepared for the students and the interviews conducted are in the structured interview category.

Study Group

The study group of this research consists of 45 science students studying in the 6th, 7th and 8th grades and studying at private and public schools in different provinces in the 2018-2019 academic year. In this study, one of the purposeful sampling methods, easily accessible situation sampling method was used (Yıldırım & Şimşek, 2016). With purposeful sampling, it is allowed to examine the situations in depth (Patton, 1997).

Data Collection Tool

An interview form developed by the researchers was applied to the research data. The questions of "From Homework to Projects in Science/ Student Opinion Form (HPSOF)" were determined by considering the sub-problems and the purpose of the study. In the interview form, (1) what kind of homework assignments students encountered, (2) how they followed their homework and how they felt while doing homework, (3) whether the homework given for the science lesson had any contribution and benefit, (4) home There are 5 (five) open-ended questions including how their homework should be to be useful and how they want them to be, (5) whether they want their homework to be flexible, and how they feel about this situation. Research data were collected in the second semester of the 2018-2019 academic year. The interviews were carried out by applying HPSOF to the students in one class hour in the schools where teachers are located.

Analysis of Data

Content analysis was used in the analysis of the data. Content analysis is a systematic, repeatable technique in which the text is summarized with some words and categories with smaller contents (Büyüköztürk et al., 2008). Codes and categories were created for the data obtained from the research, and they were made simple in a way that the reader can

understand. In the analyzes, the categories were created under the questions asked, and the codes describing the relevant category were included under these categories. The frequency distributions of the codes formed in the context of the students' answers to the questions are described in tables. In addition, the striking statements of some students in the relevant question are given as below the tables.

Findings

The data obtained in line with the purpose of the research and the interview form analysis were collected under six themes..

Types of Homework Encountered in Science Lessons

In the study, the students asked "What kind of homework do you encounter in science lessons?" The question was asked, and the opinions of the students about the types of homework they encountered in science lessons and the frequency distribution of these views are given in Table 1.

Table 1. *Types of Homework Students Encounter in Science Lessons*

Codes	Student (*f*)
Test questions in books or supplementary resource books	15
Mixed questions (Open-ended, Fill-in-the-blank, true-false, matching, etc.)	13
No homework	9
Planets and Space	5
Scientists	3

When Table 1 was examined, students stated that they mostly encountered test questions (*f*=15) from different sources as homework. However, some of the students gave themselves open-ended, gap-filling, true-false, matching, etc. They stated that mixed questions such as (*f*=13) were given. On the other hand, some students stated that homework was not given (*f*=9). Some of the students stated that they were given homework on planets and space (*f*=5) or scientists (*f*=3). Some of the students' views are given below.

S5: "I do not encounter any questions because homework is not given."

S16: "Test, gap filling, matching and true-false questions."

S22: "I am doing research with scientists."

S45: "I am solving questions."

S27: "Test solution and homework are given for us to repeat."

S37: “The teacher did not give much homework. He usually gave a test solving assignment. “

S7: “Homework is not given.”

S13: “He asks all of them.”

S20: “Test and book assignments.”

S30: “I come across unit evaluation and test assignments in the book.”

S1: “Testing, filling the gaps.”

S40: “I come across question types such as true-false, classic, test, matching, filling in the blank.”

S39: “More teachers do not give homework. Every now and then we have test homework.”

S22: “He gives homework in the book.”

Ways Followed While Doing Homework

In the research, students asked “What kind of way do you follow while doing homework?” The question was posed and their written comments on this question were received. In Table 2, the opinions of the students about the ways they follow while doing their homework in science lessons and the frequency distribution of these views are given.

Table 2. *The Ways Students Follow While Doing Their Homework*

Codes	Student (*f*)
Starting homework after repeating the topic	9
Finding solutions to questions by thinking while doing your homework	9
Completing homework with support from family members	7
Completing the assignment using the information in the book	5
Completing homework using the internet	3
Completing the assignment using the way / methods taught by the teacher	2
Not using any means while doing homework	2

When Table 2 is examined, it is seen that while doing their science homework, students firstly repeat the topic and then start homework (*f*=9), choosing the way of thinking (*f*=9), getting help from family members (*f*=7), benefiting from the information in the books (*f*=5) is seen. During

the homework process, students sometimes make use of the internet (*f*=3) and sometimes they use what their teachers teach (*f*=2). Few of the students (*f*=2) do not use any means while doing their homework. Some of the students participating in the study (*f*=8) did not indicate the path they followed while doing homework. Some expressions of the students about the ways they followed while doing homework are given below.

S18: "When I do my science homework, I first repeat the topic and then I solve tests."

S25: "I am thinking about homework."

S21: "When I understand well, I feel very well."

S20: "I feel happy when I feel that I am doing right."

S31: "I feel very happy while doing homework. I feel happy when I do it right."

S15: "I solve the test directly, I am in complex emotions while solving tests."

S9: "If they are all true, I feel happy. If they are wrong, I feel unhappy. I see if I can solve a test."

S28: "Generally, the homework given by the teacher is tested, I do it, but I do it reluctantly. That's why I shake them from beginning to end."

S33: "I follow the way the teacher teaches. I am very bored when I do my homework."

S42: "I mostly do not want to do it, but I do it with the force of my family. I get bored while doing my homework."

Feelings While Doing Homework

In the research, the students asked "What do you feel while doing the homework?" The question was posed and their views on their feelings were taken. Accordingly, Table 3 shows how students feel while doing their science homework and frequency distributions of these feelings.

Table 3. *Students' Feelings While Doing Their Homework*

Codes	Student (*f*)
Happiness	15
Boring	9
Doesn't make any feelings	7
Sad	6
Complex emotions	1

When Table 3 is examined, it is seen that students mostly have a feeling of happiness (*f*=15) while doing their science homework. However, students also find the homework boring (*f*=9), and there are also students who stated that they were sad (*f*=6). At the same time, some students have numbness (*f*=7). However, there are also students with complex emotions (*f*=1). Some of the students participating in the study (*f*=7) did not state the emotion they felt while doing their homework. Some of the expressions regarding the feelings of the students are given below.

S13: "I am happy when I do my homework correctly."

S11: "I find it boring. I don't want to do it."

S35: "If I can do my homework, I will be happy."

S42: "The assignments given for the science lesson are beneficial for us because the subject is repetitive, we do not forget the subject we have covered."

S38: "It helps in exams."

S12: "We repeat the issues. I think it is useful."

S18: "I don't think, it is very boring."

S2: "It helps us not to forget the subjects by repeating them."

Homework contribution and benefits

In the research, students asked "How does homework for science lessons contribute to you? Do you think it is useful? Why?" The question was posed and their opinions on this issue were received in writing. Accordingly, Table 4.1 and Table 4.2 show students' opinions about the contribution and benefits of homework given in science lessons and the frequency distribution of these views.

Table 4.1. *Frequency distribution of views on the contribution of homework*

Codes	Student (*f*)
Repeat helper	10
Help understand the topic	8
Help exams	4
Develops	4

When Table 4.1 is examined, students state that homework mostly helps them to repeat the topic (*f*=10). Similarly, they are of the opinion

that science homework helps to understand subjects (*f*=8), helps for exams (*f*=4) and also contributes to their development (*f*=4). Some of the students (*f*=15) who took part in the study did not express any opinion on this issue. Some of the students' views on this issue are as follows:

S17: "It makes us repeat. It reminds us of the topics we taught in the lesson."

S29: "It helps in exams."

S25: "I think tests and book assignments are good."

S32: "I wish it to be interesting and impressive, I would feel better if it was about what I understand."

S12: "Actually, there should not be homework. We should learn everything at school. I would feel better if there was no homework."

S15: "It is not very boring, it is not very free."

Table 4.2. *Frequency distribution of views on whether homework is beneficial or not*

Codes	Student (*f*)
Beneficial	32
Not beneficial	10

When Table 4.2 is examined, most of the students (*f*=32) find the homework given in science lessons beneficial. However, some students (*f*=10) do not find homework beneficial. In the research, some students (*f*=3) did not express their opinion on this subject. Some of the students' views are as follows:

S35: "I think it is beneficial. I learn more."

S40: "Yes, we learn science."

S42: "I don't find it beneficial. I even find it very boring."

S39: "Not beneficial. It would be better if we did it at school."

S45: "I think it is beneficial. I learn more."

S2: "It helps us not to forget the subjects. I think it is beneficial."

How Can Homework Be More Effective?

In the research, students asked "How would you like homework to be more effective in science lessons? How would you feel better if you had homework?" The question was posed and their views were received in

writing. Table 5 shows students' views on how homework should be to be more effective and make them feel good, and the frequency distribution of these views.

Table 5. *Frequency distribution of opinions about how homework will be more effective*

Codes	Student (*f*)
No Homework	20
There should be research-project assignments and the number of homework should be increased	14
Have normal homework and increase the number of homework	3
Have normal homework and reduce the number of homework	3
Get puzzles	3
I do not know	2

When Table 5 is examined, most of the students do not want to have homework (*f*=20). On the other hand, a significant portion of the students (*f*=14) argue that the homework should be research and project-style assignments. However, there are a small number of students who want to give normal homework and to increase (*f*=3) or decrease (*f*=3) the number of these homework. Some of the students want them to have puzzle type (*f*=3) homework. There are also those who are undecided (*f*=2) on this matter. Some of the students' thoughts are as follows;

S35: "It would be better if less homework is given."

S42: "It would be nice if we do more activities."

S25: "I think tests and book assignments are good. It is good to have normal homework."

S12: "It would be good if something different happens."

S3: "Project assignments will be more catchy."

S18: "It would be better if homework is not given."

S32: "I think homework should not be given. Even if it is, there should be something fun. No test."

S33: "When homework is tested, I don't feel good."

S11: "I would be happier if I don't get homework."

S41: "A little less homework should be given."

S38: “I don’t feel good when it’s homework.”

S28: “I don’t know.”

Thoughts for Flexible Homework

In the research, students asked, “Would you like your homework to be more flexible, including the subject you want to research, your plans, designs and solutions? How does this make you feel? Why?” The question has been asked. Accordingly, Table 6 includes students’ opinions about whether they want their homework to be flexible or not, and the frequency distribution of these views.

Table 6. *Frequency distribution of views on flexible homework*

Codes	Student (*f*)
Let homework design style and be flexible	20
Keep homework flexible	10
Do not be flexible with homework	8
Designs are not flexible	7

When Table 6 is examined, most of the students (*f*=20) want the design style of their homework to be flexible. However, in parallel with this, a significant portion of the students think that the homework should be flexible (*f*=10). On the other hand, some students oppose their homework to be flexible (*f*=8) and flexible in design (*f*=7). Some of the students’ views on this issue are as follows:

S36: “I would. Because I like to learn something by researching.”

S24: “We would like it. Because it will entertain us a lot.”

S13: “I will be happier if there are project assignments.”

S6: “I would like design. Because design is better.”

S12: “It would be better if he had homework.”

S32: “If there was a project, I would be more pleased and I would work harder.”

S15: “I would like it. Because we could understand the subject better.”

S18: “I wish it would feel good.”

S20: “No.”

S5: “Yes. This would improve me in science subjects.”

S40: "Yes, it would feel good. Because we would understand the subjects better."

S10: "I would like it, I would feel happy."

S21: "I had fun while doing my homework. I would be happy."

Discussion, Conclusion and Suggestions

In this section, the results of the study are given based on the findings obtained in line with the research sub-questions. As the first sub-question of the study, the answer was sought for what kind of homework they encountered in science lessons. When the opinions obtained were examined, the students mostly stated that they encountered test questions (*f*=15) from different sources as homework. However, some of the students gave themselves open-ended, gap-filling, true-false, matching, etc. They stated that mixed questions such as (*f*=13) were given. On the other hand, some students stated that homework was not given (*f*=9). Some of the students stated that they were given homework on planets and space (*f*=5) or scientists (*f*=3). The fact that the homework given to the students is related to the subject covered in the previous lesson may cause the students to accept only what is in the books as absolute knowledge with rote logic. In this case, the possibility of leaving the place of curiosity, which is among the aims of science lesson, to laziness may increase. Similarly, some homework can be the type of homework that students can give as ready-to-print online. It is thought that this situation may harm students' inquiry skills. However, within the scope of 21st century skills, science lesson helps students to understand problem solving skills, principles and concepts (Korkmaz & Kaptan, 2001). In addition, homework should encourage students to research continuously (Sarıgöz, 2011).

In the second sub-question of the study, the answer was sought for how they followed their way and how they felt while doing their homework given in science lessons. While doing their science homework, it is seen that students first repeat the topic and then start homework (*f*=9), choose the way of thinking (*f*=9), get help from family members (*f*=7), and make use of the information in the books (*f*=5). During the homework process, students sometimes make use of the internet (*f*=3) and sometimes they use what their teachers teach (*f*=2). Few of the students (*f*=2) do not use any means while doing their homework. While the students generally felt happy about the homework they could do, they stated that they were sad about the homework they could not answer. It is seen that students generally express that they receive support from the family at points they do not understand after repeating the topic. When students do homework, parents can remind the child about their homework and encourage them (Güneş, 2014). In the literature, it is also pointed out that although the student (Epstein, 2001)

is the main responsibility in making the homework, some parents do the homework themselves. According to the present research results, it is seen that students mostly have a feeling of happiness (*f*=15) while doing their science homework. However, students also find the homework boring (*f*=9), and there are also students who stated that they were sad (*f*=6). At the same time, some students have numbness (*f*=7). However, there are also students with complex emotions (*f*=1). Although the students stated that they were happy while doing their homework in science classes, the number of students who stated that they were bored, sad, and sometimes did not feel anything while doing homework is not few. This situation can be seen as an important point to be considered. Although it is stated in the literature that unnecessary repetitions for homework are found annoying by students, it is stated that students also avoid doing homework given above the level (Güneş, 2014). It can be seen as a possible situation for a student who cannot be emotionally motivated while doing homework to punctuate his homework by getting his homework ready from the internet or completing his family members (parents). When there is no assignment where students can express their creativity and self-fulfillment, they may ignore it and do it randomly. In this context, student activity is of great importance for an effective environment, process, design and innovative product.

The student is the person who knows himself best. Individual differences always have a major impact on education. In this context, in the third sub-question of the study, the answer was sought whether the homework given in science lessons had any contribution and benefit. Students argue that homework contributes and helps them to repeat the topic (*f*=10), understand the topics (*f*=8), exams (*f*=4) as well as their development (*f*=4). At the same time, most of the students (*f*=32) think that homework given in science classes is beneficial. However, it is thought-provoking that some students (*f*=10) find homework not beneficial. In this sense, the quality of the given assignments can be questioned. The assigned assignments may not be of interest to students and may not create an attractive environment for them to learn.

In the fourth sub-question of the study, students' opinions were taken on how homework can be more effective. It is thought-provoking that students mostly want to have no homework (*f*=20) and it is a point that should be dwelled on sensitively. It is an issue that should be discussed whether the students see the homework useful and they want to be happy, on the other hand. Research-inquiry and discovery-oriented assignments that will keep students happy and constantly feeling good, keep their interests and motivations alive, should be discussed more. For example, a significant portion of the students (*f*=14) argue that the homework should be research and project-style assignments. Some of the students want them

to have puzzle type (*f*=3) homework. Why are activities and homework that have a certain degree of mystery and unknownship in the style of the puzzle for students? Could the feelings of exploration and curiosity that exist naturally and without limits in the students' answer to this question? Enriching environments where students can use their creative thinking, critical thinking and problem solving skills, as well as benefit from their imaginations, should be created. He / she should be able to think while doing homework and be able to transfer all the information learned in the lesson for different situations. It should develop solutions on its own for every new problem situation it encounters and, in a sense, design its own homework or project.

In the fifth sub-question of the study, their opinions were taken about whether they want the homework to be flexible or not. In line with the data obtained, most of the students (*f*=20) want the design style of their homework to be flexible. However, in parallel with this, a significant portion of the students think that the homework should be flexible (*f*=10). Students are more interested in project-oriented and design processes. It is interpreted that such flexible processes can be fun, and that there is a general tendency that design processes based on research-based learning will make the individual happier. On the other hand, some students oppose their homework to be flexible (*f*=8) and flexible in design (*f*=7). Students' desire to keep their homework in certain standard patterns, and their opposition to flexibility and design processes in this sense, can be associated with different individual characteristics and different learning styles students have (Davidson, 1990; DeBello, 1990; James & Gardner, 1995).

As a result, although students adopt homework, they want it to be more flexible because they are uncomfortable with the limitations of homework. In addition, it can be said that the homework should be in the form of more design assignments that can demonstrate their own skills and have a tendency to project.

For this, students should be given responsibilities to create their own products by using their knowledge at home instead of testing, books or repetitive homework as homework. The limitations of the homework should be created jointly with the students and the study should be started.

For the next research;

• A qualitative research can be done on teachers' preferences as homework and their reasons.

• A more comprehensive study can be done by expanding the research working group.

• A metaphor study can be made about what project assignments mean for teachers.

• Researches on research-inquiry and design-oriented homework studies can be planned.

References

Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö.E., Karadeniz, Ş., & Demirel, F. (2008). *Bilimsel araştırma yöntemleri.* Ankara: Pegem Yayınları.

Bembenutty, H. (2011). The first word: Homework's theory, research, and practice. *Journal of Advanced Academics*, *22*(2), 185-193.

Brock, C. H., Lapp, D., Flood, J., Fisher, D., & Han, K. T. (2007). Does homework matter? An investigation of teacher perceptions about homework practices for children from nondominant backgrounds. *Urban Education*, *42*(4), 349-372.

Cooper, H., Robinson, J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987–2003. *Review of educational research*, *76*(1), 1-62.

Cooper, H. (2007). The battle over homework: Common ground for administrators, teachers, and parents. Thousand Oaks, CA: Corwin Press.

Corno, L. (2000). Looking at homework differently. *The Elementary School Journal*, *100*(5), 529-548.

Davidson, G.V., (1990). Matching learning styles with teaching styles: is it a useful concept in instruction?, Performance and Instruction, 29, 36-38.

DeBello, T.C. (1990). Comparison of eleven major learning style models: Variables, appropriate populations, validity of instrumentation, and the research behind them, International Journal of Reading, Writing and Learning Disabilities, 6, 203-222.

Epstein, J. L., & Van Voorhis, F. L. (2001). More than minutes: Teachers' roles in designing homework. *Educational psychologist*, *36*(3), 181-193.

Güneş, F. (2014). Eğitimde ödev tartışmaları. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, *3*(2), 1-25.

James, W.B. & Gardner, D.L. (1995). Learning styles: Implications for distance learning, New Directions for Adult and Continuing Education, 67, 19-32.

Kılıç, İ., & Özel, M. (2015). Proje tabanlı öğrenme yönteminin fen ve teknoloji derslerinde uygulamaları hakkında öğretmen ve veli görüşlerinin incelenmesi. *Sakarya University Journal of Education*, *5*(2), 7-20.

Keith, T. Z. (1982). Time spent on homework and high school grades: A large-sample path analysis. Journal of Educational Psychology, 74(2), 248–253. doi:10.1037/00220663.74.2.248.

Korkmaz, H. & Kaptan, F. (2001). Fen Eğitiminde Proje Tabanlı Öğrenme Yaklaşımı, *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 20*(20), 193-200.

Ökdem, M. (2019). Üniversite Öğrencilerinin Zaman Yönetiminde Düştükleri Zaman Tuzakları ve Bunlarla Başetme Yolları. *Türkiye Sosyal Araştırmalar Dergisi, 23*(1), 79-94.

Partnership for 21st Century Skills (P21) (2009) Curriculum and Instruction: A 21st Century Skills Implementation Guide. Retrieved on 30/08/20 from https://files.eric.ed.gov/fulltext/ED519422.pdf

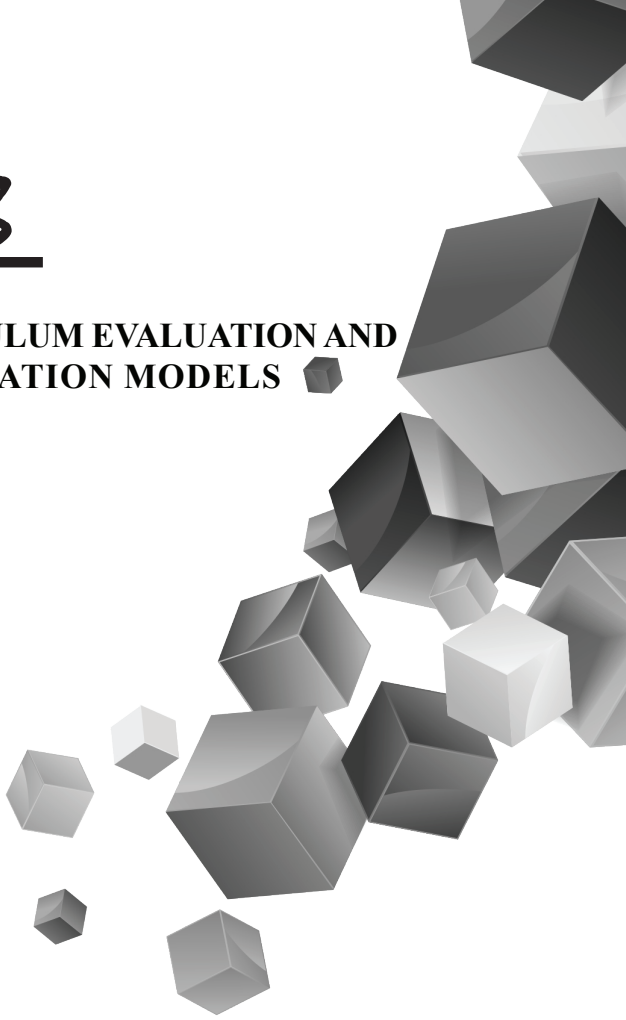
Patton, M. Q. (1987). *How To Use Qualitative Methods In Evaluation.* CA: SAGE Publications.

Sarıgöz, O. (2011). Ortaöğretim öğrencilerinin kimya derslerinde verilen ev ödevleri hakkındaki düşüncelerinin değerlendirilmesi. *Ejovoc (Electronic Journal of Vocational Colleges)*, *1*(1), 80-87.

Yıldırım, A. & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri.* Ankara: Seçkin Yayıncılık.

Chapter 13

A LOOK INTO CURRICULUM EVALUATION AND CURRICULUM EVALUATION MODELS



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Introduction[2]

Levine (2002) asserts that curriculum evaluation is "neither simple nor uniform" (p.1) and it can be most simply defined as the combination of two separate and at the same time two complicated discipline areas, "curriculum" and "evaluation". The complex nature of curriculum evaluation stems from the fact that there have always been many different perspectives or approaches to define and conceptualize these two terms or their sub-characteristics. However, in order to define and understand curriculum evaluation in a better manner or direction, it seems that we first need to understand its components parts separately. Thus, the following account will be devoted to the explanations concerning the main characteristics or qualities associated with its two component parts in the literature.

Oliva (2005) contends that people interpret the concept of curriculum differently with regard to their philosophical beliefs, which gives an amorphous nature to this term. According to Willis and Marsh (2003), people always have their own views of the world, their values and attitudes, and their priorities about knowledge (p. 68). Ornstein and Hunkins (2004) also maintain a similar outlook in that they assert that curriculum is the mirror of one's view of the world and reality, crucial values to him and the amount knowledge he has. Considering the ineluctable plurality of "one's" in the earlier wording, it is inevitable to have a plethora of definitions in the literature. Therefore, the conceptualization of the curriculum is varied owing to the number of various personal approaches and philosophies for the understanding of the curriculum, and there have always been some attempts by the individuals and scholars to find a solution to "this field of utter confusion" (Grumet, 1988, as cited in Oliva, 2005, p. 3). Curriculum viewed as an elusive, fragmentary and confusing field of study in Ornstein and Hunkin's (2004) terms, attracts scholars in that each wants to increase our understanding of the curriculum, thus also increasing the possibility of different definitions for the curriculum based on each scholar's philosophy and view of the world. This idea regarding the attempts of the scholars is also shared by Portelli (1987). He claims that more than 120 definitions of the term have been suggested for the conceptualization of the curriculum, which is probably a result of the attempts of the authors for delimiting the term and its meaning or perhaps a result of proposing new meanings for the conceptualization of the term. To sum up, each attempt of defining the term "curriculum" has resulted in a different definition of the curriculum. The following presents a sample of the existing curriculum definitions in the literature which have certain focus areas differentiating them from one another.

2 The author of this paper presented some preliminary ideas related to the topic of this chapter at the 2nd INES International Academic Research Congress (INES-2017) held on 18-21 October, 2017.

- Curriculum is "a plan for providing sets of learning opportunities for persons to be educated" (Saylor, Lewis & Alexander, 1981, p. 8) - *curriculum as a plan*

- Curriculum is all experiences that children have under the guidance of their teachers (Caswell & Campbell, 1938, as cited in Ornstein & Hunkins, 2004, p. 11) - *curriculum as experience*

- Curriculum is "the planned and guided learning experiences and intended outcomes, formulated through the systematic reconstruction of knowledge and experiences under the auspices of the school, for the learners' continuous and willful growth in personal social competence" (Tanner & Tanner, 1980, p. 43). - curriculum *as a field of study*

Having considered the meaning and conceptualization of curriculum, it is also worth dealing with the concept of evaluation. As is the case with the definition of curriculum, Fitzpatrick, Sanders and Worthen (2004) again talk about the absence of "uniformly agreed-upon definition" of evaluation among professionals (p. 5). Thus, it is better to present a sample of the definitions suggested for educational evaluation.

Program Evaluation: Differentiating it from Some Other Related Terms

Gredler (1996) considers *evaluation* as a process in which data and information is systematically gathered so as to contribute to decision making. Ornstein and Hunkins (2004) view evaluation as a process or a group of processes individuals engage in for the purposes of collecting and interpreting data to choose among the decisions of acceptance, modification or termination of something. Popham (1993) claims that evaluation, in its very basic sense, relates to the appraisal of the quality of something, which is very similar to Scriven's (1967) and Fitzpatrick and other's (2004) definition seeing it as judging the worth of something. In terms of its purpose, there is a consensus in that evaluation means the determination of something's merit and worth. In terms of its use, however, the contexts of evaluations are varied, from everyday activities (e.g. decision to take the umbrella based on the weather forecast) to non-education related activities at schools (e.g. a teacher's determination to walk in the garden during a sunny day; Popham, 1993) or somewhere else (e.g. evaluation of commercial products, works of art, human services etc.; Gredler, 1996)

The above account makes it clear that with evaluation, people aim to determine the merit and worth of something though this process further depends on the characteristics of this something and its relevant context. Now that we could gain a basic agreed-on idea concerning the meaning of evaluation, it would be more practical now to talk about program

evaluation as a popular term or discipline area that is closely connected to educational research and practice. As is the case with defining the term curriculum explained above, it is again difficult to offer one agreed-on definition for curriculum evaluation. Hence, it is better to present a sample of the available definitions for educational evaluation from the literature, which will lead us to have more holistic and clearer picture of the term.

Program evaluation is defined as serious and comprehensive investigation of any system or innovation for the purposes of improving conditions and providing richer educational opportunities and experiences for students (Walberg & Haertel, 1990). This definition is very close to what Popham (1993) names *educational evaluation* in that the basic evaluation or appraisal is applied to the quality of educational phenomena in a formal and systematic manner. Gredler (1996) elaborates on the term educational phenomena by specifically deepening this term with the use of more concrete terms of pedagogy or learning environments. For her, educational phenomena encompass "policies, programs, curricula, courses and educational software and other instructional materials" (Gredler, 1996, p. 13) and program evaluation refers to the activities to evaluate the effectiveness and conduct of these educational products or terms. Stufflebeam (1971, as cited in Ornstein & Hunkins, 2004) associates program evaluation with the administrative works of an institution and delineates program evaluation as something that should at the first place serve to decision makers in an educational institution. Educational evaluation is considered as " the process of delineating, obtaining and providing useful information for judging decision alternatives" in terms of Stufflebeam's managerial outlook (Stufflebeam, 1971, as cited in Ornstein & Hunkins, 2004, p. 334)

Though the term evaluation in the two concepts (evaluation and program evaluation) has the same meaning, the added word, program makes a difference. The difference between the evaluation and educational (program) evaluation, as is clear from Popham's (1993) definition above, is educational evaluation's becoming more formal and systematic than the informal everyday evaluative activities. In this vein, the added word of program means "a set of specific activities designed for an intended purpose with quantifiable goals and objectives", which provides the second concept (program evaluation) with a more formal nature (Spaulding, 2008, p. 5). Though their purposes are the same, that is, the determination of the worth of something (appraisal of the quality), their uses are different in terms of their being formal/informal, systematic/unsystematic or being educational or non-educational. Making judgments regarding educational products, the instructional programs at schools, at prisons or at companies may be the examples of educational (program) evaluation, while saying "it is too warm to wear a sweater" (Popham, 1993, p. 7) is an example of everyday evaluation in its basic terms. Program evaluation relates more

to the educational phenomena as put forth by Gredler (1996) who defined program evaluation as "sets of activities involved in collecting information about the operation and effects of policies, programs, curricula, courses and educational software and other instructional materials" (p. 13).

People often use the term curriculum evaluation interchangeably with the term accreditation. These two terms are in fact different. One can accept that activities held for the purposes of accreditation are similar to those performed in evaluation; but, these activities are done for the sake of judging the alignment of a specific program with some existent standars under the name of accreditation while these activities (like document analyses) are performed for the purposes of program evaluation so as to determine the effectiveness or outcomes of any program. For Gredler (1996, p.15), *accreditation* is concerned with "the review of documents to determine if certain prespecified status characteristics are present". Fitzpatrick and others (2004, p. 115) refers to it as a "formal, professional review system through which an organization, such as schools, universities or medical institutions receive approvals of their qualities as particular types of institutions. While the purpose of program evaluation is to determine the effects of a program on students and to analyze the student outcomes, accreditation procedures do not relate to such investigations. As being different from evaluation and program evaluation that aims to investigate the outcomes of the programs thus to determine the worth of them, the purpose of accreditation is to examine the adequacy of facilities and staff qualifications and the suitability of the processes involved (Fitzpatrick et al., 2004). With regard to the uses of accreditation procedures, they can be performed for similar contexts, such as in education, medicine or law.

Educational Research also refers to the procedures undertaken to test principles or theories for their generalizability to some other cases (Gredler, 1996). Educational research refers to the activities performed for the purpose of production of knowledge, which may also contribute to the growth of a theory (Fitzpatrick et al., 2004, p. 6). In comparing educational research to program (educational) evaluation and evaluation in its basic sense in terms of their purposes, all aim to provide additional knowledge; however, the uses in which this knowledge is activated are different. Research is used to draw conclusions, while evaluations are used to make decisions (Popham, 1993). Another example for the uses of knowledge for the two concepts in different ways; educational research produces knowledge in a field, but program evaluation makes use of this knowledge. Second, research aims to investigate relationships or to discern the nature of relationships between the variables, while evaluation seeks to describe the things, and program evaluation seeks to describe a particular educational program (Fitzpatrick et al., 2004; Popham, 1993).

From the above account and list of definitions, it is easy to suggest that almost all of them follow a judgmental approach to evaluate a program, but what is common to all is the presence of systematicity. All view evaluation as composed of a systematic set of activities. In the light of the evaluation definitions suggested above, the term curriculum evaluation refers to the appraisal of the quality of the curricular choices. While determining the quality of curricula, educational products or courses, researchers working on program evaluation in the literature have used several evaluation methods and techniques. You can even see a purposeful mention or utterance of program evaluation methods in some of the more contemporary definitions of program evaluation made within the last two decades. Chen (2005), for instance, asserts that program evaluation is the systematic assessment and improvement of programs with the use of evaluation approaches and techniques. It would be meaningful and necessary here then to offer some definitions about the curriculum or program evaluation models used in the literature. In this way, one can better understand the purposes and functions of program evaluation. The following offers an account about the mostly used program evaluation models in the literature.

Program Evaluation Models: The Two Umbrella Categories of Evaluation

Different curriculum evaluation models have been proposed in the literature. Gredler (1996) has grouped such models under two main umbrella terms. The two major evaluation approaches proposed by Gredler (1996) are utilitarian approaches and intuitionist-pluralist evaluation approaches. *Utilitarian evaluation approaches* which are sometimes referred as management approaches are related to managerial or product-oriented thinking (or systems approach thinking) in that they serve decision makers (administrators, managers, policy makers and boards etc.) and the information needs of them are dealt with (Fitzpatrick, Sanders & Worthen, 2004; Gredler, 1996). Utilitarian approaches are built upon the basic premise that good decision making is very much dependent upon evaluative information (Fitzpatrick et al., 2004). As is clear from the dictionary meaning of utilitarian, such type of an evaluation centers on the total impact of the program (not individual effects) with a purpose and belief of the maximum happiness of the maximum number of people.

Intuitionist-pluralist evaluation approaches holds a pluralist view of evaluation in that not only the needs and concerns of the decision makers, but also all the individuals associated with the evaluation are taken into consideration. As is clear from the dictionary meaning of pluralistic, such type of an evaluation involves the various perspectives, values and the needs of the other various bodies and individuals, not only those of decision makers.

Main Differences between the Two Umbrella Categories for Evaluation

Overall impact of the program on the people associated with the evaluation is emphasized in Utilitarian approaches, while intuitionist-pluralist evaluation approaches deal with the impact (separate impact over the total impact) of the program on each individual (Fitzpatrick et al., 2004). Utilitarian evaluation refers to applying predetermined, specific standards for evaluation, but the intuitionist-pluralist evaluation is not limited to applying specific standards to programs, it is something more comprehensive with the intuitionist-pluralist evaluation including variety of perspectives (Gredler, 1996). In other words, utilitarian approaches are preordained in that there is a uniform, designated set of standard to evaluate a program, while the intuitionist-pluralist evaluation is not uniform but varied (Gredler, 1996). In talking about the audience for the evaluation, for utilitarian approaches, it is a predetermined decision maker (manager, program administrator and government sponsors etc.). In this vein, informational needs of these identified decision makers are taken into consideration and responded (Gredler, 1996). Audience for the intuitionist-pluralist evaluation, on the other hand, is any individual associated with the program, not specifically the decision makers. The evaluator in the utilitarian perspective is responsible for communicating total group benefits by employing average outcome scores. The evaluator of the intuitionist-pluralist perspective, on the other hand, is responsible for communicating the different values and the needs of each individual involved in the evaluation (Fitzpatrick et al., 2004). As a criterion for evaluation, utilitarian approaches usually develop one, common and unique "index of good" (Fitzpatrick et al., 2004, p. 62) to determine the value of a program or innovation. For the intuitionist-pluralist approach, one can mention a plurality of criteria to evaluate a program rather than a simple criterion of what is good and appropriate. In this vein, the utilitarian approaches have a value idea that greatest good refers to the greatest number of individuals' making benefits out of a program or an innovation. The intuitionist-pluralist approaches are based on the value vision in which the greatest good refers to each individual's making benefits (Fitzpatrick et al., 2004).

Although the differences far exceed the similarities, these two approaches have some characteristics in common. Both approaches deal with the information needs. However, as mentioned earlier, utilitarian approaches deal with the informational needs of the decision makers, while the intuitionist-pluralist approaches address the information needs of all individuals related to the program, not peculiarly the decision makers. Second, with both approaches, the main aim is to determine a value, that is, worth and merit for a program.

Some Exemplary Program Evaluation Models in relation to the Two Umbrella Categories

The following present the most popular models belonging to those two approaches starting with the Intuitionist-pluralist perspective. Moving from Gredler's (1996) main categorization, program evaluation models frequently used in the evaluation studies were collected here for the purposes of this paper. Responsive Evaluation Model, Illuminative Evaluation Model, Connoisseurship and Criticism Evaluation Model were given as examples for the Intuitionist-pluralist perspective while Discrepancy Evaluation Model, Context-Input-Process-Product Evaluation Model and Goal-Free Evaluation Model composed the examples for the Utilitarian evaluation approaches (Figure 1).

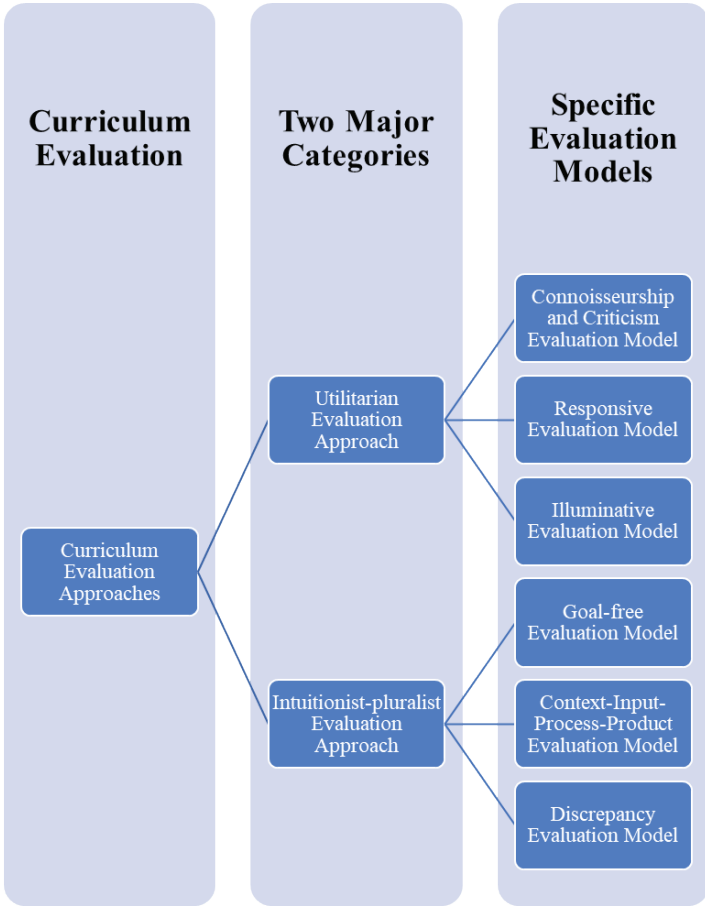


Figure 1. *Two Major Categorizations of Evaluation Models*

Responsive Model proposes that evaluation should be responsive to the concerns of the individuals whom the evaluation is performed for

(Popham, 1993; Stake, 2010). Stake (2010, p.185) explains responsive evaluation in the following:

"An educational evaluation is responsive evaluation if it orients more directly to program activities than to program intents, if it responds to audience requirements for information, and if the different value perspectives of the people at hand are referred to in reporting the success and failure of the program. In these three separate ways, an evaluation plan can be responsive."

Responsive Evaluation has three sets of activities: 1) initial planning and focusing of the evaluation, 2) conducting observations, and 3) organizing and reporting. An evaluator using this model first tries to better understand the program by talking to different audiences and observing the program activities and documents. She/he then identifies a few issues on which he will base his evaluation, which is followed by the determination of data collection tools and sources. For the last step, organizing and reporting, there is no standard and unique way to perform it and no specific time (Gredler, 1996).

As is clear from its name, Illuminative Evaluation Model attempts to illuminate specific problems and unique characteristics of an educational program (Ornstein & Hunkins, 2004). Similar to the Responsive Model, it is attentive to the concerns of the individuals involved in a program. The model has three steps: *observation*, *further inquiry* and *explanation*.

I. Observation stage refers to the negotiation of the evaluation, that is, understanding the reasons for evaluation (Gredler, 1996). It is also the stage the evaluator gets an overall picture of the program (Ornstein & Hunkins, 2004).

II. In the further inquiry stage, a focus (a theme) is chosen for the evaluation.

III. In the explanation stage, the evaluator explains his findings to the audience associated with the program.

The purpose of Eisner's Evaluation Model is to make the teachers and others to be aware of the ongoing interactions and classroom dynamics. Like Responsive and İlluminative Models, this evaluation model is attentive to the experiences and activities of the audiences relevant to the program (Gredler, 1996). Eisner's Model relies on two main concepts: *connoisseurship* and *criticism*. Connoisseurship refers to the "art of appreciating the educationally significant (Ornstein & Hunkins, 2004, p.347), while criticism stands for the "art of vividly describing, interpreting and evaluating ongoing events in the classroom setting (Eisner, 1976, as cited in Gredler, 1996, p. 69).

Scriven (1967) developed the goal-free evaluation model which is based on the basic premise that pre-determined goals used to guide the evaluation can narrow the focus of the evaluation and limit the evaluator (Fitzpatrick et al., 2004; Gredler, 1996). Therefore, the goals themselves should also be evaluated. The focus of evaluation is on all the actual outcomes rather than the intended outcomes related to the goals (Fitzpatrick et al., 2004).

Provus developed the Discrepancy Evaluation Model of curriculum evaluation the key characteristics of which has been derived from Tylerian tradition. His model is based on the idea that evaluation is arrived at through the comparison of actual performance with the posited standards (Popham, 1993). Briefly talking about the Tylerian Evaluation Model, which may be also referred as a goal attainment model or objectives-based evaluation, the model is basically based on the premise of measuring the degree to which predetermined objectives are achieved. Achieved goals stand for the success of the program, while the unattained goals for the deficits and weaknesses of the program evaluated (Fitzpatrick et al., 2004, Popham, 1993).

Provus defined program evaluation as " the process of 1) defining program standards; 2) determining whether a discrepancy exists between some aspect of program performance and the standards governing that aspect of the program; and 3) using discrepancy information either to change performance or to change program standards" (Provus, 1971, as cited in Popham, 1993, pp. 37-38). The model possesses four evaluation stages (Gredler, 1996 & Popham, 1993):

I. Establishment and Evaluation of the Program Definition (Design) refers to the documentation of the nature of the program.

II. Evaluation of Program Installation (Installation) refers to the evaluation stage where the evaluator strives to understand if the installed program is consistent with its installation plans.

III. Verifications of the relationships between teacher-student interactions and intermediate program objectives (Process) stage asks the question of whether "enabling objectives" ("gains that participants should be making") are being met. (Fitzpatrick et al., 2004, p. 76).

IV. Evaluation of Program Outcomes (Product) attends to the question whether the terminal objectives have been achieved.

Stufflebeam developed the "decision-management-oriented" model of evaluation which has been recognized as CIPP as it represents four types of evaluation, *context*, *input*, *process* and *product*. The CIPP approach views evaluation as "the process of delineating, obtaining and providing useful information for judging decision alternatives" (Stufflebeam, 1971,

as cited in Popham, 1993, p. 34). The evaluation framework Stufflebeam developed for the purpose of serving the information needs of the decision makers exhibits four different kinds of decisions (Fitzpatrick et al., 2004).

I. Context evaluation contributes to *planning decisions* with its aim of providing a rationale for the determination of educational objectives. Its purpose is also to conceptualize the relevant environment with the identification of the expected and real (current) conditions, unmet needs and missed opportunities (Ornstein & Hunkins, 2004; Gredler, 1996, Popham, 1993).

II. Input evaluation is necessary to provide information on which instructional resources to employ and how to employ these resources (structuring decisions) to meet the objectives (Ornstein & Hunkins, 2004; Gredler, 1996, Popham, 1993).

III. Process evaluation refers to the identification of inadequecies in the implementation. That is, this type of evalution aims to identify if the procedural activities and events are being implemented (implementation decisions) as they have been originally planned (Gredler, 1996, Popham, 1993).

IV. Product evaluation puts its emphasis on the outcomes (program effects). By exploring the extent to which the desired objectives or standards have been met, the product evaluator assists others to decide whether to continue, modify (recyling decisions) or terminate the curriculum (Gredler, 1996; Popham, 1993).

Among the evaluation models discussed above, one cannot suggest the best one. However, one evaluation model can be better for a program than the others depending on the evaluation focus, conditions and program type. Differentiating between the utilitarian and pluralistic perspectives in general is also helpful in guiding an evaluator towards the most suitable evaluation model. In looking at the evaluation models above, the first three aim to involve other individuals in the evaluation not only the decision makers; so they have pluralistic perspectives. The remaining three are utilitarian as their main aim is to serve the decision makers.

Comparison of the Curriculum Evaluation Models: An Example

Choosing the right model for curriculum evaluation is important in that each model has its own characteristics in relation to its main evaluation focus area, the role of the evaluator, purpose of evaluation and the audience and the target group for the evaluation. Therefore, those involved in program evaluation should strive to find the best model to serve their needs and contextual characteristics or expectations of the programs

under investigation. Investigations into the models by comparing the advantages and disadvantages of each with regard to the characteristics of a particular program or course in question are recommended before the evaluators proceed with one. The following account compares two popular curriculum evaluation models, Discrepancy Evaluation Model and Responsive Evaluation Model each representing one of the two major evaluation approaches previously explained in this paper. The following will present you with an example in which a comparative analysis of the use of each model was performed in line with their strengths and weaknesses. Such sort of a comparison should be performed by the evaluators prior to the identification of evaluation models for their evaluation studies.

The first unit of analysis is the intention of evaluation. Given this criterion related to the purpose of evaluation, Provus' Discrepancy Evaluation Model is aimed at determining whether to "improve, maintain or terminate a program" (Gredler, 1996, p. 42). That is, learning about the effectiveness and performance and the outcomes of a program or any other innovation is the main concern of this type of evaluation. In this vein, this model assists the decision makers in getting the big portrayal of the effectiveness of the curriculum by evaluating the outcomes (Ornstein & Hunkins, 2004), and in determining one single true value of the program, as one of the characteristics of the utilitarian approaches within which Provus' model has been included by Gredler (1996).

Stake's Responsive Evaluation Model, on the other hand, centers more on evaluating program activities and processes rather than the outcomes (Ornstein & Hunkins, 2004). Responsive Model has no aim to determine a single true value regarding the program as it is built upon the idea that "a program has different values for different persons for different purposes" (Stake, 1975, as cited in Gredler, 1996, p. 71). Based on this assumption, the intention of responsive evaluation is to reflect "the issues, language, contexts and the standards of stakeholders (Stake, 1990, as cited in Gredler, 1996, p. 71). Part of the aim of the responsive evaluation thus is to make evaluation more useful for all the individuals (stakeholders) associated with the program (Gredler, 1996), while the discrepancy evaluation intents to help decision makers in their decisions of rejecting, modifying or accepting a program by providing the evaluative information (Ornstein & Hunkins, 2004).

Given the audience, the main audience for Provus' Discrepancy Evaluation Model is the decision makers. Discrepancy information is reported to decision makers. On the other hand, the audience for Stake's Responsive Evaluation Model is all of the stakeholders, that is, all of the individuals somehow related to evaluation. The findings of the evaluation are shared with these stakeholders (teachers, students, program staff etc.) and they are usually given a chance to respond to the findings.

Given the role of the evaluator, the evaluator for Stake's Responsive Evaluation Model, acts like an observer and analyst in that he performs several observations and investigations so as to define the characteristics, personnel, major issues and problems of the program, and its success and failure (Ornstein & Hunkins, 2004). Ornstein and Hunkins (2004) give the examples of a critic for a theatrical activity or a painter picturing a scenery to elaborate on the job of the evaluator of the Responsive Model. Likewise, the evaluator for Provus' Discrepancy Evaluation Model reports what he has observed to the decision makers; however, he is further responsible for the identifying the problems, reporting the discrepancies between the program performance and selected standards and also suggesting some possible corrective actions to be taken (Ornstein & Hunkins, 2004; Gredler 1996).

Given the strengths and weaknesses, one of the strengths of Provus' Discrepancy Evaluation Model is its emphasis on program definition, design and installation. The emphasis on the part of the Stake's Responsive Evaluation Model is directed towards the interests, concerns, language and the standards of the stakeholders, which is again considered a type of strength with its humanistic perspective. However, the excessive emphasis on the interests and concerns of the stakeholders may lead to a loss of important program information, and further the inclusion of the stakeholders in the technical steps of the evaluation may detract from its value of evaluative validity (Gredler, 1996). As a contribution of the Provus' Discrepancy Evaluation Model to the literature of evaluation, one can mention the information management idea and forming informative databases which combine student characteristics, classroom processes and student outcomes so as to provide comprehensive information about the program and its implementation (Gredler, 1996). Stake's Responsive Evaluation Model, similarly, reveals the complexity of educational programs by collecting information from a variety of perspectives of the different individuals (stakeholders), which is again a strength on the part of the model.

Due to the fact that the Discrepancy Model serves to the decision makers (administrative bodies, program developers etc.), a close relationship and teamwork is expected between the evaluator(s) and the decision-making bodies (Gredler, 1996), and this corporation may be beneficial for the evaluation to proceed productively (e.g. negotiation of the framework for evaluation with the decision makers). In the same way, one strength of the responsive evaluation refers to the idea that a kind of partnership is expected and encouraged between the evaluation staff and the other stakeholders (in addition to decision makers) in that responsive evaluation takes the concerns, interests, feelings and expressions of the individuals (Ornstein & Hunkins, 2004) associated with the evaluation into consideration, and this in turn provides the necessary feedback to

the evaluation staff (e.g. identification of the needs and interests of the personnel or clients). An important weakness of the Provus' Discrepancy Evaluation Model is its reliance on the specified list of objectives for some steps of the evaluation (Gredler, 1996), which is a highly structured process. In contrast, Stake's Responsive Evaluation Model does not require a predetermined list of objectives to check the effectiveness of the program, but it attempts to develop some issues and check and discuss them with the related stakeholders, which is more practical compared to the discrepancy model as some institutions may not have such objectives.

As is shown with the above account, curriculum evaluation models have their own particular characteristics on one side. On the other side, programs or curricula under investigation and their relevant contextual characteristics are also important. This two-dimensional outlook should be taken and considered together when planning the details of an evaluation study.

Conclusions and Discussion

Given the existence of a variety of definitions for curriculum and then of the development of different evaluation methods, it would be wise to accept the idea that different conceptualizations expand our vision. This, in fact, corresponds to what education is for. It is for expanding our vision. Though considering curriculum a field of study (science), it is not always a must to look for exact answers. It is more important to develop your intellectuality, understanding of the complexities in your own mind and the minds of the people. The vast number of definitions supports this view in that the different definitions enrich the field and enable us to look for venues of doing research. If we had only one definition, we would not seek to investigate and explore it any further, which will hinder or taper our understanding. Accordingly, the earlier mention of the curriculum as an area of confusion because of the existence of different conceptions of the curriculum is advantageous but not disadvantageous in that it is a kind of richness, challenge and dynamism with the existence of a lot of voices and collective energy gained from all those (Ornstein & Hunkins, 2004).

We cannot disregard the disadvantages totally because such an open area of study with no well-defined limits but with a variety of personal definitions appear to have no clear direction and purpose on its own behalf as a separate field of science (Ornstein & Hunkins, 2004). Different definitions get related with different disciplines; some definitions have more psychology, some more philosophy, and some more learning theory research within themselves, which, in turn, makes it difficult to accommodate certain venues for conducting research in its own sake.

The writer of this paper would refer to curriculum as a process which has a system of methodology involving such elements as design, implementation and assessment, each of which is arrived at as a result of dynamic and never-ending act to identify and choose among alternatives (i.e., decision making processes). In this definition, one can easily notice the emergence or existence of two major concepts, curriculum development and curriculum evaluation. These two concepts or processes can take place at the same time. That is, when developing a curriculum, people can also evaluate the existing conditions and programs and then develop the new or improved version of the existent one. The situation can also be in the opposite direction. People can develop a new curriculum and then want to see or test its effectiveness or impact on the relevant stakeholders. Testing the effectiveness or outcomes of any curriculum can be considered as a sort of program evaluation. Therefore, these two related processes can be complementary of one another. In this essence, in the more contemporary literature on curriculum evaluation, there are merged models of curriculum development and curriculum evaluation (see Bellon and Handler, 1982). The writer of this paper followed the basic and more traditional categorizations of curriculum evaluation in the current paper here and excluded such contemporary variations.

It is known that the emergence of educational program evaluation is closely related to the increasing voices and demands of the taxpayers and public officials pertaining to the provision of accountability for the expenditures of public funds (Worthen, 1990). Hence, in addition to its more obvious or manifest function as to the assessment of the effectiveness of any program, curriculum evaluation serves to the accountability purposes in the form of public policy. It is also striking that the need for program evaluation or its first emergence as a field of study shows parallelism with the velocity and rhythm of social change (Levine, 2002). It appears that the changing needs of the societies or the individuals within these societies resulted in the development of new curricula or programs. These developed programs were later subjected to investigations to test their level of quality or effectiveness in line again with the changing demands or dissatisfactions of the stakeholders. Hence, the above idea regarding the togetherness of curriculum development and curriculum evaluation is not in fact a recent assumption or tendency in the literature. Given the first emergence of curriculum evaluation as a distinct field of study or activity, there was still this link to or influence of curriculum development.

Curriculum evaluation appeared to be a distinct professional field of study or practice as of 1930s in the United States and 1950s in Britain as a tool of public policy (Levine, 2002). However, in Turkey evaluation is not yet a mandated instrument for public policy. It is usually seen as a form of

educational research and though not great in number, there are a number of program evaluation theses studies conducted by Turkish researchers (Daloğlu, 1996, Erdem, 1999; Erozan, 2005; Yel, 2009). It is important to note here that in spite of the use of some common data collection methods, educational research and educational program evaluation differ from one another. However, Turkish researchers or educational people are not used to its use as a public policy like those were in the States or Great Britain. There are also some accreditation practices performed by private institutions specialized in evaluation, but such practices are still seen to be more like an educational activity but not as a tool of social accountability or transparency in Turkish contexts. Hence, there is a need for a more and better understanding of curriculum evaluation for future research and practice in Turkey and even for future public policy and accountability purposes. In this sense, this paper is believed to be beneficial for those who want to have a foundational theoretical level of understanding in curriculum evaluation and some relevant terms and concepts to it.

References

Bellon, J. J., & Handler, J. R. (1982). Curriculum development and evaluation: A design for improvement. Dubuque, Iowa: Kendall/Hunt Publishing Company.

Chen, H. (2005). Practical program evaluation. Thousand Oaks, CA: Sage Publications, Inc.

Daloğlu, A. (1996). A Case Study on Evaluating "The Certificate for Overseas Teachers of English" Curriculum at Bilkent University. Unpublished dissertation, Middle East Teachnical University, Ankara.

Erozan, F. (2005). Evaluating the language improvement courses in the undergraduate ELT curriculum at Eastern Mediterranean University: A case study (Unpublished doctoral dissertation). Middle East Technical University, Ankara.

Erdem, H. E. (1999). Evaluating the English language curriculum at a private school in Ankara: A case study (Unpublished doctoral dissertation). Middle East Technical University, Ankara.

Fitzpatrick, J.L., Sanders, J.R., & Worthen, B.R. (2004). Program evaluation: Alternative approaches and practical guidelines. Boston: Pearson Education.

Gredler, M. E. (1996). Program evaluation. Upper Saddle River, NJ: Pearson Education, Inc.

Levine, T. (2002). Stability and change in curriculum evaluation, Studies in Educational Evaluation, 28(1), 1-33. doi= 10.1016/S0191-491X(02)00010-X.

Oliva, P. (2005). Developing the Curriculum (6th ed.). Boston, MA: Pearson Education, Inc.

Ornstein, A. C., & Hunkins, F. P. (2004). Curriculum-foundations, principles, and issues (4th ed.). Boston, MA: Pearson Education, Inc.

Popham, W. J. (1993). Educational evaluation. Needham Heights, MA: Allyn and Bacon.

Scriven, M. (1967). The methodology of evaluation. In R. W. Tyler, R. M. Gagné, & M. Scriven (Eds.), Perspectives of Curriculum Evaluation (pp. 39–83). Chicago: Rand McNally.

Portelli, J. P. (1987). Perspectives and imperatives on defining curriculum. Journal of Curriculum and Supervision, 2(4), 354-367. Retrieved from http://www.ascd.org/ASCD/pdf/journals/jcs/jcs_1987summer_portelli.pdf

Spaulding, D. T. (2008). Program evaluation in Practice. San Francisco, CA: Jossey-Bass.

Stake, R. (2010). Program Evaluation Particularly Responsive Evaluation*. Journal of Multi Disciplinary Evaluation, 7(15), 180-201. Retrieved from https://journals.sfu.ca/jmde/index.php/jmde_1/article/view/303

Tanner, D., & Tanner, L. (1980). Curriculum development: Theory into practice. Columbus, OH Merrill.

Walberg, H., & Haertel, G. (1990). The international encyclopedia of educational evaluation. Oxford: Pergamon.

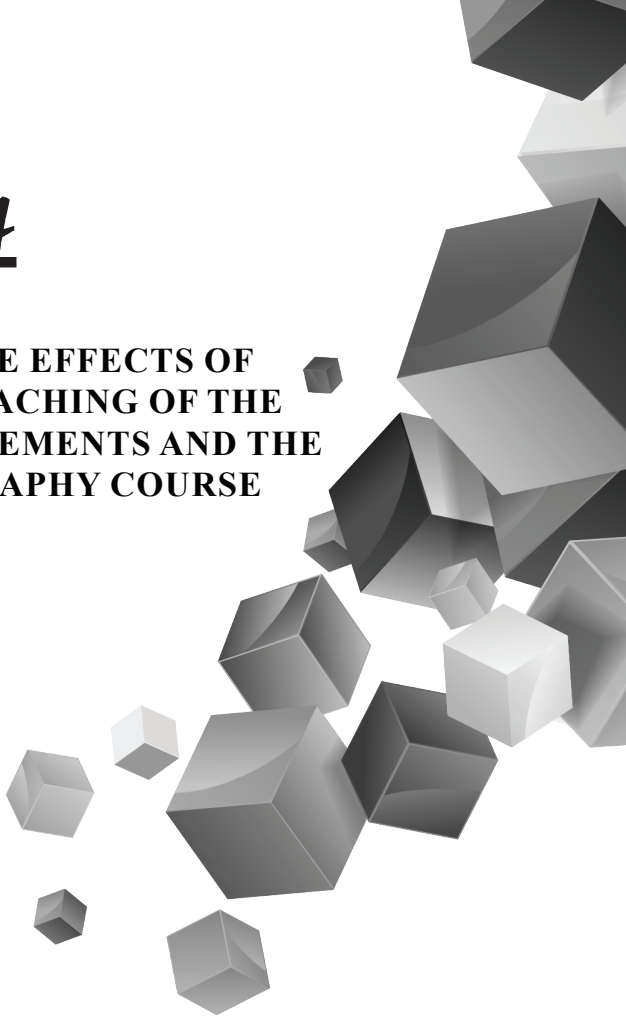
Willis, G., & Marsh, C. J. (2003). Curriculum: alternative approaches, ongoing issues. New Jersey: Pearson Education, Inc.

Worthen, B. (1990). Program evaluation. H. Walberg & G. Haertel (Eds.), The international encyclopedia of educational evaluation (pp. 42-47). Toronto, ON: Pergammon Press.

Yel, A. (2009). Evaluation of the effectiveness of English courses in Sivas Anatolian High Schools (Unpublished master's thesis). Middle East Technical University, Ankara.

Chapter 14

EXAMINATION OF THE EFFECTS OF WORKSHEETS ON TEACHING OF THE EARTH'S SHAPE-MOVEMENTS AND THE ATTITUDE OF GEOGRAPHY COURSE



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INTRODUCTION

Geographic information is the information that has been wondered, researched and applied since the first periods of humanity. The geography that came into use with Eratosthenes, has evolved into a modern science since the 19th century. Different definitions have been made to explain geography. According to Erinç (1977), geography is "a science that reveals the characteristics of places on earth and explores and explains the reasons for the similarities and differences between these features and the various places and the laws that govern them (Çifçi, 2018, p.4). Geography, which can be defined as an effort to understand the events occurring on the Earth, is not a science that consists of memorizing place names as stated by Tümertekin and Özgüç (2002). According to Lacoste's (2015) ironic phrase, there is nothing to understand in geography, it is necessary to memorize information. As Doğanay (2010, p.4) emphasizes, geography treats nature-human interaction and emerging problems like an equation with three or four unknowns. Geography never has an education and learning principle or method, such as memorizing.

Although the desire to learn geography changes over time, people want to understand the differences and similarities between people living in different places and their own living space. Therefore, the desire and need to learn geography comes from creation. Thereby, geography education consists of the knowledge, skills, values, and attitudes that people need in both formal and non-formal education and that they can use in their lives (Öztürk, 2007).

Because our daily life is in a tight relationship with geography. Depending on weather events, we prefer to dress in disguise, explore geographical features for tourist trips, use the map to understand inter-country relations and try to understand geographical conditions. We need to learn geography to understand seasons, natural disasters or the environment. For this reason, direct information presentation should be abandoned for effective geography education. A course that consists of just a pile of information doesn't get the student much. For geography education to be efficient, it is necessary to emphasize the meaning and the effects of geography on our lives. (Akınoğlu, 2005). For this purpose, students should be compared to activities that will make learning geography enjoyable and enable them to understand and interpret permanent information rather than memorized information.

Geography course aims to give students skills such as time, change and continuity perception, table-chart preparation and interpretation, observation and mapping skills as stated in the curriculum. For this purpose, it is necessary to increase curiosity in learning and to make

learning fun to realize the gains given in the program by the students. This can be achieved by using very different teaching materials in geography teaching, depending on the grade level and the level of development of the students. The materials used in the teaching and learning process are used to support the teaching. Materials that are used in accordance with the subject and achievements, selected correctly and effectively enrich the teaching process and increase learning (Demiralp, 2007). As Artvinli (2010) points out, teachers need to have a student-centered way of thinking about what to do to their students in the class, how to activate them, how to make them think and criticize. For this purpose, a wide variety of teaching materials can be used in a geography course. One of these teaching materials is work sheets.

Work sheets can be defined as printed teaching materials prepared to give students knowledge, skills and attitudes, including explanations that help them achieve gains on any subject (Kaymakcı, 2010, p.57).

Domestic and foreign researchers have explained the many contributions that sheets make to teaching activities. These are listed as follows. Work sheets contribute to the topics such as;

- to be able to use individual and active learning by processing on the student, in-class and extracurricular activities,
- to direct students to individual work and to give them a sense of confidence in doing business on their own,
- informative learning strategy to improve student's learning experiences,
- to increase the student's motivation for a clear learning experience, helping them make a discovery in their research,
- to reduce the impact of the teacher in the learning environment and to enable students to access information on their own,
- to enable the student to focus on the subject,
- to help a good understanding of the subject and structuring it in a more meaningful way using tools such as table, diagram, graphic, etc.,
- to enable the student to make necessary connections and to learn concepts effectively by making sense of them correctly in their minds,
- to provide tasks that allow young minds to use their creative thinking and natural problem-solving abilities (Kaymakcı, 2010; Kohn, 2011; Bayrak, 2008, p.35; as cited in Tomlinson, 2012. Utami, Sumarmi, Ruja & Utaya,2016; Yiğit, Alev, Özmen, Altun & Akyıldız, 2006).

When the subjects and gains in the geography course curriculum are examined, especially the 9th-grade course subjects, abstract concepts take an important place (Ministry of Education, 2019). The subjects that cannot be embodied are found boring by the students and are tried to be learned by the method of memorization learning. It is thought that the rote approach will cause students to both not grasp the subject adequately and to forget it quickly. One of these subjects is the shape and movement of the Earth. There are many concepts that need to be embodied in the shape and movements of the Earth, such as geoid, orbit, axis tilt, terminator (solar) and linear velocity. In this respect, work sheets can be used to enrich the content of the subject and to provide a better understanding of the subject.

Work sheets can also be prepared in coordination with the model sphere, atlas and smartboard contents. The maps, tables and graphs that will be included in the work sheets may help students to gain skills such as understanding time, change and continuity, preparing and interpreting tables and graphs, observation and mapping skills as well as the subject of the shape and movements of the Earth.

When the literature survey was conducted, it was determined that studies related to the use of work sheets in different fields such as social studies, science, mathematics were carried out. While Kaymakcı (2012), Elvan (2012), Başıbüyük and Çıkılı (2002) studied in the field of social studies; Wolf, Stanton and Gellot (2010) and Utami et al. (2016) conducted a study at the level of higher education on the use of work sheets on geography subjects. It was determined that there was no study of high school geography subjects. In this respect, it is thought that the study will contribute to the literature on geography teaching.

This research aims to demonstrate the impact of the use of work sheets on the shape and movements of the Earth on students' academic achievements and attitudes towards geography teaching. For this purpose, answers to the following questions were sought.

Do the academic achievement scores of the students on the subject of the shape and movement of the Earth differ according to groups (experiment and control), measurements (pre-test-final test)?

Do students' geography course attitude scale scores differ according to groups (experiment and control), measurements (pre-test-final test)?

Method

It is a mixed-method in which qualitative and quantitative methods are used together in research. Since all data collection methods have their

limitations, mixed methods neutralize or eliminate these disadvantages. In particular, due to the complex structure of social science studies, different types of methods need to be used to best understand these complex structures (Creswell, Clark, Gutman, Hanson, 2003). In the quantitative part of the research, methods are experimental research. Such research involves manipulating the independent variable by the researcher and comparing the subjects' measurements of the dependent variable under at least two conditions. The research was organized from semi-experimental patterns into paired patterns in experimental research types where there were no selective assignments and groups that were already trying to be matched under certain conditions. The selection of the semi-experimental pattern was due to the difficulty in selecting the students included in the research by non-objective assignment method (Büyüköztürk et al. 2015, p.195-208). The qualitative data of the study was collected through the experimental process using an unstructured observation technique. The practitioner of the research in this study is the person who did the study. In this context, since studies related to geography education are generally based on school and classroom environment, data collected by participatory observation will be obtained by unstructured observation (Öztürk, 2014).

Study Group

The study group for the 2019-2020 academic year is the 9th graders of a high school located in Kastamonu city center. Provided that the groups are formed randomly, there are 58 students in total, 29 in the experimental group and 29 in the control group. It was assumed that the groups would be equivalent, as the preferred school took students with the high school entrance exam. In addition, students were distributed equally to different branches by the school administration to have similar scores. In this context, the appropriate sampling method was preferred in the selection of the study group from the non-selective sampling methods which had the least loss of time, money and labor (Büyüköztürk et al. 2015).

Data Collection Tools

Qualitative and quantitative data collection tools were used in the study. These tools are the Geography Course Attitude Scale, the Academic Achievement Test, and unstructured observations. The process steps of the research using the pretest-posttest paired control group pattern are shown in Table 1.

Table 1. Application Steps of the Research Pattern

Group	Pre-tests	Process	Post-tests
Experiment	Academic Achievement Test, Geography Course Attitude Scale	Teaching Based On Work sheets, Unstructured Observations	Academic Achievement Test, Geography Course Attitude Scale
Control	Academic Achievement Test, Geography Course Attitude Scale	Teaching Based On Curriculum	Academic Achievement Test, Geography Course Attitude Scale

As can be seen in Table 1, during the pre-test phase of the study, academic achievement test and geography course attitude scale were used for the students. In the process section of the research, the students in the experimental group were taught by the researcher with work sheets prepared on the shape and movements of the Earth. 7 work sheets prepared within 4 Weeks (8 hours) were used according to the sections of the subject. The control group was taught according to the methods prescribed in the geography curriculum. As for the post-test section, the Achievement Test and attitude scale used in the pre-test phase were re-applied to the experiment and control group.

Academic Achievement Test

The academic achievement test is about the shape and movements of the Earth and consists of 20 multiple-choice questions. The questions were prepared with the contributions of experts by taking advantage of the questions that appeared in the achievement tests and Assessment Selection and Placement Center (ÖSYM) exams prepared by the Ministry of National Education (MEB). The 35 questions prepared in the first place were reduced to 25 questions according to expert opinions. The pilot application of the prepared questions was made to 150 students studying in a different school that was not included in the experimental study. Accepting the correct answers as 5 points and wrong answers as 0 points, the lowest point was determined as ‘0’ and the highest point was determined as ‘100’. The questions are prepared in accordance with the following sections, which are sub-headings of the subject:

- The shape of the Earth and its consequences (6 questions)
- The daily movement of the Earth and its consequences (3 questions)
- The shape of the orbit and its consequences (2 questions)

- Axial tilt and its consequences (4 questions)
- Special dates and seasons (5 questions)

The reliability analysis of the test has been performed with the SPSS 20 program (Cronbach Alpha coefficient 0.70) and made ready for the test.

Geography Course Attitude Scale

Determination of students' attitudes towards the course is important in the studies that will be applied. Therefore, the 'Geography course attitude scale' developed by Demir and Aries (2013) was used in the study. The scale, which consists of 2 factors, has 14 articles. On the scale of 5 points Likert type scale, 8 articles consist of negative and 6 articles of positive expressions. The Cronbach Alpha reliability coefficient of the scale was 0.81 according to the SPSS 20 program.

The lowest score that can be obtained from the scale on which negative substances are processed as reverse coding is 14 and the highest score is 70. The scale score range and comments generated based on the highest score and 5-point classification are as follows:

- 0-14 points Completely negative attitude
- 15-28 points Negative attitude
- 29 - 42 points Partly positive attitude
- 43 - 56 points Positive attitude
- 57-70 points Completely positive attitude

Observation

In order to measure the participation status, interest status and reactions of the students in the experimental group during practice, the researcher made observations. This observation is of the unstructured observation type as it is made in the natural environment where the application takes place and the researcher joins the environment (Şimşek & Yıldırım, 2013). Non-verbal behaviors were observed in the natural environment, activities occurring in the environment and language over a long period (4 weeks) without any form being used. Since the observer is the researcher himself/herself, he/she has information about the students' situation in the course before using the work sheets. Therefore, during the experimental work, changes in the students' attitude and in the students' of the skills in the work sheets (Table 2) and their class participation status were recorded in short notes during and after the course in a comparative way.

Work sheets

7 work sheets related to the shape and movements of the Earth have been prepared for the students in the experimental group. When preparing work sheets, *'assesses the effects of the shape and movements of the Earth'* achievement on the 9th grade Geography Course Curriculum has been focused. The information about the work sheets is given in Table 2.

Table 2. Information About Work Sheets

Name of the Work sheet	Skill	Application
1. I'm Creating Graphs	Table-graph preparation and interpretation	Showing the effect of latitude on temperature by drawing graph
2. I'm Making A Map Application	Map skill	Evaluation of the features of points on Earth according to the axial tilt
3. I'm Solving Puzzles	Geographic questioning	Questioning the basic concepts about the shape and movements of the Earth
4. I'm Interpreting a Scientific Text	Geographic questioning	Making inferences about the given scientific text
5. I'm Storifying	Map skill, using evidence	Creating evidence through atlas with the help of story from subject-related terms
6. I'm Comparing Events	Understanding time, change and continuity	Analyzing the subject in light of given case studies and possibilities
7. I'm Interpreting Figures	Map skill, table-graph preparation and interpretation	Express their knowledge about the subject through the given Earth shape

As shown in Table 2, work sheets on the shape of the Earth and its consequences, daily motion, annual motion and axial tilt, and seasons have been created to cover the sub-headings of the Earth's shape and movements. Besides, these work sheets are compatible with the skills given in the Geography Course Curriculum. 4th and 7th work sheets included in Table 2 were applied to the students before the subject was processed. After the subject was fully discussed, the I'm Storifying work sheet was given to the students as homework. Other work sheets (No.1, 2, 3 and 6) were applied within the class at the end of the subject as the sections were discussed.

Analysis of the Data

The data obtained in the study was analyzed with SPSS 20. After the normality distribution of the data was tested with skewness and

kurtosis coefficient, parametric statistical tests were applied to the data. In addition to frequency and arithmetic averages, in the pre-test and post-test stages of the study, unpaired t-test and two-way ANOVA were applied for repeated measurements on a single factor in accordance with the sub-problems of the study. The unpaired t-test was used to determine the variation of the academic achievement test and attitude scale scores of the experimental and control group according to the pre-test and post-test. Two way ANOVA was used because it is suitable for use in pre-test post-test control group patterns, it looked at the difference between repeated measurements regardless of groups, and it looked at the common effect of group and measurement on the dependent variable (Büyüköztürk, 2004). Besides, shapes showing a change in the pre-test and post-test were used to visualize the data. The observation notes made by the researcher during and after the course were categorized by content analysis. The results of the categorized observations are explained in articles.

Findings

This section contains findings related to research problems. Firstly, it was examined whether the students' geography course attitude scale scores differed according to groups (experiment and control) and measurements (pre-test post-test).

The results of the geography course academic achievement test scores for the students in the experimental and control groups before and after application are shown in Table 3.

Table 3. Unpaired Groups T-Test Results for Students' Geography Course Achievement Test, Pre-Test and Post-Test Scores

	Group	**N**	$\bar{X}$	**SS**	**sd**	**t**	**p**
Pre-test	Control	29	48.62	11.28	56	.556	.581
	Experiment	29	46.72	14.50	56		
Post-test	Control	29	63.96	13.86	56	3.15	.003
	Experiment	29	75.68	14.41	56		

According to the results of the analysis in Table 3, there was no significant difference between the achievement scores of the experimental and control group students in the pre-test [t(56)=0.556; p>.05].

It was determined that the average of the test group students before the application was $\bar{X}$=46.72 and the average of the control group students was $\bar{X}$=48.62. This finding indicates that the students' achievement test scores were close together before the subject of the shape and movement of the Earth was discussed. In other words, it can be said that the level of knowledge of the students is identical.

When Table 3 is examined, there is a significant difference between the achievement test scores of the students in the experiment and the control group for the post-test [t(62)=3.15; p<.05]. The achievement test mean of the experiment group students after the application is $\overline{X}$=75.68 and the mean of the control group students is $\overline{X}$= 63.96. Accordingly, it can be said that the use of work sheets is more effective than the general teaching method in terms of learning about the shape and movements of the Earth. Table 4 shows the two way ANOVA findings for repeated measurements of the students' geography course achievement test scores.

Table 4. ANOVA Results of Students' Achievement Test Pre-Test Post-Test Scores

Source of the Variance	Sum of Squares	sd	Average of Squares	**F**	**p**
Intergroup	9106.244	57			
Group (Experiment / Control)	700,21	1	700,21	4.665	.035
Error	8406.034	56	150,108		
Intragroup	27837.48	58			
Measurement (pre-test post-test)	14234.69	1	14234.69	65.03	.000
Group * Measurement	1345.043	1	1345.043	6.145	.016
Error	12257.75	56	12257.75		
Total	36943.72	115			

Table 4 shows that the achievement scores of the students in the experiment and control group differed significantly when compared before and after the experiment [F(1,62) = 65.03, p < .05]. Accordingly, it is understood that the academic achievements of the students in the classrooms where two different teaching methods are used differ significantly from before to after the experiment. In other words, groups and measurement results differ. Clearly, this finding can be interpreted as the use of teaching methods based on work sheets and curriculum to learn about the shape and movements of the Earth has different effects on improving students' academic achievement. The graph in Figure 1 clearly shows this situation.

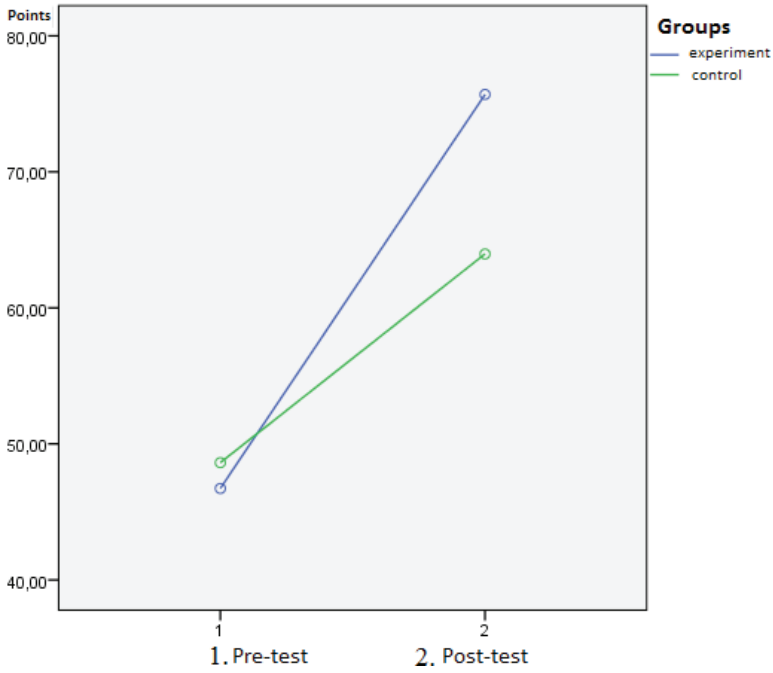

Figure 1. Student' pre-test post-test attitude scores graph

When Figure 1 is examined, it is seen that the pre-test scores of the students in the experimental group are lower than those in the control group. In the post-test, it is pointed out that the experimental group was more successful than the control group with a significant difference. In this part of the findings, the students ' geography course attitude scores differed according to groups (experiment and control), and measurements (pre-test post-test). Table 5 shows the results of the unpaired t-test for the geography attitude scale pre-test post-test scores of the students in the experiment and control groups.

Table 5. Unpaired T-Test Results for Students' Geography Course Achievement Test, Pre-Test and Post-Test Scores

	Group	N	$\bar{X}$	SS	sd	t	p
Pre-test	Control	29	47.00	10.72	56	.972	.335
	Experiment	29	49.68	10.34	56		
Post-test	Control	29	46.68	9.01	56	1.29	.200
	Experiment	29	49.86	9.62	56		

The results of the analysis in Table 5 show that there was no significant difference between the attitude scale scores of the pre-test scores of the students in the experiment and the control group [t(56)=0.972; p>.05]. This finding can be interpreted as the students' geography course attitude scores being close together before the subject is discussed. As stated in the

method section, students have a positive attitude towards the geography course, in other words, the attitude point range is between 43-56 points.

As can be seen in Table 5, there is no significant difference between the attitude scores of the students in the post-test for the geography course [t(56)=1.29; p>.05]. It was determined that the attitude scale mean of the experimental group students after the application was $\overline{X}$=49.86 and the mean of the control group students was $\overline{X}$=46.68. Table 5 shows the change in students' geography course attitude scale scores in the pre-test and post-test.

These findings can be interpreted as using work sheets on the shape and movement of the Earth subject does not cause a change in students' attitudes towards the class. Table 6 shows the two way ANOVA findings for repeated measurements of the students' geography course achievement test scores.

Table 6. ANOVA Results Of Students' Achievement Test Pre-Test Post-Test Scores

Source of the Variance	Sum of Squares	sd	**Average of Squares**	**F**	**p**
Intergroup	6000.828	57			
Group (Experiment / Control)	249,138	1	249,138	2.426	.125
Error	5751.69	56	102,70		
Intragroup	5471.862	58			
Measurement (pre-test post-test)	0.138	1	0.138	.001	.970
Group * Measurement	1.690	1	1.690	.018	.895
Error	5332.172	56	95.217		
Total	11472.69	115			

When Table 6 is examined, it is observed that the scores of the geography course attitude scale of the students in the experiment and control group did not differ significantly from before to after the experiment [F(1,62)=0,001, p>.05]. In other words, it is understood that the common effects of repetitive measurement factors on the shape and movements of the Earth are not significant by being in the teaching group based on the curriculum or work sheets. In other words, the measurement results with the groups do not differ.

This finding point out that different teaching methods do not have different effects on changing students' attitudes towards geography course. The graph in Figure 2 clearly shows this situation.

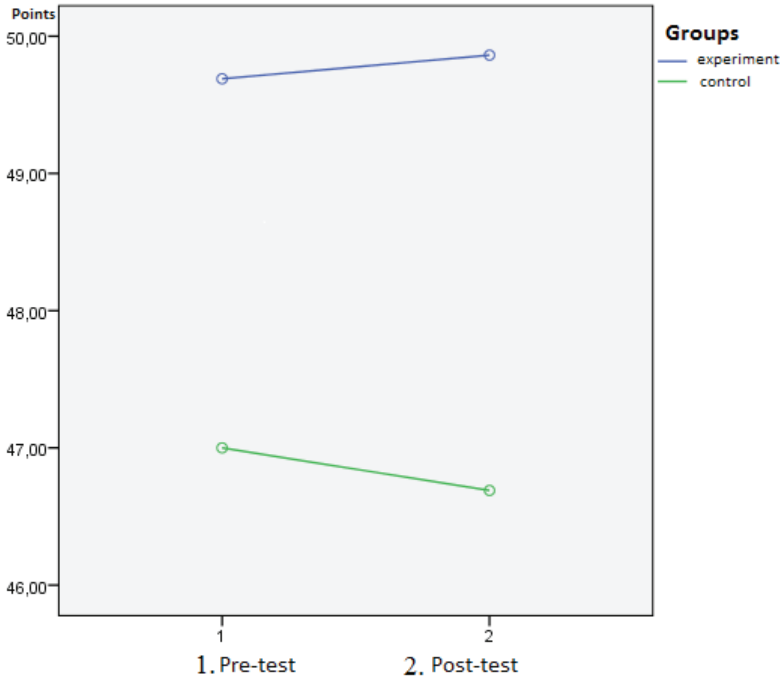

Figure 2. Student ' pre-test post-test attitude scores graph

When Figure 2 is examined, it is seen that the pre-test scores of the students in the experimental group are lower than those in the control group. In the post-test, it is seen that the attitude scores of the experimental group have increased relatively and the control group has decreased relatively. In other words, it is seen that the attitude scores in the experimental group increased positively, even if not significantly.

The findings of the survey were classified by content analysis. During the ongoing research period of 4 weeks (8 hours), the observations notes of the taken in the class where the experiment group is located are as follows:

- In parallel with the data obtained from the attitude scale, it was observed that students started with a positive attitude towards the class.

- The belief that the motivation levels of the students were identical was made clearby the observation that made were 2 hours per week one hour in the morning and one hour in the afternoon in the experimental group as it was in the control group.

- It was observed by the verbal responses that the majority of students had not previously engaged in a learning activity based on work sheets.

- At first glance, it was noticed that some students took a remote approach to their work sheets because it required mental activity and established dialogues that they considered as a waste of time.

- The preconception caused by the subject's being heavy memorization information has been relatively eliminated with the first applied work sheets.

- It has been observed that students have fun during the use of work sheets especially the ones with map applications and tend towards collaborative learning.

- In practice for storifying, it is understood from their reactions and dialogues that students share different ideas and that they manage to embody the subject more easily.

- In contrast to the general situation in the classroom, the indifference of a few people to this method has not escaped from attention.

- It is clearly understood that the students' map skills have improved and their knowledge of location and country has improved in the world map thanks to them applications included in the work sheets (I'm storifying-I'm making map application). Similarly, it has been seen that the work sheets called "I create graphs and I interpret figures" contribute to the students' ability to prepare and interpret tables and graphs and correct their incorrect and incomplete information.

Discussion, Conclusions and Recommendations

According to Ausubel (1979), the learning experience will enter long-term memory and become new knowledge if it has meaning. The fact that knowledge is meaningful depends on how the learning experience occurs. Utami et al., (2016) described the learning experience as the interaction of learners with teaching materials. In this context, different techniques and methods that can help students permanently reach knowledge need to be discovered. For this reason, the effect status of work sheets in teaching geography subjects was investigated in the study.

One of the accepted principles in learning is the principle of abstract to concrete. In this study, the shape and movements of the Earth, which became the subject for experimental study, consists mostly of abstract information. The effect of embodying and visualizing the subject using work sheets on academic achievement has been tested. First of all, it was concluded that the pre-test achievement averages of the students in the experimental and control group were too close to each other to produce any significant differentiation. This indicates that there are identical groups in terms of academic achievement.

The attitudes that the student develops towards the course are also important to be successful in a course or subject. The study concluded that the students in the experimental and control groups had a positive attitude towards the geography course before the experimental process. Tavşancıl (2014) stated that attitudes are formed by the emergence of bias, which presents continuity through life. The impact of attitudes developed by individuals on learning is expected to be positive. Therefore, it was observed that the students' positive attitude towards geography courses contributed to the experimental study.

During the experimental process, teaching was made to the students in the experimental group with work sheets and control group with general teaching methods. At the end of this process, it was observed that there was no change in students' attitudes towards geography. It was concluded that the attitudes of the students in the experimental and control group in the pre-test continued in the same way as in the post-test. This suggests that using work sheets does not maximize students' already positive attitudes towards the geography course. In Sözen (2019) and Alım (2008) studies, it was found that high school students' attitudes towards geography course were negative or unstable. Attitudes do not change easily, as stated by Kağıtçıbaşı and Cemalcılar (2014) and Tavşancıl (2014), attitudes of strong individuals are static compared to those that are weak. Because individuals have the same idea at certain stages of their lives.

At the end of the subject of the shape and movements of the Earth, it was observed that success in both the experiment and the control group increased when the academic achievement test applied in the pre-test was re-applied. The achievement test averages of the experimental group in which the work sheets were used increased to form a significant difference compared to the control group. This leads to the conclusion that the use of work sheets is an effective method in teaching the shape and movement of the Earth. In their study, Utami et al., (2016) similarly concluded that using work sheets on the subject of the distribution of natural resources markedly increases student achievement. In the same way, Wolf, Stanton & Gellott (2010) found that work sheets increase success in teaching physical geography. Kaymakcı (2012), Elvan (2012), Başıbüyük and Çıkılı (2002) have concluded that work sheets increase success in their studies in which they investigated the effect of work sheets on social studies teaching. The results show that the work sheets have had successful results in teaching some geography subjects. As shown in Table 9, the study also concluded that there was a significant difference between the average of work sheets and general teaching methods and the total scores obtained from the pre-test and post-test scores of the students participating in the study. In other words, the experimental group was more successful in the shape and

movement of the Earth subject compared to the control group, where the work sheets averaged more points than before the experiment.

One of the points supporting that using work sheets increases academic achievement is the observation results obtained by the researcher. Observation is valuable as it allows direct observation of the researcher, as stated by Yıldırım & Şimşek (2013), and provides students with all aspects and in-depth analysis of the subject. 7 different work sheets were applied to the experimental group for 4 weeks. First of all, it was determined during the observation that the students had no difficulty in understanding the work sheets and that the guidelines were sufficient. During these practices, students were observed to engage in complex emotions. Initially, it was noted that some students were prejudiced and remote and adjusted when they saw the willing demeanor in their other friends. It can be said that the active participation of students in the course is the most important factor that increases success. Because the work sheets that enable students to embody the subject during the 8 hours of the course and encourage them to think about it kept their interest alive. From time to time, there was also a short period of discussion among the students, depending on the nature of the work sheet. It has also been observed that these discussions for learning purposes contribute to the students. Besides, it is stated in the definitions that the work sheets can give students not only knowledge but also skills. In this context, the observations made by the researcher contributed to the development of the students' skills in the program.

According to the results obtained from this study, it can be said that the work sheets are a useful method in teaching the subject of the shape and movements of the Earth. As a result of the literature review, it was observed that there was no work sheet research on geography course subjects in Turkey. In particular, it will be appropriate to carry out work sheet studies for the teaching of subjects where abstract knowledge in high school geography course curriculum is weighted. As of 2019, the Ministry of Education has begun publishing skills-based attainment tests. In addition to these tests, as Kaymakcı (2012) similarly stated, it is thought that it will be useful to prepare work sheets for geography course subjects with the cooperation of experts and teachers. In the same way, the authors may be asked by the ministry authorities to add the working paper applications that will be available to the students at the end of the subject or unit of the books that they will prepare. Considering the limitations of the research, it is suggested that in the future, more participants are included and qualitative data are diversified. In this study, researchers can contribute to the literature by studying the effect of the work sheets used in the geography course on student attitudes, from the point of view that the work sheets do not have much effect on changing students' attitudes towards geography course.

References

Akınoğlu, O. (2005). Coğrafya eğitiminin etkililiği ve sorunları. *Marmara Coğrafya Dergisi*, (12), 77-96.

Alım, M. (2008). The attitude of high school students towards geography course. *Eastern Geographical Review,* 13(19), 25-32.

Artvinli, E. (2010). Coğrafya derslerini yapılandırmak: aksiyon (eylem) araştırmasına dayalı bir ders tasarımı. *Marmara Coğrafya Dergisi; Sayı 21.*

Ausubel, D. P. (1979). *Meaningfull reception learning and the acquisition of concepts (Chapter 10, pp. 157-175).* University Illinois, Urbana, Illinois: Academic Press.

Bayrak, N. (2008). *Yapılandırmacı öğrenme yaklaşımının beş aşamalı modeline uygun olarak geliştirilen ders yazılımı ve çalışma yapraklarının öğrencilerin başarısına, öğrenilen bilgilerin kalıcılığına ve öğrencilerin fen bilgisi dersine yönelik tutumlarına etkisinin incelenmesi* (Unpublished master thesis), Atatürk Üniversitesi Fen Bilimleri Enstitüsü, Erzurum.

Başıbüyük, A. & Çıkılı, Y. (2002). İlköğretim 6. ve 7. sınıf sosyal bilgiler coğrafya konularında çalışma yaprağı ve dilsiz harita kullanımının öğrenci motivasyon ve başarısı üzerine etkisi. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, *16*(16), 29-38.

Büyüköztürk, Ş. (2004). *Sosyal bilimler için veri analizi el kitabı, istatistik, araştırma deseni SPSS uygulamaları ve yorum.* Ankara: PegemA Yayıncılık.

Büyüköztürk, Ş., Akgün, Ö. E., Demirel, F., Karadeniz, Ş. ve Çakmak, E. K. (2015). *Bilimsel araştırma yöntemleri*. Ankara:Pegem Akademi.

Creswell, J. W., Plano Clark, V., Gutman, M. & Hanson, W. (2003). Advances in mixed graphics design, in A. Tashakkori and C. Teddlie (Eds.), *Handbook of mixed methods in the social and behavioral sciences.* Thousand Oaks, CA: Sage. In: Gray, David. Doing Research in the Real World . Sage Publications Ltd.

Çifçi, T. (2018). *Coğrafya'da değer eğitimi.* Ankara:Pegem Akademi.

Demir, S. B. ve Koç, H. (2013). Geography courses attitude scale: development, validity and reliability study**.** *Electronic Turkish Studies*, *8*(8).

Demiralp, N. (2007). Coğrafya eğitiminde öğretim materyalleri. S. Karabağ ve S. Şahin (Ed.) *Kuram ve Uygulamada Coğrafya Eğitimi* (s.137-175). Ankara: Gazi Kitabevi.

Doğanay, H. (2010). Anlamı, tanımı, konusu ve felsefesi bakımından coğrafya ilmi hakkında bazı düşünceler, *Doğu Coğrafya Dergisi* , 16, (25):1-43.

Elvan, Ö. (2012). *Sosyal bilgiler öğretiminde çalışma yaprakları kullanılmasının kavram yanılgılarını gidermeye* etkisi (Unpublished master thesis), Ahi Evran Üniversitesi, Kırşehir.

Kağıtçıbaşı, Ç.& Cemalcılar, Z. (2014). *Dünden bugüne insan ve insanlar,* 16. Baskı. İstanbul: Evrim Yayın Evi.

Kaymakcı, S. (2010). *The effect of using worksheets in social studies education on students' academic achıevement and attitudes toward the course* (Unpublished doctorial thesis). Gazi Unıversity, Ankara.

Kaymakcı, S. (2012). A review of studies on work sheets in Turkey. *US-China Education Review A 1 (2012) 57-64.*

Kohn, A. (2011). Poor teaching for poor children... in the name of reform. *Education Week*, *30*(29), 32-33.

Lacoste, Y. (2014). *Coğrafya her şeyden önce savaş yapmaya yarar*, (Çev S. Sezer). İstanbul: Ayrıntı Yayınları.

Ministry of Education.(2019). *Coğrafya dersi öğretim programı.* 14.09.2019 tarihinde *http://mufredat.meb.gov.tr/Programlar.aspx* adresinden erişilmiştir.

Öztürk, M. (2007). Coğrafya: gelişimi, içeriği, eğitimi. S. Karabağ ve S. Şahin (Ed.) *Kuram ve Uygulamada Coğrafya Eğitimi* (s.1-52). Ankara: Gazi Kitabevi.

Öztürk, M. (2014). *Coğrafya eğitiminde araştırma*. Ankara:Pegem Akademi.

Sözen, E. (2019). High school students' views and attitudes towards geography courses in Turkey. *Review of International Geographical Education Online* (RIGEO), 9(2), 458-478. http://www.rigeo.org/vol9no1/Number1Spring/RIGEO-V9-N2-10.pdf sitesinden erişilmiştir.

Tavşancıl, E. (2014). *Tutumların ölçülmesi ve SPSS ile veri analizi (5. baskı).* Ankara: Nobel Yayınları.

Turan, İ. (2002). Lise coğrafya derslerinde kavram ve terim öğretimi ile ilgili sorunlar. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, *22*(2).

Tümertekin, E. & Özgüç, N. (2002). *Beşerî Coğrafya,* İstanbul: Çantay Kitabevi.

Utami, W. S., Sumarmi, I., Ruja, N.& Utaya, S. (2016). The effectiveness of geography student work sheet to develop learning experiences for high school students. *Journal of Education and Learning*, *5*(3), 315-321.

Yıldırım, A.& Şimşek. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri.* Ankara: Seçkin Yayıncılık.

Yiğit, N., Alev, N., Özmen, H., Altun, T. ve Akyıldız, S. (2007). *Öğretim teknolojileri ve materyal tasarımı.* Trabzon: Akademi Kitabevi.

Wolf, J., Stanton, M. & Gellott, L. (2010). Critical thinking in physical geography: Linking concepts of content and applicability. *Journal of Geography*, *109*(2), 43-53.