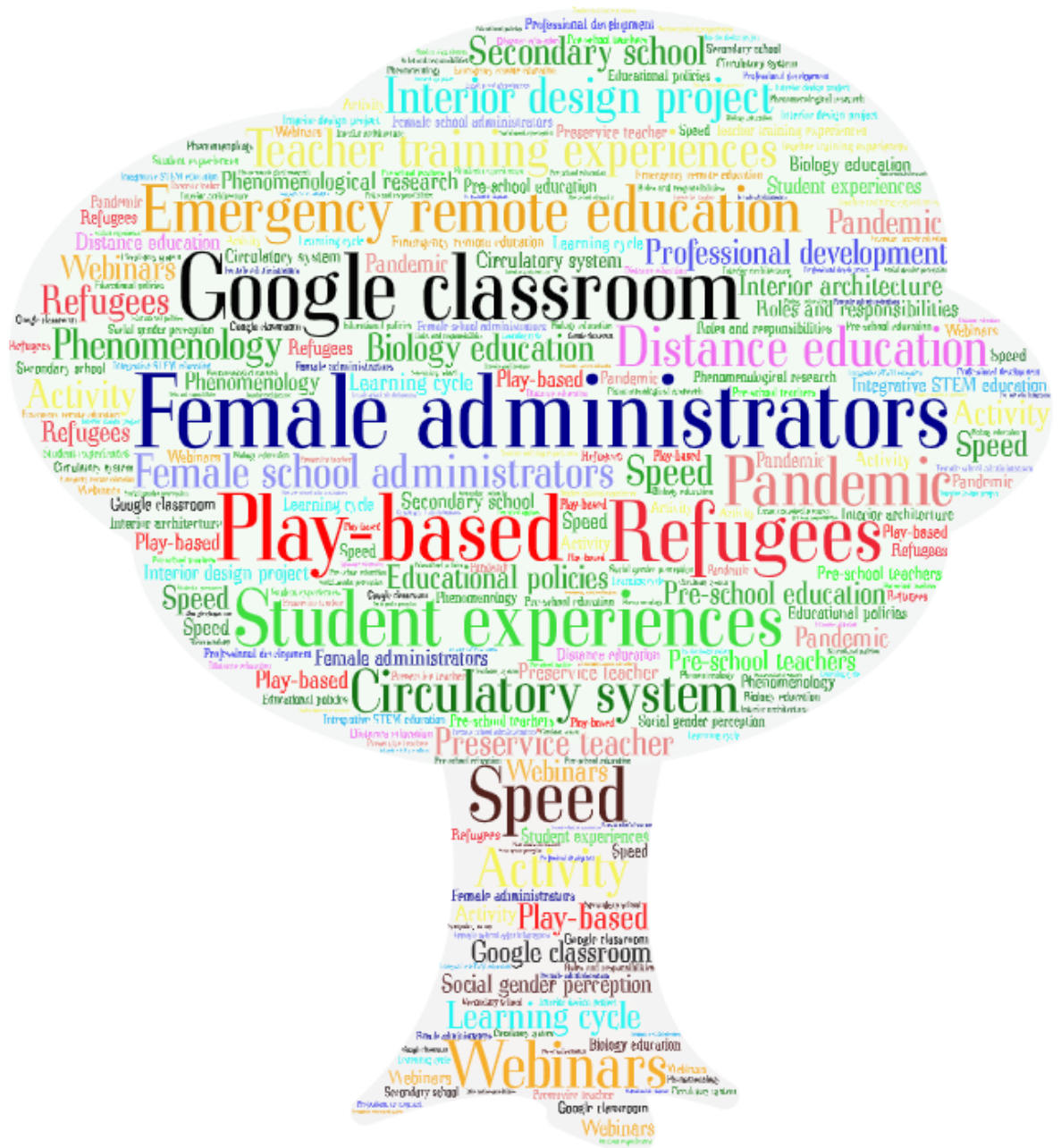
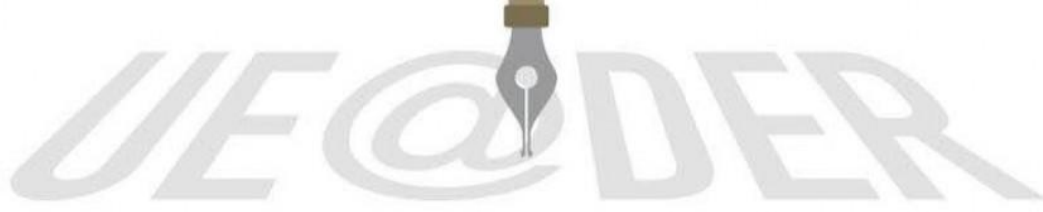


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The Webinar Experiences of Higher Education Instructors in the Time of Emergency Remote Education*

Abel, Jr. V. ALVAREZ** Lovely C. CORCUERA***

Abstract: The global health threat caused by Covid-19 has resulted for schools, colleges, and universities to temporarily shutting down physical operations. The Philippine education sector, in particular, shifted from face-to-face interactions to emergency remote education. However, the question relies on the context that the majority of educators are trained and products of traditional teaching and learning environment. And since there is an urgency to adapt to emergency remote education and implementation of face-to-face in-service trainings, seminars, and workshops are prohibited, the idea of shifting to webinars has been seen as a way for educators to still engage in continuous professional development even at a distance. It cannot be denied that there is also a paucity of research about educators' webinar experiences during this time of uncertainty. Hence, using qualitative case study research, this study investigates the experiences of higher education instructors with regard to in-service training webinars and how this addresses and helps them to adapt to the sudden change of educational context. More importantly, there were three themes that emerged in this study: flexibility in engaging in lifelong learning practices, openness to alternative delivery of in-service training programs, and thirst for digital literacy skills improvement. The paper concludes with the overall findings and its implication to emergency remote education.

Keywords: Emergency remote education, Pandemic, Professional development, Teacher training experiences, Webinars.

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Introduction

Over the past years, technological advancement brought vital changes to education. The integration of technology into education offers new and innovative teaching and learning ways. Interestingly, it contributes pedagogical richness to deliver quality education to stakeholders, especially for students. For instance, some studies highlighted the impact of technology in education towards learning engagement (Adnan & Anwar, 2020; Al-Hariri et al., 2017; Hubalovsky, 2019; Tomaro & Muriarin, 2018), the advantages and disadvantages of educational technologies (Al Zumor et al., 2013; Raja & Nagasubramani, 2018; Rashid et al., 2020), and other educational matters such as the effects of the adoption of conventional textbooks to electronic textbooks (Bickle, 2017; Zhang & Kudva, 2014) or teaching methods and strategies using the technology (Alhajri, 2016; Nasir & Quick, 2016; Ahmadi, 2018).

Although there were some researchers and educational leaders who explored technology in education over the past years, the current pandemic crisis paved the way for them to rethink and revisit the importance of strengthening and integrating educational technology in today's teaching and learning environment. The global disturbance caused by Covid-19 brought inevitable changes and challenges to everyone. When it hit the whole world, technological innovations in education became the number one used resource for continuing education. However, educational leaders continuously face these challenges since the situation in the context of education is different from what is practiced. This phenomenon left them to make tough decisions on what to do and act (Data Quality Campaign, 2020).

The higher education instructors, on the other hand, have to be updated on the recent innovations to adapt the emergency remote education. However, the conduct of various trainings and seminars cannot be executed in a physical setting. Thus, the use of online webinar trainings have been seen as effective tool to update higher education instructors (Rao, 2019), but the question relies on the context that the majority of educators are trained and products of face-to-face teaching and learning environment (Alvarez, 2020b).

In the Philippine context, the Commission on Higher Education (CHED) made different advisories and policies to adapt to the new learning environment (Cuaton, 2020). One is to migrate the traditional face-to-face education to emergency remote education (Bozkurt & Sharma, 2020; Bozkurt et al., 2020). Due to an entirely different learning environment, higher education instructors have to be updated on the latest trends and information for continuous professional development (Rao, 2019). Although online learning is not new to education, however, the webinar praxis has been observable and maximized only in today's current global health crisis.

Therefore, these reflect that higher education instructors have to re-align their teaching skills with the use of technology in the classroom. The urgency to adapt to emergency remote education, and the need for educators to have in-service trainings and workshops, which cannot be implemented in a face-to-face environment, are some of the present struggles faced by educational institutions. There is also the paucity of studies implemented with regards to educators' experiences of webinars during this time of uncertainty. Hence, this study attempts to explore the experiences of higher education instructors concerning in-service training webinars and how these address and help them adapt to the sudden change of educational context.

The Benefits of the Webinar in Various Contexts

The term webinar is a neologism and blended words of web and seminar (Gegenfurtner & Ebner, 2019). Many define it as a web-based or online-based seminar (Ahrens et al., 2016;

Gegenfurtner & Ebner, 2019; Rao, 2019). For example, Rao (2019) defined the webinar as a virtual and live event perform online that includes audio-visual communication. Alshahrani (2019) also noted that webinars established communication through the use of computers and internet facilities. These make technology one of the main ingredients of the webinar.

With this in mind, one advantage of a webinar is the notion of having high levels of geographical flexibility (Alvarez, Ventura, Opiniano, 2020; Ebner & Gegenfurtner, 2019; Gegenfurtner et al., 2020). Aside from that, it provides an opportunity to expand the content and pedagogy with real-time exchange of information (Alshahrani, 2019; Leiser et al., 2018). Thus, it makes the webinar an efficient tool that offers an opportunity for the presenter and listener to communicate, collaborate, and learn even at a distance (Alvarez et al., 2020).

Additionally, Alshahrani (2019) explored the webinar experiences of students and faculty at King Khalid University College of Dentistry (KKUCOD) Abha, Saudi Arabia. It was found out that the organization of 15 webinars was smooth, flawless, encouraging, and attended by the teachers and less response from the students. Also, the audience provided positive feedback from the webinars.

More recently, Prasetyono & Christian (2020) explored the adaptation of virtual meetings using videoconferencing apps. The video conferencing was combined with the game platform. The results revealed that a shorter event gets more participation and fewer participants leaving halfway through the event. These documentations contribute to the pool of researches concerning webinars as technological innovation. Hence, the advantages of the use of webinars made it accepted by many in the educational context especially during these challenging times.

Challenges and Opportunities on the Use of In-Service Webinar Trainings

Previous studies noted some disadvantages of the webinar, for instance, the need for a sophisticated software system, limited interaction, internet connectivity, and lack of technological skills (Ahrens, 2020; Ebner & Gegenfurtner, 2019; Lieser et al., 2018; Wang & Hsu, 2008). Webinars are mostly used for business purposes but suddenly became popular in the educational context due to the pandemic (Prasetyono & Christian, 2020).

In the past years, there were different studies emerged to document the use of webinars. Ahrens et al. (2016), for instance, explored the opinions of higher education, which include 58 educators from the teacher training. The results found that educators' opinions are homogenous. Researchers hypothesized that educators' competence towards webinars in higher education will be enhanced if there is a provision for webinar tools, has technical support, and training.

Additionally, Lieser et al. (2018) described a three-stage process of developing a webinar integration tool to enhance active learning in a blended environment. The findings showed that researchers have led to a practical effort to set parameters of support and best practices. From these aspects, the need for further research is needed to continuously improve the webinar as an alternative way for the professional development of higher education instructors.

Hence, the focus of this study is to investigate the experiences of higher education instructors on the use of webinars as part of their in-service training programs in the Philippine education context amidst the pandemic crisis. The new normal in education entails the necessity to provide evidence-based experiences of higher education instructors about in-service training webinars and how these address and help them adapt to the sudden change of educational context.

Methodology

Research Design

The researchers utilized a case study research design to deeply analyze and build an inquiry of understanding towards investigating the webinar experiences of selected higher education instructors in a particular locality or university in the City of Manila, Philippines (Creswell, 2014; Merriam, 2002; Stake, 1995; Yin, 2014).

Moreover, Yin (2009) explains that learning from the case of participant's experiences allows researchers the opportunity to understand meanings from a certain group of people. As such, our role, as researchers, involves immersion to look into the experiences of the selected higher education instructors in a particular university (Creswell, 2005). We also served as the key instrument in gathering our research data and in interpreting and analyzing the findings of the study (Stake, 1995).

Participants and Locale

Merriam (1998) and Yin (2009) characterized a case study as having a zone of focus or concentrated on a particular locale of study. Thus, this research study was conducted in one of the top-tier universities in the Philippines located in the City of Manila. The said institution caters to various degree-granting programs that are accredited by the government and external accrediting agencies both locally and internationally. Moreover, since this is a qualitative case study, the researchers chose to gather its data collection from only one university so there would be a clear focus of understanding in investigating the journey of experiences of ten higher education instructors. Considering also the current physical and social limitations, this also served as a good attempt to revisit and explore timely and relevant issues faced by educators in the higher education context in the Philippines.

Table 1
Demographic Profile of the Participants

Participant	Age	Years of teaching experience in higher education	Courses handled	How many webinars have you attended during the time of the pandemic crisis?
1	25	2	General education courses	> 5
2	43	18	Business courses	> 5
3	29	3	Business courses	2-3
4	45	16	Business courses	> 5
5	58	38	Business courses	> 5
6	28	2	General education courses	> 5
7	45	16	Business courses	> 5
8	34	7	Accounting courses	> 5
9	59	18	Accounting courses	> 5
10	25	2	Accounting courses	> 5

Furthermore, the ten higher education instructors were purposively selected and confirmed their willingness to participate in this study. The criteria of selection were: full-time instructors, either male or female, who attended various webinars of the university's in-service training programs in preparation for emergency remote education, and willingness to participate in this study. Looking at the demographic information of the participants, it was observable an equal distribution of the age groups. At the same time, all the participants have more than a year of teaching experience in the higher education context. While most of them were handling businesses-related courses, and the majority have already attended more than five webinars since the outbreak of the pandemic crisis.

Data Collection and Ethical Considerations

Since the entire Philippine archipelago was placed in strict community quarantine measures and regional lockdowns, especially the National Capital Region, due to continuous surge of Covid-19 cases in the country, we utilized the use of various communication mediated tools and applications, such as Zoom and MS Teams, to interview our participants. We asked the participant's time availability and platform preferences so we could plot ahead and strategize well for the actual interview. All necessary documents, such as the approval for the conduct of the study, were all secured to ensure a smooth flow of data collection engagement. Meanwhile, before we started the individual interview process, we introduced ourselves to establish rapport with the participant. In this way, it created space for an organized flow of conversations and facilitated in gaining their trust and confidence in sharing their insights, thoughts, and experiences (Patton, 1987) about their webinar experiences in this time of emergency remote education.

The rationale and purpose of the study were explained thoroughly to provide the participants the opportunity to picture out and have a deep sense of understanding about the research being conducted. We also pointed out that during the interview process it will be audio recorded as not to miss essential information (Merriam, 1998). It was also clear to them that the entire interview process will be audio recorded to ensure participants' accurate verbatim statements. After we discussed everything with the participants, we explained the content of the informed consent such as the overview, purpose, flow of data collection, and benefits, and risks in joining this study. It is essential to ensure that informed consent was secured prior to the actual collecting of data because the subject of our study involves the experiences of human beings (Zahle, 2017).

Moreover, the data collection was guided with semi-structured interviews so that the participants can freely share their webinar experiences (Merriam, 2002). At the same time, it facilitated an open exchange of conversations which are essential in deeply understanding their experiences to a particular phenomenon (Esterberg, 2002; Kvale, 1996). All information collected, like the profile and insights shared by the participants, were treated with confidentiality and privacy. Each participant's name was replaced with pseudonyms such as P1 or participant 1 to ensure their anonymity.

Data Analysis

Strauss and Corbin (1994) highlight the importance of involving continuous interaction from data collection to data analysis. It simply supports the notion of engaging in to open coding process which requires intensive work in identifying data categories and eventually comes up with a set of themes (Esterberg, 2002). Similarly, immersing from the start of data collection creates an intimate point of data (Esterberg, 2002) which provides an interactive data analysis (Creswell, 2009). Using Braun and Clarke's thematic analysis (2013), the codes were organized into categories in which these were presented back to the participants for credibility checking (O'Brien et al., 2014). From the set of categories, it was refined into themes and presented as well to external peers to increase its trustworthiness (Elliot et al., 1999; Nowell et al., 2017) and discussed the findings to various lenses of literatures for discussion.

Findings

There were three themes that emerged in this study. The first one highlights the idea that despite the distance brought about by the pandemic crisis, the use of webinar in-service training programs paved the way for educators to continuously engage in learning anytime,

anywhere, or having the idea of flexibility in engaging in lifelong learning practices. The webinars served as a realization in bridging the need for higher education instructors to prepare for the new normal in education through the webinar. P3, for instance, shared that “engaging in webinars gives me ideas and knowledge on how to cope up easily with changes.” Additionally, P1 emphasized that:

“With the help of webinars, new learnings are easily attained as physical movements and interactions are prohibited. A lot of educators in the Philippines are conducting webinars for free and this is [a] big help to the education sector as paying would become more of a hindrance rather than a help” (P1)

The statements of P1 and P3 were also supported by P7 and P9 who both claimed that webinars provided a wide range of learning flexibility since they no longer need to physically report to the university’s professional growth and development programs. The comforts of their home provided them a safe space to continuously hone their remote teaching knowledge and skills amidst the challenges brought by the pandemic crisis.

“My family and I have to temporarily leave our house in Manila because of unpredictable increase of [Covid-19] cases. And the new normal of professional trainings, which is now done through the conduct of webinars, are amazing. Technically, it provides us to learn more since there are lots of learning opportunities maximizing the use of technology. At the same time, it does not compromise our health.” (P7)

“I have hesitancy about webinars at first considering my age, however, I find it very useful because I am learning anytime even, I am in my home. Before the pandemic crisis, we must go to physical venues for professional growth, but the pandemic [crisis] opened new opportunities to learn despite time and distance especially that community quarantine is being implemented in several parts of the country.” (P9)

Meanwhile, the second theme that was revealed talks about the notion of openness to alternative delivery of in-service training programs. Since becoming an educator equates with the idea that one has to engage in lifelong learning practices, educators also felt the need to adapt to the present context of new normal in education. Likewise, the participants realized the importance of webinars as new and alternative ways of upscaling their in-service training skills. To wit, P8 claimed that:

“I believe that as an instructor at tertiary level, I have the responsibility to learn to become open and adapt to changes. What I mean is that looking at the situation, physical mobilities are being prohibited, and so as teachers, we also must engage in trainings, but the question is how? With my webinar experiences, I have learned to appreciate its openness to deliver professional trainings. I believe it helped me to develop [a] sense of appreciation regardless of the circumstances. The webinars that I have attended, as part of our in-service trainings, are a testament that professional learning can also be done alternatively. That we can continuously enhance our profession by learning to appreciate to other modes of professional learning delivery like webinar trainings.” (P8)

Also, P3 and P4 both agreed that, in time of the pandemic crisis, the idea of willingness to learn regardless of its approach or delivery is an essential aspect to consider lifelong learning practices. They both expressed that:

“Since the Covid-19 problem broke out in early 2020, I have many whys and hows in my mind. I have personal doubt about webinars simply because, prior to this pandemic, I have a lot of engagements attending various local and international conferences. But one thing this pandemic taught me is to learn to have patience, coping up with new challenges, and developing new ideas to continuously enhance my field of profession regardless of the situation we are experiencing. Indeed, my

experiences in attending webinars gave me a new realization about professional growth and development which is alternatively at par [with] traditional trainings and seminars.” (P3)

“I am not a techy type of person, and with my age, I guess I am a bit of a traditional teacher and a learner. But I have no choice but to attend the university’s in-service trainings since as an educator I am bound to engage with various professional trainings to enhance my teaching skills. And one thing that I realized about engaging [in] various webinars is the fact that it is flexible enough that help me to facilitate learning in unconventional way. From hesitancy to no doubts at all, I can say that webinars are a great way of opening new learning delivery whenever you are. You just need to learn to accept it.” (P4)

The last theme highlights the concept of thirst for digital literacy skills improvement. This emphasized the need for educators to learn the basics of technology-enabled tools in order to sustain and address the needs of 21st-century learners, especially in this time of emergency remote education. Considering that prior to the pandemic crisis, the Philippine education system relies heavily on the traditional way of teaching and learning delivery. However, with the current temporary shutdown of face-to-face classes, educators have to become digitally literate as well so they could adapt to emergency remote teaching. P1 shared her learning experiences from the in-service training webinars that she attended prior to the opening of the school year. To wit:

“I think the webinars that I have attended for the past seminar-workshops and trainings helped me develop my capability and skills for digital adaptation. These trainings, in fact, helped me to address the needs of my students in an online setting.” (P1)

For P10, he claimed the need to recalibrate his digital literacy skills so he could immediately attend to the concerns of his students even in a remote class set-up:

“The webinar trainings that I attended helped me to understand more how Canvas works as our remote classroom. Despite the situation, in-service webinar training-workshops like these were very helpful to learn our digital classroom that we will be using for our remote teaching class. Just to share with you, some of the webinar trainings that I attend had break-out sessions so we could practice navigating the Canvas platform in small groups.” (P10)

Through the exposure in webinar trainings, some participants were able to envision the virtual classroom scenario in the emergency remote education context. For instance, P6 realized that attending webinars “helps me to anticipate problems and provide solutions to virtual classroom concerns.” Hence, some participants shared that their exposure to this type of in-service training program made them prepared for the new normal in education.

Discussion

The results of this paper highlight the webinar experiences of ten selected higher education instructors in preparation for emergency remote teaching. Interestingly, the findings of this study significantly contribute to the emerging discussion about emergency remote education. The first theme which talks about the flexibility of online trainings in attaining lifelong learning practices synthesizes the idea of accessibility towards learning anytime, anywhere through the utilization of webinar trainings and workshops (Alvarez et al., 2020; Bhawna, 2018; Ulmane-Ozolina et al., 2019).

In a time of pandemic crisis where face-to-face contact is prohibited and social movements are restricted, in-service webinar trainings can serve as a bridge in facilitating their

virtual teaching experience in preparation for their emergency remote teaching (Toquero & Talidong, 2020). This shows that webinar trainings provide new avenues for educators to engage in a new learning environment, such as learning at the comforts of their homes. Significantly, engaging in various webinars provides leeway for professional learners, like educators, to still enhance their skills regardless of time and space. The notion of flexibility that webinar provides is considered to be a game-changer, especially in developing countries like the Philippines, in the area of continuous professional development programs.

Moreover, the educators' response to becoming open to the new ways of in-service training programs delivery, such as in the form of webinars, provide them alternative learning opportunities to experience continuous professional development even in these challenging times (Medynska et al., 2020). No wonder that the majority of the educators and even the students, during the early parts of the sudden shift from traditional to emergency remote teaching, experienced digital confusion, anxiety, and technology gaps (Alvarez, 2020b; Bozkurt & Sharma, 2020; Bozkurt et al., 2020; Corcuera & Alvarez, 2021). And through the introduction of various webinar trainings, it paved the way to see the essence of an unconventional way of professional training delivery.

As a response to these situations, the need to look into ways for educators to prepare in emergency remote education resulted in various webinar trainings and workshops which have now become a new normal for educators' training programs (Toquero & Talidong, 2020). This reflects that educators, as lifelong learners, have to imbibe the culture of excellence, which is not confined to knowledge and skills, but also excellence in terms of educator's behavior in becoming receptive and adaptive to the ever-changing landscape of educational delivery.

More importantly, since the majority of Filipino educators are products of conventional teaching and learning environment and are sometimes being left in the technological landscape (Alvarez, 2020a; de la Pena-Bandalaria, 2007), the call for digital literacy is integral to ensure that educators are aligned and prepared with the emergency remote education context (Alvarez, 2021; Corcuera & Alvarez, 2021; König, Jäger-Biela, & Glutsch, 2020). Interestingly, the need to update their digital knowledge and upscale their technology literacy skills are necessary to achieve course objectives and provide timely and relevant academic services to their students.

In this way, they can immediately attend and address the educational concerns of their students. This shows that digital literacy is an essential component of pedagogy not only in today's age of information but also an important element and approach in the time of global health problems. With the current educational situations and underlying phenomena that schools and universities are experiencing, educators have to adapt and move forward towards becoming digitally literate. Through this, they will keep at pace with the rapid advancement of technology as well as respond to the changing demand for education, such as in this time of the pandemic crisis.

Conclusion

This study contributes to the ongoing discussions about emergency remote education in a time of uncertainties and the pandemic crisis. Interestingly, three themes emerged which reflect instructors as life-long learners. Interestingly, the findings of the study revealed the efficiency of the webinar as a tool for the professional development of higher education instructors during a health crisis. In a time of global health threat where physical distancing and wearing of the mask are necessary to contain the spread of the virus, the utilization of technology-based tools and apps is essential in making education a continued process.

Moreover, the study synthesizes with the notion that while schools are still on temporary closures and educators are at the comforts of their homes, the need for continuous professional learning in this time of the pandemic crisis also requires adaptation and alternatives. Thus, the use of webinars serves as an avenue towards ensuring lifelong learning for professional educators and helping them as well to adapt to the new normal in education. Therefore, the results of this study add and contribute to the emerging studies about the phenomenon of webinar experiences for higher education instructors in the time of the sudden shift to emergency remote education.

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Examining School Experiences of Syrian Students Attending Secondary School According to Student and Teacher Views*

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Abstract: The aim of this study is to describe the experiences of Syrian students attending secondary school in Gaziantep. The design of the research is phenomenology. The participants of the study are six Syrian secondary school students and two teachers. Purposeful sampling method was used to identify the participants. Data were collected by semi-structured interview form and personal information form. The collected data were analyzed using content analysis. In this study, it was observed that Syrian students who do not speak Turkish sufficiently are excluded from their peers by their peers in their school lives, and that these students have low success in the courses, but that Syrian students who speak Turkish sufficiently are adopted by their peers, and that these students are able to establish friendship relations with their peers.

Keywords: Phenomenology, Refugees, Secondary school, Student experiences.

Ortaokula Devam Eden Suriyeli Öğrencilerin Okul Deneyimlerinin Öğrenci ve Öğretmen Görüşlerine Göre İncelenmesi

Öz: Bu araştırmanın amacı Gaziantep il merkezinde ortaokula devam eden Suriyeli öğrencilerin okul yaşamındaki deneyimlerini betimlemektir. Araştırmanın deseni fenomenolojidir. Araştırmanın katılımcıları altı Suriyeli ortaokul öğrencisi ve iki öğretmendir. Katılımcıların belirlenmesinde amaçlı örnekleme yöntemlerinden ölçüt örnekleme kullanılmıştır. Veriler yarı yapılandırılmış görüşme formu ve kişisel bilgiler formu ile toplanmıştır. Toplanan veriler içerik analizi kullanılarak çözümlenmiştir. Araştırmada yeterli düzeyde Türkçe bilmeyen Suriyeli öğrencilerin okul yaşantılarında akranları tarafından dışlandığı, benimsenmediği ve bu öğrencilerin derslerdeki başarısının düşük olduğu ancak yeterli düzeyde Türkçe bilen Suriyeli öğrencilerin akranları tarafından benimsendiği, akranları ile arkadaşlık ilişkileri kurabildiği ve bu öğrencilerin derslerdeki başarısının yüksek olduğu bulgusuna ulaşılmıştır.

Anahtar Kelimeler: Fenomenoloji, Sığınmacılar, Ortaokul, Öğrenci deneyimleri.

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Introduction

In the historical process, the wars between countries or disasters caused by internal conflicts in a country have forced people to migrate to safer countries from where they live. In the 21st century that we are in, many people living in these countries have had to take refuge in neighboring countries due to security problems because of the armed conflicts that started in the countries of the Middle East (Palaz, Çepni & Kılcan, 2019). Due to the civil war that started in 2011 in Syria, which is one of the places where armed conflicts are intense among these countries in the Middle East, 5, 600, 000 Syrians have immigrated to other countries approximately. The countries where Syrians fleeing from the war migrate heavily are Turkey, Jordan, Lebanon, Iraq and Egypt (Duman, 2019).

Among these countries where Syrians migrate heavily, the Republic of Turkey has become the host country which has the highest number of Syrian refugees, because it does not refuse Syrian refugees. According to the 2021 data of the Ministry of Interior Directorate General of Migration Management, there are an average of 3,678,527 Syrian refugees in Turkey. While 55.851 of these asylum seekers live in the shelter centers established, the majority of them live outside the accommodation centers (Directorate General of Migration Management, 2021). Approximately 47,4 % of the Syrian refugees coming to Turkey are children (Refugee Association). These school-age children, who constitute a significant part of the Syrian population in Turkey, constitute the most aggrieved group among Syrians (Aykırı, 2017).

When Syrian refugees came to Turkey, they brought their personal, social and economic problems with them. The Republic of Turkey, which faced this intense immigration wave for the first time in its history, had to solve the problems that Syrian refugees brought with them in the areas of accommodation, nutrition, education, employment and health (Vardarlı, Khatib, Uygur, & Gönültaş, 2019). For this reason, Law No. 6458 on Foreigners and International Protection came into force in April 2014. Based on this law, Syrian refugees began to benefit from education, health and other social services in line with the regulation published in October 2014. After the enactment of this law, Syrian children started to receive education in public schools. This situation has made a great contribution to the meeting the educational needs of children (Emin, 2016). However, despite these positive works, it can be said that the problems of these children in the field of education is decreasing but still continuing. Positive studies on the education of these students are insufficient due to the children's inability to adapt to the society they live in and their inability to learn Turkish adequately.

Immigrants have to leave their established culture and adapt to a new culture and learn a new language. This situation causes several adaptation problems to appear in people who migrate. Syrian students who attend schools in Turkey also face various difficulties while continuing their education due to the traumatic effects of the phenomenon of immigration. Syrian students experience adaptation problems with the students at the schools they attend because of their different backgrounds, cultural characteristics, and difficulties in understanding, speaking and writing the Turkish language (Yavuz & Mızrak, 2016). These children who cannot adapt to school cannot establish good relationships with their peers and display negative social behaviors (Gülay, 2011).

Children who differ in terms of language and culture with the society they live in cannot be successful in their education lives. This situation causes children to quit school life (Delgado-Gaiten & Trueba, 1991). The Syrian students in Turkey who cannot adapt to the school do not continue their education life. These children who do not continue their education life are excluded from society and can be exposed to discrimination. These children, who are pushed out of society, may face many risk factors such as falling into the network of various terrorist

organizations, being forced to marry at an early age and child labor (Watkins & Zyck, 2014). The education of refugee children, besides being important for the future of these children, has an effect protecting the security of the society they live in and strengthening the economy (Dryden-Peterson, 2011). Considering the possibility of Syrian children living in Turkey to continue their lives in Turkey, the individual and social benefits of continuing their education cannot be ignored.

Providing Syrian children with a quality education and ensuring that they continue to school will contribute positively to the social peace and welfare of Turkey in the future. Therefore, it is important to get to the root of the problems experienced by Syrian students and to describe their school life under the spotlight in order to solve these problems. When the literature is examined, it is seen that many studies have been conducted to describe the school life of Syrian students and the problems they encounter in their school life. Some of these studies; primary school (Bulut, Kanat Soysal & Gülçiçek, 2018; Karaağaç & Güvenç, 2019, Dinler and Hacifazlıoğlu, 2020; Tümüklü, Türk, Tecan & Kaçmaz, 2020; Alkalay, Kırıl and Erdem, 2021) and secondary school (Guven, 2018; Yenilmez & Garbage, 2019) seems to be intended for the Syrian students. In addition, some studies seem to be aimed at Syrian students attending high school (Demir, 2019; Aytakin, 2019; Abay & Gülpınar, 2020) and university (Taşkın & Özer, 2020; Kaya & Şahin, 2021; Kaya, 2021). However, when these researches on Syrian students attending different education levels are examined, it is seen that the opinions of other people instead of Syrian students are sought to describe the school life of these students and the problems they encounter in their school life. In these studies; school administrators' (Sakız, 2016; Levent & Çayak, 2017; Demir, Özdemir & Köse, 2020), teachers' (Kardeş & Akman, 2018; Şahin & Doğan, 2018; Yılmaz, 2020; Sözer & Işiker, 2021; Alkalay, Kırıl & Erdem, 2021) and parents' of Syrian students (Yılmaz & Kaplan, 2019) opinions were asked. However, it is not possible for secondary people to describe a phenomenon in depth, except for people who have experienced a phenomenon. In addition to this, there are also studies in the literature that refer to the opinions of Syrian students. The subjects of these studies are Syrian students; problems, expectations and demands (Gözüböyük & Tamer, 2017), Turkish language skills and school adaptation processes (Biçer & Özaltın, 2020) and educational difficulties (Saklan, 2019). In the aforementioned studies, one or more of the dimensions that make up the school life of Syrian students are examined. In the literature, only one study (Demir & Demir, 2020) was found that examines the school experiences of Syrian students from a holistic perspective. In order to describe a phenomenon in depth, it is necessary to investigate all dimensions of this phenomenon. Because of this, it is necessary to investigate all dimensions of this phenomenon in order to describe the school life of Syrian students in depth. Describing the school life of Syrian students from a holistic perspective by themselves can provide important information for decision makers and practitioners who try to solve these problems. In this context, the aim of the research is to describe the experiences of Syrian immigrant students attending secondary school in Gaziantep city center in school life. Within the framework of the aforementioned purpose, answers to the following questions were sought in the study:

- What are the experiences of Syrian immigrant students with Turkish students?
- What are the experiences of Syrian immigrant students with Turkish teachers?
- What are the academic experiences of Syrian immigrant students at school?
- What are the experiences of teachers with Syrian immigrant students?

Methodology

Research Design

In this research, the experiences of Syrian immigrant students attending secondary school in school life were tried to be described. As the description of students' experiences in school requires an in-depth research, a qualitative research approach was used in the study. Qualitative research is a research approach that tries to understand how individuals interpret their experiences, how they structure their worlds, and what meaning they attribute to their experiences (Merriam & Tisdell, 2015). Qualitative research adopts as a principle to present the descriptive information which is collected for the problem studied in all its richness and depth (Yıldırım & Şimşek, 2016). Phenomenology, one of the qualitative research designs, was used in the study. Phenomenological research is an inductive descriptive study which focuses on the human phenomenon and aims to define the meanings of the expression of lived experiences (Saban & Ersoy, 2016).

Research Environment and Participants

The research was conducted in Şahinbey district in Gaziantep, where Syrian migrants reside more frequently. The school where the research was conducted is located in one of the most preferred neighborhoods of Syrian immigrants to reside in Şahinbey district. People with low socio-economic level generally live in this neighborhood. An average of 600 students attend the school where the research was conducted and 150 of these students are Syrians on average.

Criterion sampling, which is one of the purposive sampling methods, was used to determine the school where the research would be conducted, the students and the participants, and the teachers. Purposeful sampling allows for in-depth investigation of situations that are thought to have rich information (Yıldırım & Şimşek, 2016). In the criterion sampling method, the units to be researched are composed of people, events, objects or situations that meet the specified criteria (Büyüköztürk et al., 2013).

As a criterion when determining the school where the research will be conducted; It has been determined that the school is located in a neighborhood where Syrian immigrants prefer to reside. As a criterion when determining the student participants of the research; It was determined that the number of female and male students was equal, with the students having a good command of Turkish in terms of comprehension and speaking skills. For the criteria while determining the student participants of the research; It was determined that the students have a command of the Turkish language in terms of comprehension and speaking skills and the number of male and female students is equal. The reason that the student participants were chosen among the students who have a good command of Turkish language comprehension and speaking skills is that there is no desire to have data loss due to the lack of communication at the interviews with the students. The reason why the number of female students and male students participating in the study was chosen equally is that it was thought that the experiences of the students can be different depending on their gender. For the criteria while determining the teacher participants of the research; It was determined that the teachers had been working at the secondary school where the research was conducted for at least one year. The reason why the teachers participating in the study were preferred among the teachers who had been working at the secondary school for at least one year is that it was thought that at least one year is enough to get to know the Syrian students who study at this school.

In order to determine the participants of the research, teachers and administrators working in the secondary school where the study was conducted were interviewed, and students and teachers who met the necessary criteria to participate in the research were determined.

Later, the volunteers among these students and teachers were selected as the participants of the research. In this context, the participants of the study consisted of six Syrian students studying at this school and two teachers working at this school.

General information about the students and teachers who are the participants of the study is shown in two tables. In the tables and other parts of the research, code names are used instead of the real names of the participants. In this context, the information about the student participation of the study group is presented in Table 1.

Table 1
General Information about the Student Participants of the Research

Student Name	Gender	Age	Grade
Hatice	Female	12	5. grade
Zeynep	Female	13	5. grade
Osman	Male	12	5. grade
Ömer	Male	12	6. grade
Ayşe	Female	14	7. grade
Oğuz	Male	14	7. grade

As seen in Table 1, Hatice, Zeynep and Ayşe are female students who participated in the research. Osman, Ömer and Oğuz are male students who participated in the research. Therefore, three of the six students participating in the research are female and the other three are male students. Among these students, Hatice, Osman and Ömer are 12 years old. Other students participating in the research; Zeynep is 13 years old and Ayşe and Oğuz are 14 years old. Therefore, out of a total of six students participating in the study, three of them were 12 years old, one of them was 13 years old, and two of them were 14 years old. Among these students, Hatice, Zeynep and Osman are in the fifth grade. Other students participating in the research; Ömer is in the sixth grade and Ayşe and Oğuz are in the seventh grade. The information about the teacher participants of the study group is presented in Table 2.

Table 2
Information about the Teacher Participants of the Research

Teacher Name	Gender	Age	Branch	Work Experience	Experience at School
Gökhan	Male	40	Physical Education	11 years	10 years
Murat	Male	52	Maths	22 years	6 years

As seen in Table 2, Gökhan who is one of the teacher participants of the study is 40 years old and is a physical education teacher. He has 11 years of professional experience and has been working at the school where the research was conducted for 10 years. Murat, the other teacher participant of the study, is 52 years old and he is a mathematics teacher. Murat has 22 years of professional experience and has been working at the school where the research was conducted for six years.

Data Collection Tools

In this research, interview method was used as the basic data collection method. Interview method is considered as the basic data collection method in phenomenological research (Creswell, 2017). Interview method is a highly effective method to obtain information about individuals' experiences, attitudes, opinions, complaints, feelings and beliefs (Briggs, 1986; Yıldırım & Şimşek, 2016).

If a researcher wants to obtain in-depth and detailed information about a problem, it will be more appropriate to use the interview method. However, this approach may not always be as effective as it seems. For example, the interviewees may not give correct answers to the questions asked (Yıldırım & Şimşek, 2016). Therefore, in the study, two volunteer teachers working at the school of Syrian students who constitute the study group were interviewed in order to ensure the credibility of the answers which were given by the students during the interviews.

Interview forms and personal information forms were used as data collection tools in the interviews during the research process. These interview forms and personal information forms were developed by researchers. In the interviews during the research process, different interview forms were prepared for the students and teachers who were the participants of the research.

The Student Interview Form, which was used as a data collection tool in interviews with students in the study, consists of seven semi-structured interview questions. After the Student Interview Form was prepared, it was implemented to two voluntary Syrian students who were not included in the study group in the secondary school where the study was conducted. Later, the feedback given by these students and the opinions of a Turkish teacher working in the middle school where the research was conducted was taken and the necessary corrections were made on the questions in the Student Interview Form and the form was finalized. In addition, the Student Personal Information Form was used to collect personal information about the students interviewed. In the Student Personal Information Form used, there are items prepared to get information about the student's name, surname, gender and the level of education.

The Teacher Interview Form, which was used as a data collection tool in the interviews with teachers in the study, consists of 6 semi-structured interview questions. In addition, the Teacher Personal Information Form was used to collect personal information about the teachers interviewed. In the Teacher Personal Information Form used, there are items prepared to get information about the teacher's name, surname, gender, branch, professional experience and the work experience time at the school where the research was conducted.

Data Collection

Before starting the interviews with the students and teachers who are the participants of the research, interviews were conducted after verbal and written consent was obtained from these students and teachers. Accordingly, the purpose of the study was explained to the students and teachers who participated in the study, verbal and written explanations were made that they could leave the study whenever they wanted, could not answer the questions they were uncomfortable with, and their identity information would not be shared with other people and their consent was obtained.

In order not to interrupt the education-training process in the secondary school where the research was conducted, appointments were made with the teachers and students interviewed. Some of the interviews with students and teachers were held during the lunch break, and some were held in the meeting room at the school when the classes of students and teachers were empty.

The interviews with students and teachers during the research process were conducted in April 2018. Interviews with students and teachers lasted an average of 10-20 minutes each.

Data Analysis and Interpretation

In this research, the data obtained from the participants were analyzed using content analysis which is one of the qualitative data analysis approaches. The main purpose in content analysis is to reach the concepts and relationships that can explain the collected data (Yıldırım & Şimşek, 2016). For this reason, firstly, interviews which were recorded with a tape recorder were transformed into written form by one of the researchers and transferred to the computer environment. A randomly selected interview record was submitted for examination by one of the other researchers in order to prevent data loss that may occur in translating the interviews into written form. As a result of this researcher's examination, it was determined that there was no difference between interview records and interview transcripts. Then, the interview transcripts were coded line by line. These codes were grouped according to their common features and the themes were reached. Finally, these created themes were interpreted.

Findings

In this part of the research, in parallel with the aims of the research, findings and comments obtained after the interviews with Syrian students and Turkish teachers are presented. The themes and sub-themes determined as a result of the analysis of the interview records made with the participants of the research are shown in Figure 1.

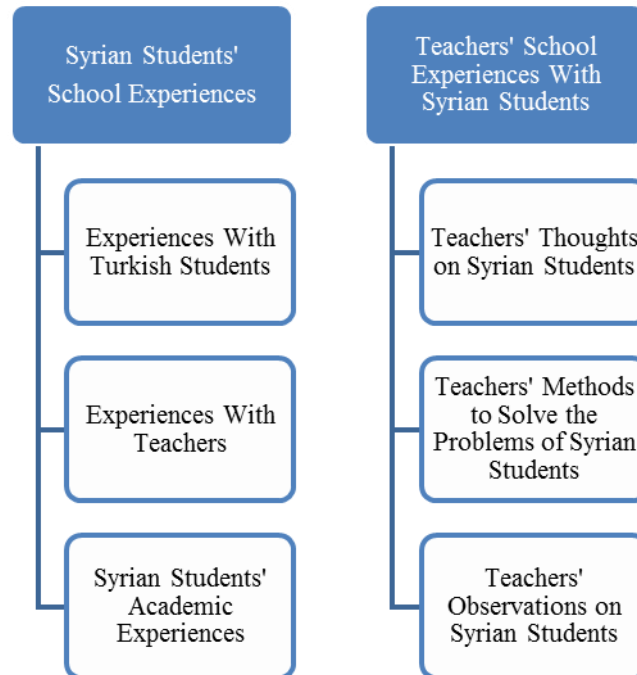


Figure 1 Themes and sub-themes reached as a result of the research

As seen in Figure 1, as a result of the analysis of the data obtained during the research process, two themes named Syrian Students' School Experiences and Teachers' School Experiences with Syrian Students were determined. Three sub-themes were found under each of these themes obtained as a result of the study. In this context, under the theme of Syrian Students' School Experiences; sub-themes called Experiences with Turkish Students, Experiences with Teachers and Syrian Students' Academic Experiences were reached. Under the theme of Teachers' School Experiences with Syrian Students; sub-themes named as Teachers' Thoughts on Syrian Students, Teachers' Methods to Solve the Problems of Syrian Students, Teachers' Observations on Syrian Students were reached.

Syrian Students' School Experiences

In this title of the study, findings obtained on the sub-themes of Experiences with Turkish Students, Experiences with Teachers and the Syrian Students' Academic Experiences which were reached under the theme of Syrian Students' School Experiences.

Experiences with Turkish Students

One of the sub-themes reached as a result of analyzing the interviews with Syrian students in the study is Experiences with Turkish Students. The findings obtained regarding the sub-theme of Experiences with Turkish Students are shown in Figure 2

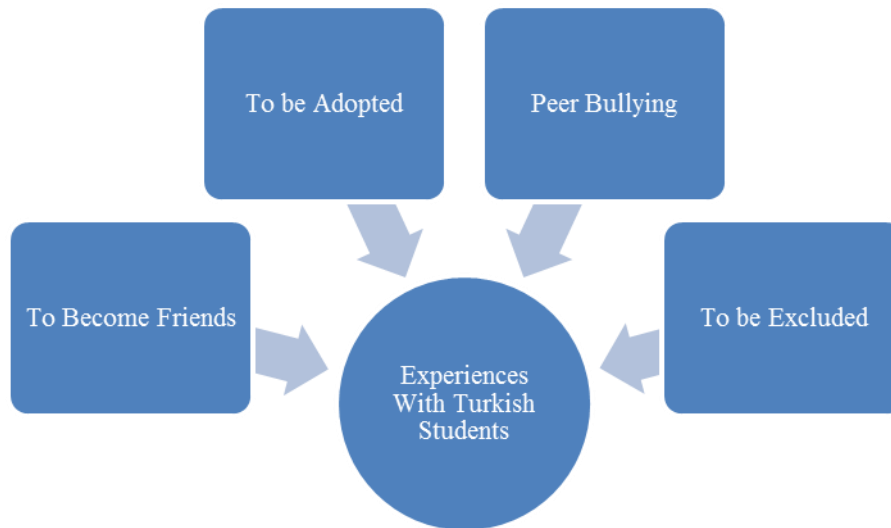


Figure 2 Experiences with Turkish students

As shown in Figure 2, under the sub-theme of Experiences with Turkish Students, the findings of being friends, adoption, peer bullying and exclusion were reached. These findings obtained under the sub-theme of Experiences with Turkish Students are explained in detail below.

To Become Friends. In interviews with Syrian students, it was found that Syrian students have become friends with Turkish students. Hatice, Ayşe and Zeynep, one of the Syrian students, expressed their thoughts on this issue as follows:

Hatice: I don't want to go to my homeland right now. I have very good friends here. We do not sit at home and go anywhere, but it is very nice at school. I'm playing games with my friend here.

Ayşe: It was very nice. It was so good that we talked to friends and stuff like that

Zeynep: I love my school. I love my friends... I love them very much. So, I love my school, my teachers, my friends, and I work as hard as I can.

Based on the quotations above, it can be said that some of the Syrian students can become friends with Turkish students and these students are happy to spend time with Turkish students.

To be Adopted. In interviews with Syrian students, it was found that Syrian students were adopted by some Turkish students. Hatice and Oğuz who are Syrian students expressed their thoughts on this issue as follows:

Hatice: Now sometimes they say Syrian, then they come and apologize.

Oğuz: They are sniping, sir, or they call me Syrian, Syrian. Sometimes they said when I came to school and when I first came to this school. But now they are very good.

Based on the quotations above, it can be said that the negative attitudes of some Turkish students towards Syrian students have changed positively over time and these students have adopted Syrian students.

Peer Bullying. In interviews with Syrian students, it was found that Syrian students were bullied by some Turkish students. Syrian students Hatice, Oğuz and Ömer expressed their thoughts on this issue as follows:

Hatice: There are no difficulties in the lessons, but sometimes they call us Syrian or something when we have break, now they pull our scarves, but not for now.

Oğuz: They are all together and they snipe to me. Well, they say, sir...

Ömer: Sir, we come in the morning, we play ball. Sir, they come and get a ball. He says "Get out".

Based on the quotations above, it can be said that some of the Turkish students used physical and psychological violence to Syrian students.

To be Excluded. In interviews with Syrian students, it was found that Syrian students were excluded by some Turkish students. Syrian students Hatice, Ayşe, Oğuz and Zeynep expressed their thoughts on this issue as follows:

Hatice: Teacher, they say, "You came to Turkey for us, but why do you come to our school? Go read it at another school! "

Ayşe: They said that you are Syrian. They started to exclude. I felt very offended.

Oğuz: I only talk to Ahmet. I do not talking to anybody. They are very nice to each other. But as for us, now, they are walking around themselves in a group. I and Ahmet are walk around alone.

Zeynep: Here, teacher, sometimes some students are very prejudiced. Not against me, but to things... There, for example. Nobody talks to them much. They just talk with only together.

You know, teacher. Syrians cover their head early. This situation... For example, there are girls. Many say. For example, they covered their head at a very young age, and so on. They don't speak

Based on the above quotations, it can be said that some Turkish students have prejudices towards Syrian students, do not communicate with Syrian students and do not respect the culture of these students.

Experiences with Teachers

One of the sub-themes reached as a result of the analysis of the interviews with Syrian students in the study is the Experienced with Teachers. The findings obtained regarding the sub-theme of Experienced with Teachers are shown in Figure 3.

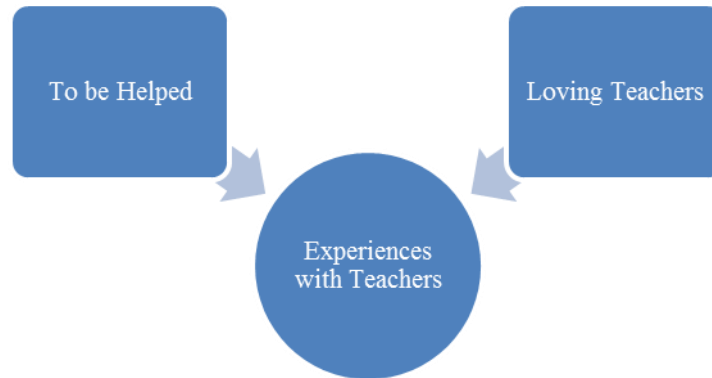


Figure 3 Experiences with teachers

As seen in Figure 3, the findings of being helped and loving teachers were reached under the sub-theme Experienced with Teachers. These findings obtained under the sub-theme of Experiences with Teachers are explained in detail below.

To be Helped. In interviews with Syrian students, it was found that teachers helped Syrian students. Syrian students Hatice, Ayşe, Osman and Oğuz expressed their thoughts on this issue as follows:

Hatice: Now here, when a girl in 7th grade was walking, her shoes were a bit torn. Then it was torn more... Come and I was walking, girl why did you tear my shoe but another teacher saw me anyway. He told that girl why are you slandering? The girl didn't tear your shoes! I don't know, you fell while running, it was torn like that. My teacher, she tore it herself. When the teacher said so, the girl left.

Ayşe: They didn't let us in. They said we can't let you in or something. Such. They said go to the principal or something. We went to the principal. The principal said something like that: He said we can't take it. They said we cannot take the second term of the school. Then, out of luck, God sent it. My teacher came... Then my mother said: They are not taking Ayşe. "It's the second term," he said. The teacher said: Who doesn't take my daughter or something. My daughter calls me. Who could not take my daughter or something. Who says that? My mother said that the principal couldn't get. He said: does something like that happen? I do not give this girl to anyone. He will stay in my class. They took me. Then my mother said something: She said: Well, her brother remained. He also said: OK. I'll take him too, she said. He's hardworking anyway, she said. I'll take that too, she said. Then we talked to the principal. They took let us in again.

Osman: Social studies teacher helps me a lot...

Researcher: ... Well, what are good points about your teachers?

Oğuz: Me... They take good care of me. They never snapped at me, sir.

Based on the quotations above, it can be said that teachers protect Syrian students in negative situations they encounter in their school life and try to find solutions to the problems of these students.

Loving Teachers. In interviews with Syrian students, it was found that Syrian students love teachers. Hatice, Oğuz and Zeynep expressed their thoughts on this issue as follows:

Hatice: My very good teachers never get angry with me, I mean when I don't know. I am always satisfied with the teachers. Very good... I always want to stay with my teachers because

my teacher behaves very well here... Gökhan teacher and Osman teacher treat me very well here.

Researcher: Are you having a problem with the teacher because you don't understand?

Oğuz: No, teacher. His teacher is very good, mashallah.

Researcher: So, the difficulty you have with the teachers here?

Oğuz: No, teacher. Teachers are very good.

Zeynep: I love Ali teacher most. The lesson is more interesting... It is fun... he tells fun. He always makes us laugh.

Researcher: So, what are your thoughts about the school you attend in Turkey?

Zeynep: Well, I love all my teachers...

Based on the quotations above, it can be said that Turkish teachers exhibit positive behavior towards Syrian students in their classes and these students are happy to spend time with Turkish teachers.

Syrian Students' Academic Experiences

One of the sub-themes reached as a result of the analysis of interviews with Syrian students in the study is the Syrian Students' Academic Experiences. The findings obtained regarding the Syrian Students' Academic Experiences are shown in Figure 4.

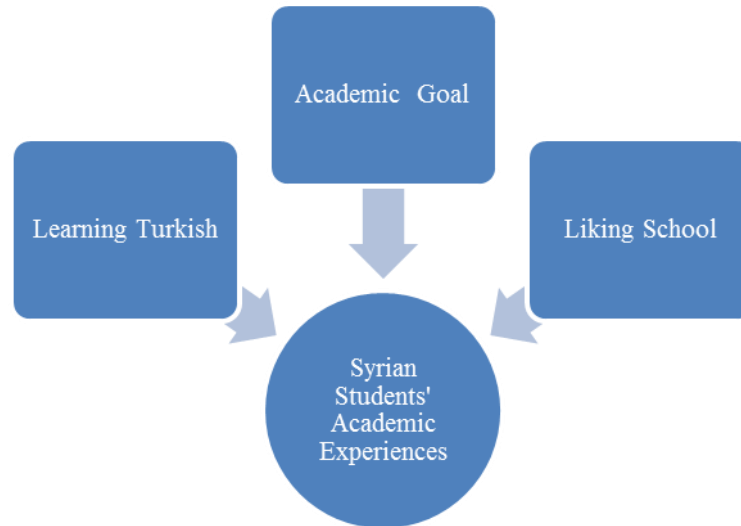


Figure 4 Syrian students' academic experiences

As shown in Figure 4, under the Syrian Students' Academic Experiences sub-theme, the findings of learning Turkish, Academic Goal and Liking School were achieved. These findings obtained under the sub-theme of the Syrian Students' Academic Experiences are explained in detail below.

Learning Turkish. In interviews with Syrian students, it was found that Syrian students whose mother tongue is Arabic can learn Turkish. Syrian students Hatice, Osman and Ömer expressed their thoughts on this issue as follows:

Researcher: What are the advantages of attending school in Turkey?

Hatice: Teacher, I knew Arabic. Now I have learned to write and read in another language.

Osman: I was in Aleppo 5 years ago. Then I came to Turkey. I learned everything here and there. I learned Turkish, English and everything here.

Ömer: Sir, when I came to school, I did not speak Turkish at the time. Sir, I found out later. I speak well, teacher... Sir, I started the fifth... Teacher is coming, my teacher is talking, I understand a little but not much. Then my teacher is Turkish, I knew. Sir, afterwards... Sir, I understand later.

Based on the quotations above and the observations made by the author during the interviews, it can be said that Syrian students whose mother tongue is Arabic can learn Turkish even if they are not at a level to understand the lessons.

Academic Goal. In interviews with Syrian students, it was found that some Syrian students had academic goals. Syrian students Hatice and Zeynep expressed their thoughts on this issue as follows:

Hatice: I didn't want to be anything while I was studying here in Syria. But when I study here, I want to be a sports teacher here or a police officer. My father says, because I am good because I have studied, my father is also... He wouldn't be able to make me study in Syria, but because I am here, he says you can study wherever you want.

Zeynep: I am reading, I am trying to have a profession. Hopefully, by God willing! I will continue my school as long as I am here in Turkey. I will try as best I can.

Based on the quotations above, it can be said that Syrian female students want to have a profession because they are positively affected by the fact that women can have a profession in Turkey.

Liking School. In the interviews with Syrian students, it was found that Syrian students liked the school they attended. Syrian students Hatice, Oğuz and Zeynep expressed their thoughts on this issue as follows:

Hatice: The teachers here are not hitting you like that. When we do something else; They don't beat swearing or anything, and they don't get angry when we don't know the questions. They say nothing will happen, it can be learned again, but they beat it like that in Syria. So it wasn't exactly like that. I am very pleased with the schools here.

Oğuz: This school is very good. I just want to say that. I don't want to quit... We will leave this school after eighth grade. Ya, I'm very sad. I'm already used to this school.

Zeynep: The processors of that area are a little something... They are not very friendly like the ones here, I mean. Yes it is. Here they are a little bit tough. How... If we wait two hours... Waiting, so like that. Here... I think I like here.

Based on the quotations above, it can be said that Syrian students, teachers and other working staff are satisfied with the school they attend because they do not use physical or verbal violence against them.

Teachers' Experiences with Syrian Students

In this title of the research, under the theme of Teachers' Experiences with Syrian Students; The findings of the sub-themes of Teachers' Thoughts on Syrian Students, Teachers' Methods to Solve the Problems of Syrian Students and Teachers' Observations on Syrian Students were given place.

Teachers' Thoughts on Syrian Students

One of the sub-themes reached as a result of the analysis of the interviews with teachers in the study is the Teachers' Thoughts on Syrian Students. The findings obtained regarding Teachers' Thoughts on Syrian Students are shown in Figure 5.

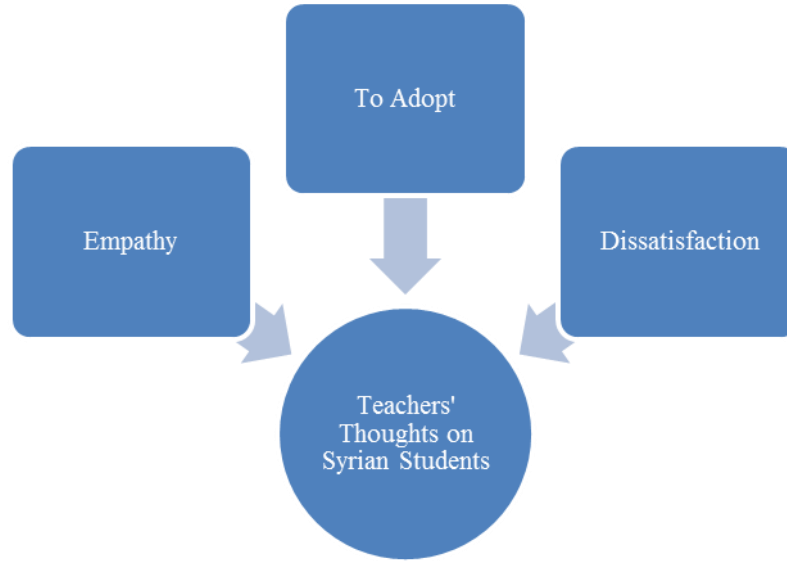


Figure 5 Teachers' thoughts on Syrian students

As seen in Figure 5 findings of empathy, adoption and dissatisfaction have been reached under the sub-theme of Teachers' Thoughts on Syrian Students. These findings obtained under the sub-theme of Teachers' Thoughts on Syrian Students are explained in detail below.

Empathy. In the interviews with the teachers, it was found that the teachers were able to empathize with the Syrian students. Teachers Gökhan and Murat expressed their thoughts on this subject as follows:

Gökhan: ... I mean, this job has no nation, no race. These are children. These come from a very difficult condition. May God not fight a country! It's a very heavy thing. I mean... I mean, we shouldn't see their shortcomings as much as we can. I try to look at the job on the positive side... As the Turkish nation, we always stand by the victims.

Murat: So I am sorry as a human being. Apart from that, of course, everyone has the right to read. Children should also read. He/she has to come somewhere. These are the crushed children. So, I know they have trouble here. There is a problem with our students. They come and say this with their sloppy tongues. Of course I am sorry. I mean, I'm sorry for the kids. So war only affects children. These children are on the fence, poor children. We feel sorry as human beings... How so... When the child comes and tells me about it in a cry, my heart breaks down as a person.

Based on the quotations above, it can be said that teachers are aware of the grievances of Syrian students and can empathize with these students.

To Adopt. In interviews with teachers, it was found that teachers adopted Syrian students. Teachers Gökhan and Murat expressed their thoughts on this issue as follows:

Gökhan: There is something wandering among the public. This is Syrian, this is Turkish. Because one third of Gaziantep's population became Syrian. I mean, There is a differentiation between both Syrians and Turks as this is Syrian, this is Turkish. In this, because there is no ulterior motive; Since there is no malicious intention in the school administration and teachers, things are done without much trouble.

Murat: Well, let me say this: I mean, all of them are our children. These are the children after all. Good guys. So, if we look at it as a character, they are not bad children. I love children very much. They are Arabic or Christian, it doesn't matter. After all, I love children very much.

Based on the considerations above, it can be said that teachers do not have negative thoughts about Syrians in society and do not discriminate between Turkish students and Syrian students.

Dissatisfaction. In the interviews with Syrian students, it was found that teachers were not satisfied with the education of Turkish students and Syrian students in the same environment. Gökhan, one of the Turkish teachers, expressed his thoughts on this subject as follows:

Gökhan: I guess ninety percent of our teachers have the same opinion. So, not all of them are very happy with this situation. None of them think such a thing. But if they get an education between each other in better conditions, in a better way. I think everyone will be satisfied, too.

Based on the quotation above and the author's observations, it can be said that teachers are not satisfied with this situation as they encounter various problems in teaching Syrian students and Turkish students in the same classroom environment.

Teachers' Methods to Solve the Problems of Syrian Students

One of the sub-themes reached as a result of the analysis of the interviews with the teachers in the research is the Teachers' Methods to Solve the Problems of Syrian Students. The findings regarding the Teachers' Methods to Solve the Problems of Syrian Students are shown in Figure 6.

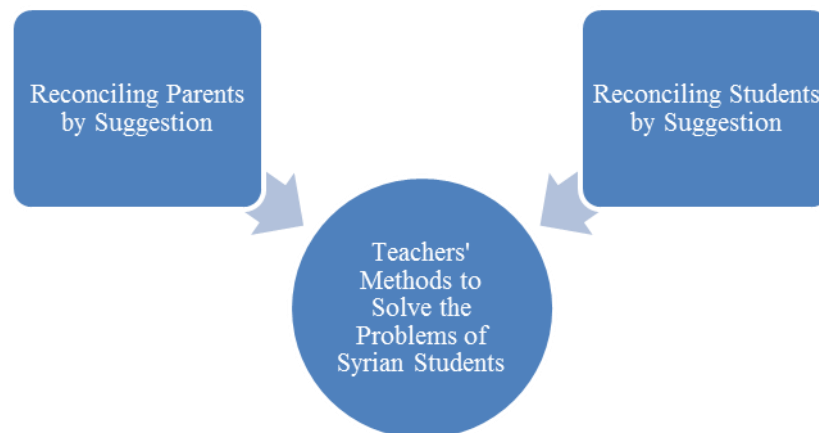


Figure 6 Teachers' methods to solve the problems of Syrian students

As can be seen in Figure 6, under the sub-theme of Teachers' Methods of Solving Problems of Syrian Students, the findings of reconciling parents by suggesting and reconciling students by suggestion were reached. These findings obtained under the sub-theme of Teachers' Methods of Solving the Problems of Syrian Students are explained in detail below.

Reconciling Parents by Suggestion. In interviews with teachers, it was found that teachers reconciled the parents by suggesting that when the problems between Syrian students and Turkish students were reflected on their parents. Gökhan who is one of the teachers expressed his thoughts on this subject as follows:

Gökhan: So, we are trying to solve the problems before they grow. When there are very problematic students, we call their parents. We explain the situation to their parents... We call their parents on both sides and we explain that we have to live together here and we try to solve the situation.

Based on the quote above, it can be said that teachers play the role of so others between the parents of Syrian students and the parents of Turkish students in solving the problems that arise because of the children.

Reconciling Students by Suggestion. In the interviews with teachers, it was found that they reconciled these students by suggestion in order to solve the problems between Turkish students and Syrian students. Gökhan and Murat, one of the teachers, expressed their thoughts on this issue as follows:

Gökhan: I always tell my own child too. I mean, they're kids, after all. He/she is a child of all nationalities. This has no Syrian, Turkish, British or French. He/she is just a child. We need to understand this. I... My son is also having minor troubles outside. I also say to my own children that these are... My son, these are children after all. After that, take them inside. Make friends with these. Don't fight as much as you can. They came here from very difficult conditions. I say this not only to my son but also to my students.

So, we try to meet with parents as much as we can. In this regard, we tell students that we have lived together before, that this job should not be brought to the issue of Syrian Turkish affair. And we are brothers.

Based on the quotations above, it can be said that teachers are trying to raise Turkish students' awareness of the problems Syrian students experience.

Teachers' Observations on Syrian Students

One of the sub-themes reached as a result of the interviews with teachers in the study is the Teachers' Observations of Syrian Students. The findings obtained from Teachers' Observations on Syrian Students are shown in Figure 7.

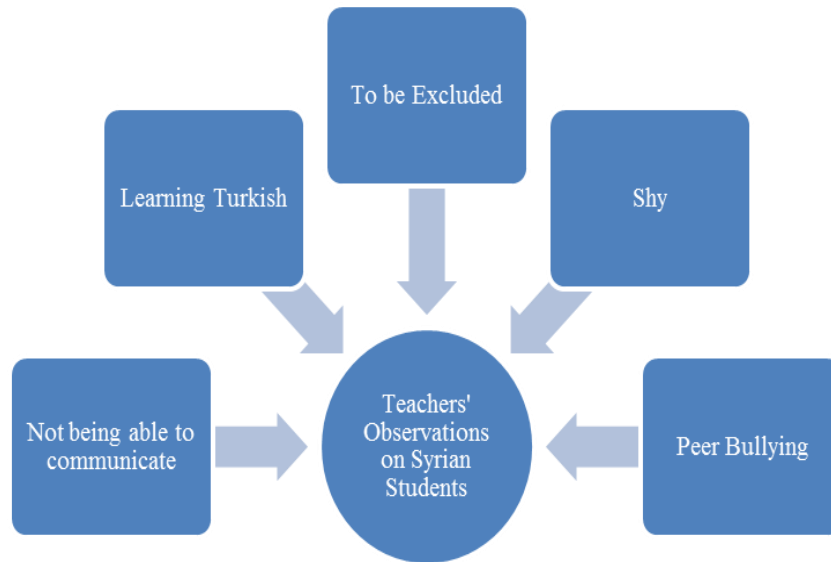


Figure 7 Teachers' observations on Syrian students

As seen in Figure 7, under the sub-theme of Teachers' Observations on Syrian Students, the findings of not communicating, learning Turkish, being excluded, shy and peer bullying were reached. These findings obtained under the sub-theme of Teachers' Observations on Syrian Students are explained in detail below.

Not being able to communicate. In interviews with teachers, it was found that teachers could not communicate with Syrian students. Gökhan and Murat, who are teachers, expressed their thoughts on this issue as follows:

Gökhan: My own problem with Syrian students: We are not comfortable communicating with them. Either they have problems with language or their incompatibility.

Murat: When we tell something, the child doesn't understand anything. So we cannot get down to their level. They don't understand us. We do not understand them either. What can we give these children! We can't give anything.

Based on the quotations above, it can be said that the teachers could not communicate due to the fact that the Syrian students did not know Turkish, and they could not provide adequate education to these students due to the language problem.

Learning Turkish. In interviews with teachers, it was found that some of the Syrian students could learn Turkish. Murat, one of the teachers, expressed his thoughts on this subject as follows:

Murat: Sometimes I look at the child stands up. Teacher, can I ask a question? I see they want to do something, in a sketchy Turkish. You know, I can see, I can speak, I can feel it, I can see the sparkle in his eyes... There is self-confidence in those who have adopted a little Turkish and start to speak. But there is a fear in children who cannot embrace and speak.

Based on the quote above, it can be said that some of the Syrian students were able to learn Turkish, although not at a sufficient level, thanks to the education they received at school, and that these students' self-confidence increased thanks to their learning Turkish.

To be Excluded. In interviews with teachers, it was found that Syrian students were excluded by Turkish students. Gökhan and Murat who are teachers expressed their thoughts on this issue as follows:

Gökhan: Whenever there is a quarrel between a Syrian and a Turkish two children at school at school, Syrian student says that all Turkish students take a stand against him.

Murat: There is a feeling lowly on the children, so. Since the children come from Syria, the children here view them differently. Maybe their parents aren't saying good things about them. I don't know, but after all, these are children, I mean. Our children have problems with these. We hear. Here they are not taking them amongst them. They exclude. These are Syrians. These came here. They broke our order. Maybe if they talk like that, it affects children too. This has such an impact on Syrian children.

And if they got together with our children, maybe they would learn Turkish better. I am sure. I believe in this. Children quickly get along with each other. But the only reason they can't get along is: I think grown-ups don't say very good things at home.

Based on the quotations above, it can be said that Turkish students exclude Syrian students.

Shy. In interviews with teachers, it was found that Syrian students were shy. Murat, one of the teachers, expressed his thoughts on this subject as follows:

Murat: But let's see that the children are like how I say it... Troubled or how I say... They are afraid of saying some things, they are afraid... They are afraid. I approach them with compassion so that they can overcome those fears. But I also saw some of them, so I benefited... I approach with compassion, but I don't know, but there is still a shyness and abstention in the children. We'll be able to sort things out if they can overcome that abstention.

Based on the quotation above, it can be said that Syrian students have a shy psychology due to the problems caused by the phenomenon of immigration and has difficulty in communicating.

Peer Bullying. In interviews with teachers, it was found that Syrian students were subjected to peer bullying by Turkish students. Murat, one of the teachers, expressed his thoughts on this subject as follows:

Murat: But these are children, after all. Well when something happens... I mean, what are they doing right away? Our children are grouping together. The other children have already been pushed, stuck because of the war. These children, our children, are oppressing them too. This is always reflected in the school administration like this. Families come and say that they beat our children, they break them, they shed them. I mean, which one can we take care of!

Based on the quote above, it can be said that Syrian students are exposed to peer bullying by some Turkish students.

Discussion, Result and Recommendations

Discussion

In this study, the school experiences of Syrian students who attend secondary school in Turkey are tried to be described. In this context, the experiences of Syrian students attending a secondary school in Gaziantep and teachers working in this secondary school were used. As a result of the analysis of the data obtained during the research process, two themes named Syrian Students 'School Experiences and Teachers' School Experiences with Syrian Students were determined. Three sub-themes have been determined under each of these themes. In this context, under the theme of Syrian Students' School Experiences; sub-themes called Experiences with Turkish Students, Experiences with Teachers and Syrian Students' Academic Experiences were reached. Under the theme of Teachers' School Experiences with Syrian Students; subthemes named as Teachers' Thoughts on Syrian Students, Teachers' Methods to Solve the Problems of Syrian Students and Teachers' Observations on Syrian Students were reached.

In the sub-theme of Experiences with Turkish Students, the experiences of Syrian students with Turkish students at school are included. According to the findings related to this sub-theme, it was determined that Syrian students initially faced negative behaviors such as being excluded by Turkish students and bullying from their peers. However, in the following processes, it was found that these negative behaviors of Turkish students changed and they started to adopt Syrian students and become friends with these students. When the literature is examined, it is seen that there are different studies supporting these findings. For example, in the research by Jafari, Tonga & Kışla (2018) in which they sought the opinions of classroom teachers, it was determined that Syrian students were initially excluded and marginalized by Turkish students, but in the following processes, Turkish students got used to studying in the same environment as Syrian students and their prejudices towards these students decreased. In the research conducted by Şimşir & Dilmaç (2018) with teachers, it was found that Syrian students were excluded by Turkish students and that Turkish students and Syrian students used violence against each other. Similarly, Dinler & Hacıfazlıoğlu (2020) found that Syrian students are marginalized by being excluded by Turkish students in the research they conducted with administrators and teachers. However, there are also researches in the literature that do not support the findings of this study. In the research of Taşkın & Erdemli (2018), in which they consulted the opinions of classroom teachers, it was determined that, contrary to similar studies,

the relations between Turkish students attending public schools and Syrian students were good. In the research conducted by Demir & Demir (2020), in which they sought the opinions of Syrian students, it was found that although Syrian students did not receive adequate response from Turkish students, they were not exposed to negative actions such as peer bullying by Turkish students.

The experiences of Syrian students with teachers in their school life are included in the sub-theme of Syrian Students' Experiences with Teachers. According to the findings related to this sub-theme, it was determined that teachers help Syrian students by trying to solve the problems they encounter in their school life, and that's why Syrian students like teachers.

When the studies in the literature are examined, it is seen that these findings are supported. For example, in the study conducted by Taşkın & Erdemli (2018) in which they sought the opinions of classroom teachers, it was found that Syrian students attending public schools were respectful to their teachers and had good relations with their teachers. In the study conducted by Yıldız-Yılmaz & Kaplan (2019), in which they sought the opinions of Syrian students' parents, it was determined that teachers were understanding and caring towards Syrian students. Similarly, in the research conducted by Demir & Demir (2020) in which they sought the opinions of Syrian students, it was found that teachers treat Syrian students well.

Similarly, in the research conducted by Özger & Akansel (2019) in which students and parents were consulted, it was found that teachers approached Syrian children in a moderate, egalitarian and friendly manner. However, there is also a study in the literature that does not support the findings of this study. In the study of Aktan & Bilen (2020), in which they sought the opinions of Syrian students, it was found that secondary school teachers acted positively or negatively on students according to their own worldviews.

The academic experiences of Syrian students at school were included in the sub-theme of Syrian Students' Academic Experiences. According to the findings related to this sub-theme, it has been determined that Syrian students have certain academic goals, and that Syrian students cannot learn Turkish at a level to understand the lessons. In addition, it was found that Syrian students like the school they attend, since teachers and other staff working at the school in this sub-theme do not inflict physical or verbal violence on students. When the literature is examined, it is seen that there are many studies supporting these findings.

For example, in a research by Başar, Akan & Çiftçi (2018) in which they sought the opinions of teachers, it was determined that refugee students could not communicate verbally and could not understand concepts in lessons because they did not know enough Turkish. In the research of Kardeş & Akman (2018), in which they sought the opinions of classroom teachers, it was found that the most important problem seen in Syrian students is the language problem and this problem is the biggest obstacle in front of children's education. Similarly, in the research conducted by Levent and Çayak (2017) with school administrators, it was determined that the most important obstacle in the education of Syrian students is language.

Similarly, in the study of Apay & Gülpınar (2020) in which students, parents and teachers sought the opinions of students, it was found that children were unsuccessful in the lessons because of the language problem they experienced at school and they had problems adapting to the school culture. Finally, in the research conducted by Demir & Demir (2020) in which they sought the opinions of Syrian students, it was found that Syrian students who know Turkish well understood the lesson, while those who did not had difficulty in understanding the lesson and did not participate in the lesson. In addition, it was found that teachers treat Syrian students well in this study.

In the sub-theme of Teachers' Thoughts on Syrian Students, teachers' opinions about Syrian students were included. According to the findings reached in this sub-theme, it was determined that the teachers approached Syrian students with empathy and adopted these students, but they were not satisfied because Syrian students and Turkish students were educated together. When the literature is examined, it is seen that there are studies supporting these findings. For example, in the research conducted by Kiremit, Akpınar & Tüfekci-Akcan (2018) with teachers, it was found that teachers empathize with, help and tolerate Syrian students because they are helpless. However, in the same study, it was found that teachers complained about the presence of Syrian students in their classrooms and saw this as a disadvantage. In the study in which Saklan (2018) sought the opinions of students and teachers, it was found that some of the teachers felt pity for Syrian students, showed mercy and tried to help.

The methods used by teachers to solve the problems of Syrian students are included in the sub-theme Teachers' Methods to Solve the Problems of Syrian Students. According to the findings reached in this sub-theme, it was determined that when the problems between Syrian students and Turkish students were reflected to the parents, they reconciled the parents of these students through indoctrination. When the literature is examined, it is seen that there is a study supporting these findings. In this study, in which Jafari, Tonga & Kışla (2018) sought the opinions of classroom teachers, it was determined that teachers tried to break the prejudice against these students by explaining to students and parents that it was not the fault of Syrian children.

In the sub-theme of Teachers' Observations on Syrian Students, observations of teachers about Syrian students are included. According to the findings obtained in this sub-theme, it was determined that Turkish students excluded and did not adopt Syrian students, and Syrian students were exposed to peer bullying by Turkish students because Syrian students were shy and families reflected their negative attitudes towards Syrians to their children. In addition, in this sub-theme, it was found that Syrian students could learn Turkish thanks to the education they received at school, but could not communicate because their Turkish was insufficient.

When the literature is examined, it is seen that there are many studies supporting these findings. For example, in the research conducted by Şenel & Güngör (2018) with refugee students and teachers, it was determined that language problem is one of the most basic problems that refugee students experience in education. In the research in which Cin (2018) sought the opinions of classroom teachers, it was found that the biggest problem in the education of Syrian students was the language barrier. Similarly, in the study of Alkalay & Erdem (2021), in which they sought the opinions of teachers and administrators, it was found that one of the important problems that Syrian students experience at school is language problem. In the research conducted by Başar, Akan & Çiftçi (2018) with teachers, it was determined that Syrian students were excluded by Turkish students. Finally, in the research by Kiremit, Akpınar & Tüfekci-Akcan (2018) in which they sought the opinions of teachers, it was found that Turkish parents had negative reactions towards Syrian students and Syrian students had adaptation problems.

Result

Problems such as intense and frequent emotional outbursts, not doing homework, lack of self-confidence, and inability to establish social relations can be seen in Syrian students who have been exposed to many negative events before and after migration (Mert & Nude, 2017). These children, most of whom do not speak Turkish, cannot understand the lessons and have difficulties in communicating well with their teachers and peers (Aykırı, 2017).

As a result, the length of stay of Syrian refugees in Turkey is uncertain and most of them are likely to continue their remaining lives in Turkey. Therefore, it is important for the future of Turkey to ensure the integration of Syrian students into the society and to grow up as individuals who are beneficial to the society. However, Syrian children attending school in Turkey face many problems in their school life. Among these children, those who do not speak Turkish fail in the lessons. In addition, they cannot communicate well with their teachers and peers at school. In addition, Turkish students are negatively affected by the prejudices against Syrian refugees due to various reasons in Turkish society. This situation causes Syrian students to be excluded, humiliated and bullied by their Turkish peers. However, Syrian students who know Turkish at a sufficient level can be successful academically because they can establish a healthy communication with their teachers and Turkish peers. In addition, Turkish students can achieve social success in their school life because their prejudices against themselves disappear after a while.

Recommendations

In order for Syrian students to be successful academically and socially in their school life, they must first learn Turkish at a sufficient level. One of the most important factors for these students to learn Turkish at a sufficient level is the quality of the teachers. Therefore, graduate programs for teaching Turkish to foreigners or in-service training courses given by academicians who are experts in the field can be opened to Turkish teachers working in schools where Syrian students attend.

School administrators and teachers have important responsibilities in solving problems arising from lack of communication and cultural differences between Turkish and Syrian students. Therefore, in-service training courses can be opened by academicians who are experts in the field of multicultural education for the administrators and teachers working in schools where Syrian students are present.

In order for Syrian students to learn Turkish at a sufficient level, the weekly Turkish course hours of these students should be increased. Therefore, in order for Syrian students to learn Turkish at a sufficient level, elective Turkish lessons can be added to the program in schools where these students are present.

Syrian students, who experienced the traumatic experiences caused by the war environment and experienced the phenomenon of migration, had to deal with academic and social problems in their education life in Turkey, where they migrated. Syrian students who have serious problems in their education life should get the help of experts in order to solve these problems. Therefore, in order for Syrian students to cope with the academic and social problems they encounter in their school life, only the guidance teachers responsible for these students can be appointed in the schools where these students attend.

The Republic of Turkey does not have a multicultural structure and most of the people know the Turkish language adequately. Therefore, Turkey does not have an education tradition similar to that of multicultural and heavily emigrated countries. Because of this, the education programs implemented in schools have been prepared in accordance with the conditions of a monocultural society. The education programs implemented in Turkey are insufficient to teach Turkish to Syrian students and these students cannot be integrated into the society. In this context, new education programs can be prepared in accordance with the conditions of Turkey by examining the education programs implemented by multicultural societies such as the USA, Canada and Australia in order to bring Syrian students into education and social life.

There are Integration Centers in Turkey for Syrian students to learn Turkish. In these centers, Syrian students who do not speak Turkish are taught Turkish. These students, who receive Turkish education in the integration centers, are then placed in classes suitable for their age groups and they are tried to be integrated into the Turkish Education System. However, since most of the teachers and classroom teachers working in these courses do not know enough Arabic to communicate with Syrian children, these children cannot learn Turkish at a sufficient level. Therefore, it can be said that it is important for Syrian students attending the Integration Centers to learn Turkish at an adequate level, so that the teachers working in these centers are selected from among the teachers who have sufficient Arabic.

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Enhancing Preservice Teachers' Understanding of Circulation System Concepts, Attitude and Motivation

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Abstract: The purpose of this study is to investigate the effectiveness of the learning cycle instruction on preservice elementary teachers' understanding of human circulatory system concepts, attitudes towards biology and motivations. The Human Circulatory System Concepts Test, Attitude Towards Biology Scale, Science Process Skills Test and Motivated Strategies for Learning Questionnaire were used to collect data. The test was administered to preservice elementary teachers in control and experimental groups. The quasi-experimental design was used as research design. The analysis of covariance revealed a statistically significant difference in favor of the experimental group after treatment. The learning cycle instruction was more effective when compared with teacher-centered instruction in eliminating the students' misconceptions about the circulatory system. There was no significant effect of the learning cycle instruction on students' attitudes towards biology and motivation. Students' prior knowledge and science process skills were related to students' science achievement. Teacher educators should provide preservice teachers with different opportunities of experiencing the learning cycle as a teacher in teacher education programs.

Keywords: Biology education, Circulatory system, Learning cycle, Preservice teacher.

Öğretmen Adaylarının Dolaşım Sistemi Kavramlarını Anlamaları, Tutum ve Motivasyon

Öz: Bu çalışmanın amacı, öğrenme halkasına dayalı öğretimin öğretmen adaylarının insanda dolaşım sistemi konusunu öğrenmeleri, biyoloji dersine karşı tutumları ve motivasyonları üzerine olan etkisini incelemektir. İnsanda Dolaşım Sistemi Kavram Testi, Bilimsel İşlem Beceri Testi, Öğrenmede Güdül Stratejiler Anketi ve Biyoloji Dersi Tutum Ölçeği deney ve kontrol gruplarına veri toplama aracı olarak uygulanmıştır. Araştırma deseni olarak ön-test son-test kontrol gruplu desen kullanılmıştır. Analiz sonuçlarına göre, öğrencilerin insanda dolaşım sistemi konusunu öğrenmeleri üzerine öğrenme halkası modelinin öğretmen merkezli öğretim yöntemlerine göre daha etkili olduğu ortaya çıkmıştır. Öğrenme halkasına dayalı öğretim insanda dolaşım sistemi konusundaki kavram yanlışlarının giderilmesinde daha etkili olmuştur. Biyoloji dersine karşı tutum ve motivasyonları üzerine anlamlı bir etkisi olmadığı sonucuna varılmıştır. Öğrencilerin önceki bilgileri ve bilimsel süreç becerilerinin öğrenci başarısı ile ilişkili olduğu gösterilmiştir. Öğretmen adaylarına öğretmen eğitimi programlarında öğrenme halkasına dayalı etkinliklerle farklı öğrenme deneyimleri yaşatılmalıdır.

Anahtar Kelimeler: Biyoloji eğitimi, Dolaşım sistemi, Öğrenme halkası, Öğretmen adayları.

Introduction

The technological advancements and global changes in the world have increased the importance of responsibilities and goals of science education to develop scientific literacy and scientific inquiry skills in recent years. Therefore, it is expected from teachers more innovative roles and responsibilities to provide quality in science education. More recent studies in science education focused on the understanding of how students learn, students' and preservice teachers' alternative conceptions. Science understanding of preservice teachers is important to teach science effectively and for promoting conceptual learning in their students. The definition of misconception can be defined that mental representation or understanding of a concept existing in the real world which does not correspond to the scientific explanation of the event (Modell, Michael & Wenderoth, 2005). Teachers' subject-matter knowledge and teachers' knowledge of student misconceptions play important role in student learning and implementing effective lessons (Sadler & Sonnert, 2016). Teachers' misconceptions about science concepts can lead to develop unscientifically concepts in their students and transmit to their students (Schoon, 1993; Yates & Marek, 2014; Yip, 1998). The number of studies has determined that preservice and inservice teachers' misconceptions of biology concepts and inadequate science content knowledge (Brown & Schwartz, 2009; Kumandaş, Ateşkan & Lane, 2018; Kurt, 2013; Tekkaya, Çapa & Yılmaz, 2000; Yakışan, 2013). Preservice teachers should be adequately prepared to teach it to be more confident, because of conceptual understanding and success learning science as critical elements for preservice teacher training (Bleicher & Lindgren, 2005). Garcia-Carmona, Criado & Cruz-Guzman (2017) that preservice teachers have limited scientific knowledge and teaching skills in science education; therefore, they don't have sufficient skills to teach science through inquiry-based activities. Menon and Sadler (2016) emphasized that preservice teacher education programs must provide new training and positive changes to encourage the improvement of conceptual understanding and science self-efficacy beliefs because science conceptual understandings are related to science teaching efficacy beliefs. It can be critical to implement new practices for preservice teachers' learning cycle and inquiry-based instruction for our instruction and developing activities based on the learning cycle as a teacher in teacher education programs (Hanuscin & Lee, 2008; Kazempour, Amirshokoohi & Blamey, 2020).

Teaching approaches and various instructional methods are crucial in science for improving meaningful learning and can be used to overcome these problems eliminating misconceptions. The learning cycle is one of the methods, centralizing on students' conceptual understandings using inquiry-based teaching by activating students in learning. The learning cycle teaching procedure was originated by Karplus as it was first developed, the 1960s. The teaching procedure developed by Karplus and Their in 1967, was the learning cycle and these phases were named, as described "exploration", "term introduction" ve "concept application" (Marek & Cavallo, 1997). The three stages have been extended into five known as the 5E learning cycle: Engagement, Exploration, Explanation, Extension, and Evaluation, by some researchers refined over the years (Bybee & Landes, 1990; Trowbridge, Bybee & Powell, 2000). It was emphasized the 5E learning cycle instructional model used by the Biological Sciences Curriculum Study (BSCS) to evidence of the development of 21st century skills (Bybee, 2009). The learning cycle's derivation from Piagets' model of mental functioning. The intelligence model of Piaget is the learning and development theory that is the foundation of the learning cycle. Students must use materials that they can touch, feel, hear, and observe; they must use every sense possible. Students are simply exploring the materials on their own or by following teacher-provided directions. The Exploration phase of the learning cycle and discovery of the materials promotes assimilation. If students are assimilating, the exploration phase fosters assimilation and disequilibrium. Term introduction provides for accommodation or the construction of the new mental structures. The new intellectual structures allow for the understanding and the student is reequilibrated. The concept application phase of the learning

cycle is designed to recognize students to reveal their new concept to other concepts or to apply this new concept in other situations. Concept application corresponds to the process of organization in Piaget's model of mental functioning (Marek & Cavallo, 1997). Many studies have reported that the learning cycle instructional model about several biology concepts had positive effects on students' academic achievement and also improved students' conceptual understanding (Arslan, Geban & Sağlam, 2015; Atay, 2006; Gök, 2014; Yılmaz, Tekkaya & Sungur, 2011).

Other components impacting students' learning in science education are attitude towards science and motivation besides the cognitive dimensions. The effects of these variables have an important role in developing actively involved in the learning process. Pintrich, Marx and Boyle (1993) stated attitudinal and motivational variables were related to the learner's conceptual change process. Some research studies in science education have been examined attitude and its relationships with academic achievement and argue that attitude towards science is related to success and reported significantly affects their success in science (Akpınar, Yıldız, Tatar & Ergin, 2009; Atay, 2006; Çakıcı, Arıca & Ilgaz, 2011; Rogayan, 2019). In addition, teaching pedagogies could impact students' attitudes (Almasri, Hewapathirana, Ghaddar, Lee & Ibrahim, 2021). Therefore, some researchers investigated the effect of instructional approaches on students' attitudes toward science (Rabgay, 2018; Rybczynski & Schussler, 2013). The important factors are that teachers' features and instructional strategies used in science courses significantly affect students' attitudes toward biology in science education (Osborne, Simon & Collins, 2003; Prokop, Tuncer & Chudá, 2007). Students' motivation is a vital component of learning biology because it affects the learning-teaching process of the teacher and student (Özbaş, 2019; Partin et al., 2011). Motivation take an important role in influencing success in science students' conceptual change process (Tuan, Chin & Shieh, 2005). It was stated that the relationship between their motivation towards science and students' achievement in science in some studies about students' motivation (Bryan, Glynn & Kittleson, 2011; Chow & Yong, 2013; Madden, 2011; Partin et al., 2011; Walters, 2014; Yenice, Saydam & Telli, 2012). Some research indicated that motivation can be affected by teaching strategies used during the lesson (Tuan & Chin, 2000; Uzezi & Jonah, 2017). Some research provided the learner to develop positive changes attitudes towards science (Bıyıklı & Yağcı, 2015, Özbudak & Özkan, 2014) and motivations (Ceylan, 2008; Çetin-Dindar, 2012). Therefore, this study also is examined the effects of learning cycle instruction on students' attitudes toward biology, motivation and is extended results of previous research.

Some studies have focused misconceptions of the circulatory system in different levels and have expressed that one of the subjects that students have the most misconceptions about biology is the circulatory system (Alkhaldeh, 2007; Arnaudin & Mintzes, 1985; Kurt, Ekici, Aksu & Aktaş, 2013; Özgür, 2013; Pelaez, Boyd, Rojas & Hoover, 2005; Sungur, Tekkaya & Geban, 2001; Yip, 1998). In another study that focused on teachers' misconceptions of the circulatory system, it was found that teachers hold misconceptions about relationships between flow rate, blood pressure, and vessel diameter, features of capillaries, the role of construction and exit of tissue fluid in the capillaries and system of exchange of materials between blood and body cells (Yip, 1998). The undergraduate students find circulatory system concepts more difficult to learn (Michael et al., 2002). To understand concepts like blood pressure, vessel diameter, and resistance to blood flow and relationships these concepts, students need to think interdisciplinary and to use physics, chemistry knowledge (Yip, 1998). Students' understanding of the circulatory system affects their comprehending other biology subjects about concepts of the body system, homeostasis that based on the concepts related to human circulatory system (Sungur et al, 2001). There are not enough studies about how the learning cycle affects preservice teachers' understanding in the human circulatory system and need to more research is required. Therefore, in this study learning cycle instruction is applied in human circulatory system subjects and is focused on preservice teachers. Teacher training has great significance

from the aspect of improving understanding of the human circulatory system of teachers and improving their motivation skills and attitudes towards the biology of student teachers. In an attempt to promote inquiry-based teaching science, the purpose of this study was to investigate the effectiveness of the learning cycle on preservice elementary teachers' on the understanding of human circulatory system concepts, their attitudes toward biology and motivation when compared to traditionally designed biology instruction.

Method

Research Design

The quasi-experimental design was employed in the current study (Fraenkel & Wallen, 2006). In the pretest-posttest control group model, the experimental group and control group of the classes from the same faculty were randomly designated. While the lessons in the experimental group were educated by the learning cycle method, lessons in the control group were only educated through the teacher-centered methods. At the beginning of instruction, Human Circulatory System Concepts Test, the Attitude Toward Biology Scale and Science Process Skills Test were administered to the experimental and control groups of students of the study. They were given Human Circulatory System Concepts Test, the Attitude Toward Biology Scale and the Motivated Strategies for Learning Questionnaire after receiving instruction.

Study Group

The sample of the study comprised a total of 67 first year preservice elementary teacher education students enrolled in two sections of general biology course at a Turkish university. Each of the two classes was designated as the experimental group and the other class as the control group. The experimental group included 35 participants while the control group included 32 participants.

Data Collection Tools

Data collection tools for this study were the Human Circulatory System Concepts Test, the Attitude Toward Biology Scale, Science Process Skills Test and Motivated Strategies for Learning Questionnaire.

Human Circulatory System Concepts Test

The test is consists of a 16-item multiple-choice test developed by Sungur et al. (2001). It was used to evaluate preservice teachers' understanding of the human circulatory system concepts in the control and experimental groups as pre-tests and post-tests. The main concepts included in the test were blood, heart, blood vessels, and homeostasis. The reliability coefficient was determined to be 0.72 for this test.

The Attitude Toward Biology Scale

It is composed of 15-items, 5-point Likert type scale developed by Geban, Ertepinar, Yılmaz, Altın and Şahbaz (1994) to determine students' attitudes toward biology as a school subject. Each item contained the choices of strongly agree, agree undecided, disagree, and strongly disagree. The reliability of the test was estimated to be 0.92. This scale was implemented in both groups as pre-tests and post-tests.

Science Process Skill Test

The test was established by Okey, Wise and Burns (1982) and adopted by Geban, Aşkar and Özkan (1992). This test is composed of five subsets and 36 multiple choice questions. The reliability of the instrument was calculated to be 0.81. This test aims to assess students' scientific process abilities for identifying variables, identifying and stating a hypothesis, operationally defining, designing investigations and graphing and interpreting data. This test was given to both groups before the treatment.

Motivated Strategies for Learning Questionnaire

This instrument is developed by Pintrich, Smith, Garcia and McKeachie (1991) to investigate students' motivational orientations and different learning strategies and is translated and adapted into Turkish by Sungur (2004). Two sections of Motivated Strategies for Learning Questionnaire were the motivation section and a learning strategies section. The motivation section of this scale was used in this study. This section was a seven point Likert scale and consisted of six factors for 31 motivation items. Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Values, Control of Learning Beliefs, Self-Efficacy for Learning and Performance, and Test Anxiety were the factors of this part. The reliability coefficients values for motivation part's factors of MSLQ were found to be 0,54 between 0,89. This test was given to both groups at the end of the treatment in both the experimental and control group.

Treatment

This study was administered over a four weeks. A total of 67 first year preservice elementary teachers from two general biology classes were engaged in the study. The instruction for both groups was conducted by the same instructor and exposed to equivalent content. Students from both groups examined the topic of human circulatory systems in the meanwhile the same period of time in two distant directions. While the experimental group was educated using 3E learning cycle instruction, the control group accepted a teacher centred instruction.

In the exploration stage of the learning cycle, teachers ask students and provide opportunities for students to assimilate the concept, encourage student discovery and construct knowledge through classifying, comparing, evaluating, and interfering. In the term introduction, the students debate each other in groups the results of the exploration activity and constructed understanding of the concept in their own words related to scientific terminology. In the final phase, concept application practices support students expand their knowledge using concepts in new circumstances associate with daily life experiences (Bybee, 2009; Marek & Cavallo, 1997). The students in the experimental group were educated with learning cycle instruction. For the learning cycle group, four instructional activities were used. The learning cycle plan was developed for the topics of elements of the circulatory system and structure of the heart, how the heart works, blood vessels and blood circulation. For example, the first learning cycle plan was planned for the topics of elements of the circulatory system and structure of the heart. In the first phase, exploration, the students' interest and motivation were increased by inquiring the questions about the human circulatory system. The exploration phase, the students dissected the heart of the mammal and answered the questions in the worksheet. Exploration phase was developed to permit students practical activities and experiences. They explored new materials and new ideas with minimal guidance. In this phase, students worked in small groups, maintained hands-on activities, discussed their observations and ideas with their peers. For example, the students discussed the results of the dissection conducted in the exploration phase. The students dissected the heart of a mammal and answered the questions in the worksheet. They studied as a group. A heart of a sheep or a cow, a dissection set, a dissection tray. The purpose of the phase was to apprehend students' power o create in mind. In this phase, for

example, the teacher asked several questions to activate the students' prior knowledge and stimulate their thinking such as; "What is the aim of the circulatory system?" "What are the elements of the circulatory system?". The teacher requested the students to argue the asking for answers with their peers. The students were asked to examine in contrast the wall of the left ventricle, try to find all parts. Compare the arteries and the veins. They explored the internal structure of the heart by dissecting heart and finding the parts and write its name. In the second phase, term introduction, after the dissection, the teacher asked the answer questions such as; "How many chambers are there in the heart of a mammal?" "How does the blood circulate in these chambers?" "Which chambers can blood go through between?" "The wall of arteries is thicker than the wall of veins. Why?". The teacher explained concepts of topics of elements of circulatory system and structure of the heart. The teacher lectured about the structure of the heart and circulation of the blood in the heart, explained the concepts and showed the related pictures by using the powerpoint program. The next phase, elaboration, provide the students with the the opportunity to expand their knowledge to other situations. Students' understandings were determined by inquiring open-ended questions about the human circulatory system in the evaluation phase as a final part.

In the control group, the teacher-centred instruction was utilized lecture and discussion methods to teach the human circulatory system concepts. Teaching strategies and methods based on teacher explanation and textbooks by transferring knowledge to the students. The number of textbook chapters assigned in the two instructional approaches was similar. After the participants studied the textbooks on their own before learning, the instructor explained the concepts associate with human circulatory system. These concepts were the heart, blood flow in the heart, types and structure of vessels, blood flow rate and blood pressure, exchanges between blood and cells, the systemic circulation and pulmonary system. After instructor explanation, the human circulatory system concepts were debated through teacher-directed questions.

Data Analysis

The data were analyzed by using the SPSS 21.0 packaged software. Descriptive and inferential statistics were performed for interpreting the data. The analysis was tested on the significance level of $\alpha=0.05$. The variables were checked for the assumptions. ANCOVA was computed to determine the effectiveness of treatment on their understanding of human circulatory system concepts using their pre-test, attitudes towards biology and science process skills test scores as covariates. ANOVA was used for attitude towards biology. MANOVA was used for motivation. In this analysis, the dependent variable was participants' achievement of the human circulatory system concepts assessed by post-test scores; the independent variable was treatment. Pearson correlation analysis was computed to investigate the relationships among the variables of the study for experimental and control groups (Pallant, 2016).

Results

Descriptive and the inferential statistics concerning the results are presented. Descriptive statistics with respect to the human circulatory systems achievement pre-post test scores, attitude scale toward biology pre-post test scores, motivated strategies posttest scores and science process skill test scores for both experimental and control groups were analyzed. These scores reveal normally distributed, values of skewness and kurtosis were in the range between -2 and +2. These statistics are presented in Table 1.

Table 1
Descriptive Statistics

Group	Test	N	Min	Max	Mean	SD	Skewness	Kurtosis
Control Group	Preach	32	1.00	8.00	4.500	1.703	-.021	-.568
	Postach	32	2.00	10.00	3.971	1.98	.649	-.104
	Preatt	32	24.00	68.00	48.68	10.89	-.554	-.103
	Postatt	32	21.00	71.00	46.50	10.97	-.420	.494
	Postint	32	4.00	28.00	15.15	4.85	-.029	1.377
	Postext	32	13.00	28.00	19.37	4.20	.634	-.281
	Posttask	32	6.00	40.00	25.87	8.77	-.468	.161
	Postcon	32	12.00	28.00	20.65	4.10	-.118	-.240
	Postself	32	21.00	56.00	36.43	8.87	.319	-.886
	Posttest	32	6.00	29.00	19.15	5.51	.085	.349
Experimental Group	Spskill	32	14.00	30.00	24.40	3.50	-.534	1.196
	Preach	35	1.00	10.00	4.77	2.04	.45	-.060
	Postach	35	2.00	12.00	6.34	2.05	.38	.488
	Preatt	35	37.00	69.00	51.11	7.91	.44	-.161
	Postatt	35	33.00	70.00	49.45	9.02	.021	-.484
	Postint	35	8.00	28.00	18.08	4.93	.280	-.243
	Postext	35	5.00	27.00	20.20	4.79	-1.148	1.758
	Posttask	35	12.00	40.00	28.60	6.80	-.459	.200
	Postcon	35	11.00	28.00	19.82	3.52	-.272	.167
	Postself	35	18.00	54.00	37.02	7.74	-.270	.279
Posttest	35	11.00	30.00	19.97	5.23	.384	-.519	
	Spskill	35	17.00	33.00	25.05	4.10	.146	-.661

* Preach: Human circulatory system concept pre-test scores, Postach: Human circulatory system concept post-test scores, Preatt: Attitude scale pre-test scores, Postatt: Attitude scale post-test scores, Postint: Intrinsic goal post-test scores, Postext: Post extrinsic goal orientation scores, Posttask: Task value post-test scores, Postcon: Control of learning beliefs post-test scores, Postself: Self-efficacy for learning and performance post-test scores, Posttest: Test anxiety post-test scores, Spskill: Science process skills test scores.

The Independent Samples t-test was conducted to test whether or not the difference between the students in the experimental and control groups in terms of human circulatory systems achievement, attitude towards biology and science process skills before treatment. Therefore, there were not any statistically significant differences between scores before treatment of experimental and control groups in terms of human circulatory systems achievement ($t=.587$, $p=.559$), attitude scale toward biology ($t=1.049$, $p=.298$) and science process skills ($t=.695$, $p=.490$).

The analysis of variance (ANCOVA) was conducted to test whether or not significant difference between the human circulatory systems achievement post-test scores of students experiencing learning cycle instruction and the students experiencing teacher centred instruction. The assumptions of ANCOVA were tested. It was seen that assumptions were met. The result of Levene's Test of Equality test [$F(1,65)=1.645$, $p>.05$]. Because the result shows a significant correlation between students' achievement posttest scores and science process skill test scores, assumption of correlation was met ($r=.260$, $p<.05$). There were the students' human circulatory system achievement posttest scores and pre-achievement test scores ($r=.352$, $p<.01$). Participants' science process skills test scores, human circulatory system achievement pretest scores, and attitude toward biology as a school subject pretest scores are controlled as covariates. The results revealed that there was a significant difference between post-test mean scores of the students educated with learning cycle instruction and those educated with teacher centred instruction in terms of achievement in favor of the experimental groups [$F(1,62)=5.793$, $p=0.019<.05$]. The mean scores of achievement of students in the experimental group were significantly higher than the control group showed a significant treatment effect in favor of the experimental groups [(EG)=6.34, (CG)=3.971]. Students in the experimental group who were

taught with the learning cycle instruction displayed better accomplishment over the students in control group who were taught with teacher-centered instruction. Table 2 contains the summary of ANCOVA statistics.

Table 2
ANCOVA Summary

Source	SS	df	F	p
Science Process Skill	5.221	1	1.424	0.237
Pre-Attitude	1.093	1	0.298	0.587
Pre-test	21.696	1	5.917	0.018
Treatment	21.241	1	5.793	0.019*
Error	227.333	62		

* $p=0.019 < 0.05$

An analysis of variance (ANOVA) was conducted to test the hypothesis that there were not any significant differences between the attitude scale toward biology post-test scores of students training learning cycle instruction and the students training teacher centred instruction. The assumptions of ANOVA were met. The result of Levene's Test of Equality test [$F(1,65=.125; p>.05)$]. The result of the analysis revealed that there was no statistically significant difference between experimental and control group in terms of attitude scale toward biology post-test scores ($F=0.279; p=0.599 > 0.05$).

MANOVA was conducted to test whether or not there was any significant difference in methods of teaching on motivation orientations. The results of MANOVA illustrated that significant difference exists between learning cycle instruction and teacher-centred instruction on motivation variables (Wilks' Lambda=0.856; $F=1.601; p=0.164 > 0.05$).

Pearson correlation analysis was performed to investigate the relationships that might exist among students' prior knowledge, science process skills, motivational strategies in two different types of instruction for each group. According to the results of the Pearson correlation analysis, there was a positive relationship between post student understanding of the human circulatory system and their prior knowledge ($r=.55, p=.001$), also science process skills ($r=.44, p=.009$) in learning cycle classrooms. Science process skills was related to prior knowledge ($r=.46, p=.005$). Post attitude towards biology was related to prior attitude towards biology ($r=.71, p=.000$), post intrinsic goal orientation ($r=.53, p=.001$), post task value ($r=.75, p=.000$), post self efficacy ($r=.35, p=.03$). Prior attitude towards biology was related to post task value ($r=.70, p=.000$). This results suggested that students' understanding of human circulatory system was related to their prior knowledge and science process skills. It is deduced that students possessing a higher prior knowledge scores and high science process skills had better understanding of the human circulatory system in learning cycle classroom. Students' attitude towards biology was related to intrinsic goal orientation, task value and self-efficacy. As a result of these, it is inferred that a higher attitude towards biology scores had better intrinsic goal orientation, task value and post self-efficacy scores in learning cycle classroom. According to the results in teacher-centered classroom, post attitude towards biology was related to prior attitude towards biology ($r=.808, p=.000$), post intrinsic goal orientation ($r=.658, p=.002$), post task value ($r=.824, p=.000$), post self-efficacy ($r=.579, p=.001$). Prior attitude towards biology was related to post intrinsic goal orientation ($r=.649, p=.001$), post task value ($r=.860, p=.000$), post self-efficacy ($r=.519, p=.000$). Students' attitude towards biology was related with intrinsic goal orientation, task value and self-efficacy. It is concluded that students having higher attitude towards biology scores had better intrinsic goal orientation, task value and post self-efficacy scores in teacher-centered classrooms.

Table 3
Correlation Coefficients among Variables for Each Group

Group	Preach	Postach	Preatt	Postatt	Postint	Postext	Posttask	Postcon	Postself	Posttest	Spskill	
Experimental Group	Preach	-	.551**	-.116	.027	-.117	-.109	-.195*	-.226	-.141	-.168	.465**
	Postach		-	-.241	-.311	-.139	-.088	-.257	-.194	-.057	-.245	.437**
	Preatt			-	.714**	.324	-.126	.694**	.285	.309	.046	-.357*
	Postatt				-	.534**	-.265	-.746	.234	.355*	-.050	-.176
	Postint					-	-.007	.628**	.246	.499*	.204	-.148
	Postext						-	-.089	.023	.002	.429*	-.007
	Posttask							-	.240	.389*	.211	-.256
	Postcon								-	.481**	.079	.031
	Postself									-	-.210	.094
	Posttest										-	-.226
	Spskill											-
	Control Group	Preach	-	.071	-.050	-.024	-.174	-.041	-.170	-.251	-.175	.026
Postach			-	-.013	.070	.129	.165	.067	-.051	.228	-.092	-.006
Preatt				-	.808**	.649**	.338	.860**	.047	.519**	.205	-.009
Postatt					-	.658**	.170	.824**	.199	.579**	.131	-.031
Postint						-	.199	.668**	.262	.706**	.317	-.201
Postext							-	.414**	.193	.392*	.608**	-.028
Posttask								-	.243	.632**	.374*	-.191
Postcon									-	.450**	.139	-.162
Postself										-	.334	-.291
Posttest											-	-.177
Spskill												-

** Correlation is significant at the .01 level *Correlation is significant at the .05 level

Analysis of the results revealed that learning cycle instruction promoted preservice elementary teachers understanding. In addition to, students in experimental and control groups have many misconceptions about the human circulatory system comparing each item. Table 4 shows most common students' alternative conceptions about human circulatory system.

Table 4
Most Common Students' Alternative Conceptions about Human Circulatory System

1	Fat is not found in plasma.
2	Under normal physiological conditions, all plasma proteins help material transport across capillaries.
3	Serum is plasma to which necessary nutrients for a patient are added.
4	Veins have the lowest blood pressure compared to other blood vessels because veins have the thinnest walls.
5	Low blood velocity in capillaries is due to material exchange through capillaries.
6	Low blood velocity in capillaries is due to their small diameter.
7	In systemic circulation, percent of blood volume in the arteries, capillaries and veins is equal.
8	If blood pressure in capillaries increased above normal level, tissues would get fewer nutrients.
9	Contraction of the heart is one of the factors that help blood return to the heart.
10	When environmental temperature increases, skin takes a red appearance because blood pressure increases.
11	The thick and elastic wall of arteries helps maintain high blood pressure.

In the item that related to the substances found in plasma, while 48.6% of students in the experimental group answered correct response, 40.6% of students in control group selected this correct response as "bile pigments are not found in plasma" after the treatment. However,

28.1% of students in control group had this alternative conception which was stated as “fat is not found in plasma” (Misconception 1). After the implementation while 45.7% of students in the experimental group chosen the correct response that “under normal physiological conditions, all plasma proteins help maintain blood pressure”, this value was 34.4%. The proportion of the most frequent misconception was 40.6% in the control group. This alternative conception was that “under normal physiological conditions, all plasma proteins help material transport across capillaries” (Misconception 2). In another item, students have requested to the true description of serum. After the treatment 91.4% of students in the experimental group chosen the correct description that “serum is the liquid remaining after blood plasma is clotted”. Only 68.8% of students in the control group marked this correct description. 28.1% of students in the control group held misconception item which was expressed as “serum is plasma to which necessary nutrients for a patient are added” (Misconception 3). While 20% of students in the experimental group answered the reason correctly that “veins have the lowest blood pressure compared to other blood vessels because vessels offer resistance to blood movement”, only 3.1% of students in the control group answered this item correctly. After the implementation, 34.4% of the students in the control group have misconception that “veins have the lowest blood pressure compared to other blood vessels because veins have the thinnest walls” (Misconception 4). In another item related with the velocity of blood in capillaries, students were inquired reasons of blood velocity is the lowest in capillaries. Whereas 57.1% of students in the experimental group selected the desired reason that “velocity of blood is the lowest in capillaries due to the high cross-sectional area of capillaries” in this item, rate of students this correct response in the control group was only 25% after the treatment. It was seen that there existed difference among students response in the experimental and the control groups. In addition, the most widespread misconception was “velocity of blood is the lowest in capillaries due to the material exchange through capillaries”. 46.9% of the students in the control group held this misunderstanding (Misconception 5). After the implementation, another alternative concept reported in the control group (18.8% of the students) was misconception which “velocity of blood is the lowest in capillaries due to their small diameter” (Misconception 6). Another important misunderstanding was about the distribution of blood volume in vessels in systemic circulation. In this item students were requested to think the percent of blood volume in vessels comparatively. After the implementation, 54.3% of students in the experimental group answered the correct response that “in systemic circulation, percent of blood volume in the veins is highest, while the blood volume in the capillaries is the lowest”. Only 31.3% of students in the control group answered this item correctly. In addition, 34,4% of the students in the control group thought that “in systemic circulation, percent of blood volume in the arteries, capillaries and veins is equal” after the treatment (Misconception 7). The alternative conceptions detected in the control group were that “if blood pressure in capillaries increased above normal level, tissues would get fewer nutrients” (25% of the students), “contraction of the heart is one of the factors that help blood return to the heart” (31.3% of the students), “when environmental temperature increases, skin takes a red apperance because blood pressure increases” (34.4% of the students), “the thick and elastic wall of arteries helps maintain high blood pressure” (50% of the students). It can be concluded that the learning cycle instruction was more powerful about eliminating the students’ misconceptions on human circulatory system and improving understanding than teacher-centered instruction.

Discussion, Conclusion and Suggestions

This study aimed to examine the effectiveness of learning cycle instruction on preservice science teachers’ conceptual understanding of human circulatory system concepts and students attitudes and motivation. Therefore, developing instructional strategies to overcoming of alternative conceptions for all science subject areas is very important for enhancing meaningful learning. The students in the experimental group engaged in more hands-

on activities related to real-life examples and conducted based-on inquiry based activities during the learning process instead of the traditional teacher-centered method. The results of this study show that the learning cycle instruction significantly better gains of scientific circulatory system concepts than expository teaching. These findings of the current study are also supported by the results of several previous studies in that the learning cycle promote learning biology concepts (Arslan et al., 2015; Atay, 2006; Gök, 2014; Sam, Owusu & Anthony, 2018; Yılmaz et al., 2011). Research has revealed that in the learning cycle classrooms students improve success in science. The instruction based on learning cycle may enhance students' conceptual understanding of circulatory system concepts because students were actively in scientific research processes during each phase of the learning cycle. Learning cycle instruction also provides students experiences to work in groups and develop effective collaboration with peers. The students in the experimental group were constructed their knowledge by actively involved in their process of learning, engaged in their daily life around them with the constructivist approach. Because of student activities, investigations, laboratory works, collecting data and presenting their findings, interpreting information, working alone, acquiring new information, and persisting at given tasks, application of that knowledge to life situations as a unit of work based on the 5E instructional model support to develop 21st century skills such as problem solving, self development, communication, and systems thinking. Therefore using the widespread acceptance of the BSCS 5E instructional model is suggested in the development of curriculum materials for 21st century skills (Bybee, 2009).

When the significance of what the learners already know is taken into consideration, it was accepted that being aware of the students' misconceptions is crucial for in-service and pre-service teachers training. If teachers are aware of the misconceptions, this situation is a positive effect on students' science knowledge (Sadler & Sonnert, 2016). Preservice teachers should be better trained and make preparations to teach science concepts effectively in terms of science content and pedagogy instruction in order to afford quality in science education. These findings of the current study advase to teachers applying the learning cycle to eliminate their alternative conceptions and enhance students' understanding. Some studies describe providing opportunities for preservice teachers learning cycle as a model for our instruction can be important in developing a new way of teaching as a teacher (Hanuscin & Lee, 2008; Lindgren & Bleicher, 2005). Moreover, several studies emphasized that science teaching courses have a positive effect in increasing the self-efficacy of the pre-service teachers in science teaching and it is adviced to implementing more practices in these courses in teacher education (Flores, 2015; Kaygısız, Uygun & Uçar, 2020; Kazempour & Sadler, 2015). It can be critical to providing opportunities for preservice teachers learning cycle and inquiry-based instruction and to support preservice teachers in experiencing the learning cycle as a teacher in teacher education programs (Hanuscin & Lee, 2008; Kazempour et al., 2020). We as teacher educators identify biological misconceptions of preservice teacher students, develop different approaches and techniques to remediate such misconceptions to enhance understanding, and then implement in teacher education programme these strategies to help them develop preservice teacher students' self-efficacy.

The results obtained from the attitude and motivation scale in the research revealed that there are no significant differences with regard to attitude towards biology lessons and motivation between the experimental and control groups. These findings show consistency with the results of other searches on the learning cycle in the literature (Güzel, 2016; Uyanık, 2016; Yılmaz, 2007). One of the reasons for the situation can be thought that the limited time of implementation in the study can not be enough to improve students' attitude and motivation.

In the current study, prior knowledge and science process skills were related to students' science achievement in the learning cycle classroom. It is assumed that higher prior knowledge scores and high science process skills had better comprehending of the human circulatory

system in the learning cycle classroom. In addition to these relations, intrinsic goal orientation, task value and self-efficacy were associated with students' attitude towards biology in the learning cycle classroom and expository classroom. It can be concluded that students having higher students' goals and value beliefs for science, their beliefs about their skills to succeed in science had better attitude towards science lessons.

In the light of the results of this research, it can be suggested that teacher education curriculums developers should also take into consideration new teaching strategies to get the chance to improve conceptual understanding and try to eliminate their misconceptions for preservice science teacher. Teachers should be informed about students difficulties, misconceptions and inquiry-based learning methods. They should implement new instructional plans according to implementation of these teaching strategies for both conceptual aspects of learning and affective dimensions. Similar studies can be designed with different biology subjects and other study groups with longer treatment periods.

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Interior Architecture Undergraduate Students' Distance Learning Experiences of Interior Architecture Project Course*

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Abstract: Distance education is an education model in which learning resources and learners are far from each other in terms of time and space. Distance education started by mail in the past and continues through internet technologies today. As a result of the global Covid-19 epidemic, the use of the distance education model is gaining importance. In this process, the use of distance education model has begun to be compulsory in art and design disciplines where practice-oriented and face-to-face education is important. This study focuses on the application of Interior Architecture Project III course with distance education model in Interior Architecture undergraduate education which is an art and design disciplines. Students' opinions are taken on the "Interior Architecture Project III" course, which is conducted with distance education by using the phenomenological approach (phenomenology), one of the qualitative research methods. Accordingly, the opinions of 25 interior architecture third-year undergraduate students from a state university in Turkey were taken. Participants received a project assessment for this course, through text and drawing, for 14 weeks through distance learning. In determining the participants, it is obeyed that they have taken this course face to face and on a voluntary basis. The data obtained are evaluated through content analysis. According to the results of the study, students state that the feedback they receive during the distance education process is more understandable and permanent compared to face-to-face education. The inadequacy of the tools for computer technologies in the students' hands in terms of equipment creates a low motivation in students. At the same time, it is understood that the students who are with the family physically and psychologically do not have enough comfort conditions to study. It is observed that there is no significant difference in the education preferences of the students between face-to-face and distance education approaches. It is thought that this study can provide guiding data in order to increase the quality of distance and hybrid education models.

Keywords: Distance education, Google classroom, Interior architecture, Interior design project

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Introduction

Distance education entered the literature by taking place in the catalog of the University of Wisconsin in the United States in 1892. The history of distance education goes back to the first quarter of the 1700s. The development of postal technologies has initiated distance education activities by letter. The spread of radio and television technologies in the 1900s led to the start of mass distance education. By the 1960s, open universities began to be opened and the use of distance education became widespread (Kaya, 2002). In the 1980s, distance education was carried out by teleconferencing, and with the widespread use of internet technologies in the period from the 1990s to the present, distance education began to be provided through devices such as computers, tablets and mobile phones (Moore & Kearsley, 2011). Today, it is emphasized that the most prominent of the distance education tool is computer technologies. Tuncer and Taşpınar (2008), on the use of computer technologies in distance education,

- Dissemination of education,
- Efficient use of resources,
- Functionality of education,
- Ensuring the standard in education,
- Preventing inequality of opportunity,
- Ensuring the supply-demand balance,
- It recommends the use of computer technologies in education in terms of increasing the quality of education.

Distance education is based on the use of communication technologies for educational purposes among individuals who are physically far from each other. Moore and Kearsley (2011) define distance education as the communication between instructors and learners for the purpose of teaching and training activities when they are separated from each other permanently or partially. Gökçe (2008) emphasizes that distance education is independent of time and space. According to Güneş and Güneş (2016), synchronous and asynchronous education is provided in distance education. There are materials such as e-books or videos in asynchronous education. On the other hand in synchronous education, there is an instant interaction between the trainer and the trainee. Holmberg (1995) is of the opinion that distance education is a concept carried out today through computer technologies. Schlosser and Simonson (2009) consider distance education from a broad perspective and state that it has four components. These are institutional basedness, separation of teacher and student, being able to communicate interactively and sharing text, sound recording and video. It emphasizes that the lack of one or more of these components may hinder distance education.

In distance education, Holmberg (1995) states that the student engages in self-learning activities. This situation confronts the student with the problem of feeling lonely. Holmberg (1995) states that as a solution to this, the teacher, the education program or the educational institution interacts with the student at certain times. Özer (1990) emphasizes the structure of distance education that reaches more people, requires less cost and provides a standard education opportunity in terms of education programs. Gökbulut (2021), in his study on students' perceptions and readiness for distance education, reveals that students' perceptions are moderately positive, and there is no significant difference regarding gender and age. Fojtik (2018) emphasizes that in distance education, the grades of undergraduate students in their first year are lower compared to the grades of students who received face-to-face education in previous years. However, King, Young, Richmond, and Schrader (2001) state that education is an individual cognitive process, and distance education, as one of the practices prepared within this framework, will be more effective in education. Giryakova (2009) thinks that in order to increase the effectiveness of distance education, arrangements should be made in accordance with student needs and student profiles. Guri-Rosenblit (2005) establishes the relationship of

information and communication technologies with distance education and e-learning. Accordingly, she states that e-learning activities are incompatible with the concept of distance education. He emphasizes that distance education is at a professional level, rather than a mere information-gathering function, and progresses based on curriculum and process, according to e-learning.

In this research, distance education is evaluated within the framework of Interior Architecture education. In the project course conducted with distance education, the advantages and limitations of the students' project design and feedback processes are determined. According to this, conclusions are drawn about the education preferences of the students. It is expected that the results will be a guide to all art and design education disciplines.

Methodology

In this study, which is about the experiences of interior architecture 3rd year undergraduate students in the Interior Architecture Project course conducted with distance education, the phenomenological approach, one of the qualitative research methods, was used. The phenomenon of this research is to take the interior design project course through distance education. The research focuses on the experience of the participants in the interior architecture project course in distance education.

Participants continued the Interior Architecture Project III course, which has the most ECTS credits, over the Google Classroom application during a course period (14 weeks). The participants uploaded their project design assignments that they regularly do every week to this application. The lecturer of the course gave feedback to the students' assignments. Feedback was provided through written expression and drawing on the student's project. At the end of the course, the students obtained an interior design project ready to be implemented.

Participants

Purposive sampling method was preferred in determining the participants. Purposeful sampling is used to select sources that are thought to have knowledge about phenomena for a particular purpose. Among the purposive sampling methods, participants are determined by criterion sampling. Accordingly, participants who meet certain criteria are included in the study (Patton, 1987).

In this research, the participants were selected considering the criteria of having previously taken the Interior Architecture Project course face-to-face and being a volunteer for the research. 25 Interior Architecture and Environmental Design Department students attending a state university in Turkey who meet these criteria are the participants. 18 of these students are female and 7 are male. Age ranges vary between 20-25 for female students and 19-25 for male students.

Data Collection Tools

In this study, the opinions of the participants were obtained in written form through open-ended questions. There is no length restriction in answering the questions. In the preparation of the research questions, the following questions were asked by scanning the relevant literature and in line with expert opinions:

- 1) How would you evaluate the course of Interior Architecture Project III being held remotely?
- 2) How would you evaluate getting a written and drawing evaluation from the lecturer in the Interior Architecture Project III course?

3) If there are any aspects that you think are advantageous in conducting the Interior Architecture Project III course remotely, could you please explain with the reasons?

4) If there are any aspects that you think are disadvantageous in conducting the Interior Architecture Project III course remotely, can you explain with the reasons?

5) If you have the choice to take Interior Architecture Project Courses face-to-face or remotely, which would you prefer? Can you explain why?

6) If there is a topic you want to add, please specify.

Analysis of Data

According to Weber (1989), the content analysis method is a method in which the results are revealed by processing the evaluations obtained from the texts. Accordingly, thematic and descriptive analysis methods should be used. In content analysis, there are coding, categorization and sampling stages. The numerical, percentage and ratio values that the codes frequently repeat are expressed as frequency analysis.

In this study, content analysis method was used to analyze the data. Themes and sub-themes were determined according to the answers given by the participants. Sub-themes were given and interpreted with their numerical values (frequency values).

Themes and sub-themes were generated via the coding key. Four experts were determined by the impartial assignment method. In order to ensure the reliability of the study, the reliability formula of Miles and Huberman (1994) was used. Three experts were asked to do the coding. According to the answers given, the codes of disagreement and consensus were marked. According to this, it is seen that the agreement of the agreed codes is 84%

Results

As a result of the analysis of the data, two main themes emerged. These main themes are “Limitations of Distance Education” and “Advantages of Distance Education”. The sub-themes of these two themes are presented in Figure 1.

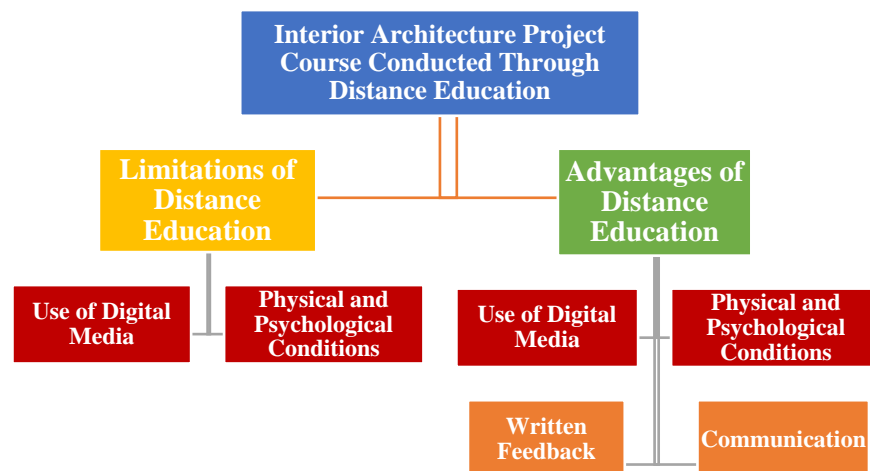


Figure 1 Themes and sub-themes formed as a result of data analysis

The sub-themes of the “Limitations of Distance Education” theme are “Digital Media Use” and “Physical and Psychological Conditions”. The sub-themes of the " Advantages of Distance Education" theme are "Use of Digital Media", "Physical and Psychological Conditions", "Written Feedback" and "Communication".

In terms of the limitations of distance education, the codes formed under the theme of digital media use are given in Table 1.

Table 1
Limitations of Distance Education 1

Sub-themes	Code	Frequency
Use of Digital Media	Feeling that the student cannot adequately communicate with the lecturer	7
	Thinking that face-to-face feedback is more effective	6
	Lack of technology literacy	4
	Students do not interact with each other's designs	3
	Decreased acceptance of students' designs	3

According to Table 1, seven students feel that they cannot adequately communicate with the lecturer. Students emphasize that communicating with the lecturer from a distance is not effective in learning. Student 23: *“In face-to-face education, I was entering the teacher's room and asking my questions, and at that moment I got my answer immediately. I could understand better because I went to the teacher.”*, Student 14: *“The criticisms I get from the digital environment are very target-oriented, I would like to talk to the teacher for a long time as before and ask my project to be evaluated. I think this process is more effective.”* expressed his views. Six students state that face-to-face project course feedback is more effective. Student 2: *“When I could not understand what the teacher said in face-to-face lessons, I would immediately ask him a question and clear my mind. But now I am writing my question to the teacher. I forget why I asked until he only answers.”* Four students stated inadequacy in terms of technology literacy. Students express that they have problems in the use of digital media. Student 19: *“It took 3 weeks until I understood the Classroom program and figured out how to upload my project. While I was waiting for the teacher's evaluations for 2 weeks, he had already made it and sent it.”* expressing his opinion, expressed his lack of basic skills to use the program. Three students state that they have no interaction with each other's project designs. In face-to-face education, students have the opportunity to listen to each other's project design feedback during the lesson. It is understood that this situation increases the motivation of the students. Student 7: *“I realized that I learned more while listening to the project evaluations of my friends, apart from the evaluation of my own project. Especially until the end of the lesson, I would stay to listen to my friends. We are all alone in distance education, I only stay with what the teacher said for me.”* expressed an opinion. Three students highlight the decline in adoption of their designs. They state that the sense of belonging disappears because the students cannot sufficiently connect with their designs in the digital environment. It is thought that with the printed projects in face-to-face education, the design perception leaves the virtual world and gives reference to the real world. Student 4: *“When I print out my project every week and take it to the teacher, I used to make corrections on it with my own hand drawing, I liked to touch the paper. I used to work on my project with hand drawing first. But now we always do it from the computer. I do not feel that my project is mine. The project turned into something soulless.”* stated that his belonging to the project he prepared with his opinions decreased.

Table 2
Limitations of Distance Education 2

Sub-themes	Code	Frequency
Physical and Psychological Conditions	The inability of living with the family to create a suitable working environment	9
	Insufficient Availability of Digital Media Tools	5

The second theme in terms of the limitations of distance education is physical and psychological conditions. According to Table 2, nine students state that living together with

their family does not create a suitable working environment. Students state that they have to share the same environment with their siblings and their course concentration is negatively affected by this situation. Student 1: *“We are 4 siblings at home, we share 2 rooms. We all go to our own lessons. Internet speed is splitting. I can't be comfortable in the room so that my sister doesn't lose her concentration when my class is over. Studying is difficult.”* Five students emphasize that the digital media tools they have are not sufficient. Students focus on the issues that they do not have an internet connection and that their computer hardware is insufficient. Student 15: *“I was using the computers in the computer lab in face-to-face education. I can't afford to buy a laptop. No matter how difficult it is in distance education, I try to draw projects from my mobile phone.”* Student 6: *“Your computer must be powerful in distance education, otherwise the education will be unpleasant. My computer has difficulty opening applications.”* It is seen that some students in distance education do not have a suitable working environment and sufficient equipment.

Table 3
Advantages of Distance Education 1

Sub-themes	Code	Frequency
Written Feedback	Elimination of the risk of forgetting returns	17
	Increasing the intelligibility of feedback	12

Table 3 shows the advantages of distance education aspects of distance education. Accordingly, there are two sub-themes under the written theme. Seventeen students stated that the risk of forgetting the feedbacks disappeared. It is understood that giving written feedback in distance education compared to verbal feedback in face-to-face education contributes positively to the effectiveness of the evaluations made about the student's project. Student 20: *“I used to forget my teacher's project criticisms in the lesson, I used to tell my friends to listen to my criticism. Now that I received the teacher's requests in writing, that situation has disappeared. Words fly away, writing remains.”* Student 19: *“A few days after my project was evaluated, I would start working on correcting my project, but I still had to clear my head to remember what the teacher said. After the project evaluation, I had to work immediately. Thanks to Classroom, I can always access what the teacher says from his own mouth.”* Twelve students emphasized that the intelligibility of feedback increased. Student 17: *“In the lesson, the teacher was saying everything at once, I had difficulty in understanding some things. With the written evaluation in distance education, I read what the teacher says in writing until I understand it, if necessary, I make friends read it.”* It is thought that the psychological and physical condition of the student may affect the understanding of verbal feedback. It can be said that the written feedbacks made in the digital environment are more understandable when they can be analyzed independently of time and environment.

Table 4
Advantages of Distance Education 2

Sub-themes	Code	Frequency
Use of Digital Media	Effectiveness of digital design tools in drawing and presentation	15
	Reduction in course costs	12

In Table 4, the sub-theme and codes of digital media use are given in terms of the superior aspects of distance education. According to this, the effectiveness of digital design tools in drawing and presentation is stated by fifteen students. Students have the opportunity to use digital design tools more intensively in distance education. Over time, students see digital design tools as effective in terms of design and aesthetics in their project drawings and presentations, as they have more experience in this subject. Student 4: *“As a result of working so much in distance education with computer programs, I discovered new applications. My*

projects got better with the new rendering engines in 3D visualization.” Student 12: *“I used to present my project in face-to-face education. Now I am preparing my project with presentation programs, I think I can express myself better.”* Twelve students stated that the use of digital media reduces course costs. Student 1: *“I used to wait at the stationery for the project critique every week, for me the best thing about distance learning was that there were no output costs.”* expressed his opinion.

Table 5
Advantages of Distance Education 3

Sub-themes	Code	Frequency
Communication	Ability to communicate with the lecturer without the constraints of time and space.	19
	Flexible course and working hours	16

In Table 5, there is the theme of communication in terms of the superior aspects of distance education. Accordingly, nineteen students stated that they were able to communicate with the instructor of the course without time and space constraints. Student 21: *“I can text to the teacher whenever I want from the classroom application. When the teacher is available to me, he usually comes back a day later. In the past, I should have gone to school and sought him out.”* The students stated that they communicated more easily with the lecturer. Sixteen students emphasize flexible study and study hours. It can be said that digital environments have advantages over face-to-face education in communication. Student 17: *“I can study whenever I want without waiting for lesson hours, I can open the teacher's project evaluations whenever I want and work on my project.”* He emphasized the flexibility of time with his view.

Table 6
Advantages of Distance Education 4

Sub-themes	Code	Frequency
Physical and Psychological Conditions	Comfort of living with family	9

According to Table 6, nine students talk about the comfort of living with their families in terms of physical and psychological conditions. This comfort can be evaluated financially and psychologically. It is thought that students feel safe with their families. Student 19: *“With my family, I can focus on my studies without ever using my financial means. They make me feel like our job is just a lesson.”* stated that he was more comfortable in terms of physical and psychological conditions with his opinion. While living with the family is disadvantageous for some students (9), some students (9) have evaluated this situation as advantageous. This situation draws attention to the importance of socioeconomic status for distance education.

Table 7
Students' Education Preferences

Education Preference	Frequency
Face to Face	11
Distance Learning	9
Hybrid	5

In Table 7, the education preferences of the participants for the upcoming periods are indicated. Accordingly, eleven students preferred face-to-face education, nine students preferred distance education, while five students stated that they wanted hybrid education. Student 9: *“I have difficulty getting used to distance education, it is more beneficial to communicate directly with the teacher in face-to-face education.”*. Student 11: *“There is a physical factor such as*

being next to the teacher in face-to-face education, we can immediately ask the teacher where we do not understand, my preference would definitely be face-to-face.” He stated that he preferred face-to-face education with his opinions. Student 4: *“I have seen that distance education can also be taught, and I can even say that I enjoyed my project process more.”* Student 16: *“While distance education scared me at first, I think the process is productive.”* stated that he prefers distance education with his views. Five students choose the hybrid education model where distance and face-to-face education can be done together. Student 3: *“It would be better to have both face-to-face and distance learning, I saw that there are advantages to both. I cannot distinguish. My preference is for hybrid.”* With this view, the student prefers a hybrid education where he can benefit from the advantages of both education methods.

Conclusion and Discussion

The limitations and advantages of the Interior Architecture Project III course conducted by distance education, and the results of their preferences for education are given below.

In distance education, the effectiveness of feedback in terms of the risk of being forgotten and intelligibility comes to the fore. Compared to face-to-face education, students experience low motivation due to the lack of written feedback. Yıldız (2020) emphasizes that e-mail and mobile messaging are used as feedback methods in distance education and that students' satisfaction levels are high in terms of feedback methods and effectiveness. Feedbacks, in which written expressions are supported by drawings, enable students to increase their achievements by directing them to target-oriented work in terms of interior design project course.

Distance education can be evaluated in two ways in terms of communication. The first is the communication between the lecturer and the students. Accordingly, the potential of the students to reach the lecturer at any time over the digital environment comes to the fore. This situation is a factor that increases the course gains of the students. Erzen and Ceylan (2020) mention that an effective communication environment cannot be established with the instructor in distance education models. This situation makes students question the quality of education. However, in this research, it can be said that the use of Google Classroom application has advantages in terms of effective communication. Despite this, it should not be overlooked that there are advantages to communicating face-to-face with the lecturer. It is thought that this situation may be shaped depending on the personal development characteristics of the students. It can be said that face-to-face education is more effective for students whose verbal communication skills have improved compared to their written communication skills. The second is the communication that students establish with each other. Compared to face-to-face education, students cannot experience each other's project designs. According to the results of their research with the nursing department students, Süt and Küçükkaya (2016) define this situation as an alternative learning environment. Aydın (2020), on the other hand, emphasizes that distance education should be learner-centered and learners should be able to cooperate in the computer environment. For this purpose, it is recommended to create an environment where students' projects can be shared and their feedbacks can be read within the scope of protection of personal data in distance education.

The results related to the study process are evaluated physically and psychologically. Work environment components in distance education are digital tools and a physical space requirement. The technical inadequacy of digital tools and the fact that it takes time to learn their effective use negatively affect the achievement of gains. However, if these factors are not encountered, digital tools become more effective than face-to-face education in terms of drawing and presentation techniques. Al and Madran (2004) mention that the hardware and

software of technical tools should be upgraded and standardized in this regard in web-based distance education. It is foreseen that student gains can increase with such a standardization regarding the interior architecture project course.

It is understood that study space is an important component in distance education. The comfort level of the space affects the gains positively or negatively. According to Kaya, Erden, Çakır, and Bağırşakçı (2002), unlike classroom environments in distance education, students are independent in terms of space and time. This highlights the importance of the workplace. The fact that the choice of place in distance education is limited to the living environment can negatively affect motivation due to noise pollution and human density.

According to the results of education preference, no significant difference was found between face-to-face education and distance education. Both education models have limitations and advantages. Arat and Minister (2014) state that distance education will not replace traditional education. On the other hand, it is emphasized that distance education is advantageous for individuals who do not have the opportunity to receive physical education. However, the hybrid education model is not preferred compared to these models. It is thought that the fact that the students have not experienced the hybrid education model is an important factor in the emergence of this situation. It is thought that the reliability of the results related to the hybrid education model preference can be achieved with the data obtained as a result of conducting the course with the hybrid education model.

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Is my Frog Faster? A Race at Home

Yilmaz SAGLAM*, Ali Derya ATIK**

Abstract: This article introduces a play-based activity that aims to assist pupils to primarily appreciate the concept of speed. An integrative STEM education approach was adopted in determining the objectives of the study. The activity particularly aimed to improve skills in using tools and materials strategically, collecting data, reasoning abstractly and quantitatively, and describing the logical connection between distance and time. An authentic learning environment was created. Two pupils with the assistance of their parents built, colored, and participated in a jumping frog contest. During the contest, they measured distances and time intervals, created a data table, and discussed and calculated the speeds of various frogs. In every action, the pupils were asked to focus on particular aspects of the activity setting. They initially focused on how to fold a paper frog, which was the first contextualizing action where they have seen the connection between scratch paper, folding, and a jumping frog. Next, they were asked to focus on race where they realized the connection between measuring distance, taking time, and creating a data table. In the last contextualizing action, in the process of determining the champion, they recognized the relationship between distance, time, and speed.

Keywords: Activity, Integrative STEM education, Play-based, Speed

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Introduction

Teaching Philosophy

Vygotsky (2016) sees play a leading activity in the cultural development of the child. To him, development begins on social (inter-psychological) plane as actual relations between child and adult and then transforms into individual's mental functioning on a psychological plane (Ibid, 1978). Meaning-making is thus a social process (Wertsch, 1991) rather than a psychological one. Inspired by the works of Vygotsky (1983, 1993), van Oers (2001) viewed the attainment of higher mental functions (abstraction) as a discursive process of taking a point of view and progressively focusing on particular aspects of an activity setting, a concrete situation. Van Oers named this process contextualizing action. In this action, through focusing on particular and increasingly isolated elements of the setting, the learner begins to realize how those elements that were not thought to be related to each other were actually related (Saglam, 2015). This action is similar to child-mother interaction (Rogoff, 1990). In the present paper, we believe that a meaningful understanding of "speed" could be developed, in the context of a play, by having children participate in several embedded situations addressing distinct skills and understandings where children get an opportunity for building, observing, measuring, recording, computing, communicating, and reasoning abstractly and quantitatively.

Integrative STEM Education

In determining the objectives of the activity, integrative STEM education approach (Sanders, 2009) was adopted. Unlike traditional S.T.E.M. education, in which each discipline is taught disconnectedly, integrative STEM education combines two or more STEM disciplines. It integrates concepts and practices of science and/or mathematics education with those of technology and engineering education. By participating in an integrative STEM learning environment, students likely acquire not only technological or engineering concepts but also those from mathematics, science, and/or art.

Learning Objectives and Connection to NGSS & CCSS

Table 1, 2 and 3 shows objectives and connection to NGSS & CCSS.

Table 1
Learning Objectives

Students who demonstrate understanding can;
<ul style="list-style-type: none"> • select appropriate materials to build the fastest frog • design/build the frog by folding and colouring • differentiate relative sizes of such units like m, cm, min, and sec. • use tools and materials strategically to measure the distance and time • measure properly distance and time in SI units • create and fill in a data table • analyze and interpret data to make sense of phenomena • reason abstractly and quantitatively • describe the rational connection between distance and time • solve related problems from different contexts

Table 2
Connection to the Next Generation Science Standards (NGSS Lead States 2013)

Dimensions	Classroom Connections
Science and Engineering Practices	(1) Analyze and interpret data, (2) Use mathematics and computational thinking, (3) Construct explanations (for science) and design solutions (for engineering), (4) Obtain, evaluate, and communicate information.
Disciplinary Core Ideas	Not included
Crosscutting Concepts	(1) Patterns (2) Scale, proportion, and quantity

Table 3
Connection to the Common Core State Standards (NGAC and CCSSO 2010)

ELA-Literacy	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
Mathematics	Reason abstractly and quantitatively; use appropriate tools strategically.

The Concept of Speed

In order to measure how fast an object was determined by the concepts of speed or velocity (Hewitt, Suchocki & Hewitt, 1999, pp 12-19). Both terms refer to the rate that an object covers in a period of time. Yet, there is a distinction between the two concepts. Velocity is a speed in a certain direction, but speed indicates how fast an object is moving without any concern about its direction. Unlike velocity, speed is a scalar quantity, a magnitude or numerical value not depending on object's direction. An object with a high speed covers a large distance in a short period of time. On the other hand, an object with a zero speed indicates no motion at all. Distance is also a scalar quantity and a measure of the length of the path the object takes regardless of its direction. For long distances, kilometers per hour (km/h) and, for short distances, meter per second (m/s) or centimeter per second (cm/s) are used. The speed that an object has at any instant is called instantaneous speed, which is, for instance, the one depicted by the speedometer of a car at a particular point in time. However, objects rarely move at constant speed. Average speed is generally spoken. It does not take the speed variations into account including stops. In the present activity, the average speeds of frogs are determined using the following formula:

$$\text{Average speed} = \frac{\text{Distance (cm)}}{\text{Time (s)}}$$

The Activity

On Covid-19 lockdown period, children were unfortunately trapped in their rooms and kept out of formal education. This brought us to think of and design a play-based activity that could easily be carried out by parents at home and, of course, by teachers in the classroom. The present activity aimed to help pupils appreciate the concept of speed. Accordingly, a play-based activity was designed and two children, a fifth grader (11 years old, boy) and a fourth one (10 years old, girl), participated in the play. Children played with their own parents at their own homes.

Step 1. Building a Jumping Frog

The activities started with building a paper frog. The paper frog is able to jump pretty far if it is pressed on its back. How far it can jump depends on many variables such as size, paper type, stiffness, folding quality, and so forth. A colour or ordinary paper, scissors, and crayons are the primary materials necessary in constructing paper frogs. In order to build one, sitting on the floor with their children, the parents initially carried out an online search with a key word, “origami jumping frog”, and a number of related videos came forward. The parents choose the one that had seemed easy to grasp and track. They watched and followed the directions in the video.

By cutting the edges of the paper, folding it up and down, shaping the legs, and coloring, the children and their parents eventually ended up with a number of good-looking frogs. Yet, this process was not as easy as expected. The children were not always able to follow all the directions without parent assistance. In such cases, the parents stopped the video, explained, and showed their child how to fold. It seemed following all the directions in the video was a difficult task for the children. Furthermore, every time the children fold the paper, because the paper gets thicker, folding became harder. On the other hand, it was seen that the children got much better in building the frogs every time they construct one. When the frogs were ready for competition, the children were asked to color them. According to children, this was the most fun part.

Safety consideration

Before the activity, parents must alert their children to the dangers of improper use of scissors. Injuries could be prevented by taking such simple precautions as (1) informing children about how to use scissors safely,(2) using them for the only intended purpose, (3) working in well-lighted areas, (4) focusing merely on the task, (5) ceasing to use the scissors when something distracts, (6) insisting on cutting paper in a direction away from their fingers, hands, arms, and body, and (7) urging them not to run around with scissors on hand. Image 1-6 shows building steps of the frogs.

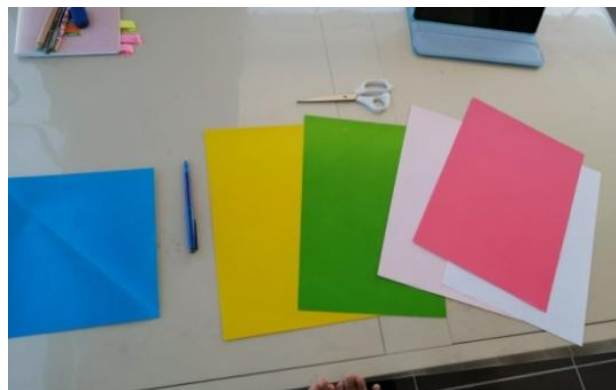


Image 1. Ready for building up frogs



Image 2. Cutting the edges of the paper



Image 3. Folding the paper up and down

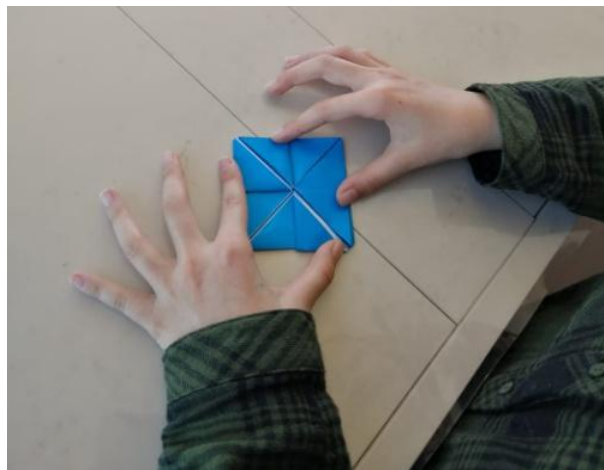


Image 4. Forming the legs



Image 5: Coloring the frog



Image 6: Frogs are ready for a race

Step 2. The Contest

A detailed plan for the activity was made before the race. If each racer was given the same duration, the champion would be the distance with the most progress. On the other hand, if each competitor was given the same distance, the champion would be the one that finished the race as soon as possible. In either case, the concept of speed would not be required in determining the champion. Therefore, it was decided to give the racers differing durations. Before the race began, a start line was drawn on the floor. Frogs competed one after the other, not simultaneously. When the time given was over, the distance covered was measured in cm. Image 7 shows this measuring activity.

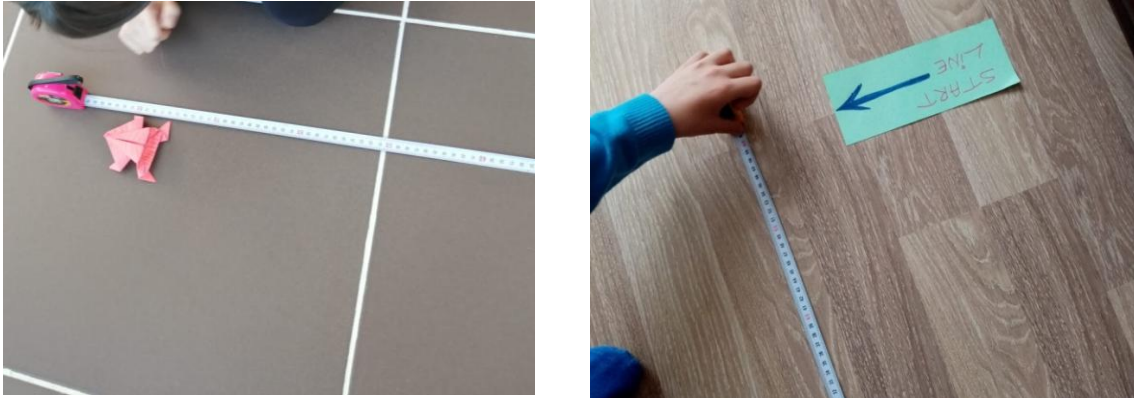


Image 7. Measuring the distance in cm

The children then created a data table. Image 8 shows this building activity.



Image 8. Creating a data

Below is the data from one of the families.

Racers	Time (s)	Distance (cm)
Blue Frog (The Child's frog)	30	380
Green Frog	20	220
Yellow Frog	10	195

The parent then asked his son, “Who is the champion?” pointing to the table above. The child said that he would be the champion because the distance his frog covered was the lengthiest. However, his older brother and the parent objected and claimed that the time intervals were not the same. Then, the child offered to calculate the distances covered in 10 seconds. In order to do that, they divided distances by 3, 2 and 1 respectively. $380/3$, $220/2$, and $195/1$ giving the distances covered in ten seconds. To the child, the frog jumping the most distance in ten seconds would be the champion. The parent found that idea quite reasonable and accurate and offered him finding out the distance in one second instead. They all agreed on this idea. Then, they carried out the following computations:

$$\text{Bluefrog} = \frac{380 \text{ cm}}{30 \text{ s}} = 12,7 \text{ cm/s}$$

$$\text{Greenfrog} = \frac{220 \text{ cm}}{20 \text{ s}} = 11 \text{ cm/s}$$

$$\text{Yellowfrog} = \frac{195 \text{ cm}}{10 \text{ s}} = 19,5 \text{ cm/s}$$

They then rounded off the numbers to two significant figures and got 13, 11, and 20 cm/s. They reached the conclusion that yellow frog was the champion. Thereafter, the parent said that the distance taken in one second is called **speed** in science. The parent further asked him three supplementary problem-based open-ended questions. Gladly, he was able to solve them all without the parent assistance. Table 4 displays questions that students are expected to respond before, during and after the activity.

Table 4
Higher Order Guiding Questions

Before, during, and after the activity students are expected to respond:

- What are the advantages and disadvantages of selecting materials (types or sizes)?
 - How can you decide which tools could be used to measure distance and time?
 - How is meter connected to cm?
 - How is minute connected to second?
 - How can you measure the distance that frog has covered?
 - How can you measure the time taken by frog?
 - How would you determine the fastest frog?
 - How is distance connected to time?
 - How would you explain zero speed?
 - How would you explain the fastest?
 - How would you explain the difference between a slow and fast object?
 - How would you explain when an object's speed is 70 cm per second?
 - How would you find the distance if aforementioned object moves fifty seconds?
-

Conclusions

The activity created meaningful embedded contexts. Each context addressed distinct skills and understandings. Searching on the web for paper frog origami (technology), building and coloring the frogs (engineering and art), measuring distance, taking time, collecting data, and creating a data table (math), and computing, communicating, and discussing the speed of frogs (math, language, and science) addressed the important elements of integrative STEM education. In every contextualizing action, the pupils were asked to focus on particular aspects of the activity setting. They initially focused on how to fold a paper frog, which was the first contextualizing action where they have seen the connection between scratch paper, folding, and a jumping frog. Next, they were asked to focus on race where they realized the connection between measuring distance, taking time, and creating a data table. In the last contextualizing action, in the process of determining the champion, they recognized the relationship between distance, time, and speed. Table 5 depicts an assessment tool for evaluating students' performance.

Table 5
Frog Activity Performance Assessment

Analytic Rubric Frog Activity Performance Assessment				
Category	Beginning (1)	Developing (2)	Accomplished (3)	Score
Preparation	No or only one material/tool is present and ready to use	At least two materials/tools are present and ready to use	All materials/tools are present and ready to use	
Designing	The child was not able to complete the frog on her/his own. The parents built all/some part of it	The child completed the frog with the help of his/her parents	The child completed the frog without any help	
Measuring	The child was not able to measure time and distance and asked for help from his/her parents	The child was able to measure time or distance properly without the help of his/her parents	The child was able to measure both time and distance properly without the help of his/her parents	
Collecting Data	The child was not able to fill out the data table on her/his own	The child was able to fill out some parts of the data table properly	The child filled out the data table completely and properly	
Computing	The child was not able to calculate the speeds of the frogs and asked for help from his/her parents	The child was able to do some parts of the calculation properly without the help of his/her parents	The child was able to do the calculation properly	
Transferring	The child was not able to calculate the related problems and asked for help from his/her parents	The child was able to do some parts of the calculation properly without the help of his/her parents	The child was able to do the calculation properly	
Overall Score				

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Women as School Administrators: Problems and Expectations (The Case of Kilis Province)*

Ali KILIÇ**, Fatih BEKTAŞ***

Abstract: In this study, it was tried to determine the problems and expectations of female school administrators in Kilis. The case study method, one of the qualitative approaches, was used in the research. The study group of the research consists of 10 female school administrators working in Kilis. The study group was formed by using the purposive sampling technique. "Semi-structured interview form" which was prepared by the researchers was used as data collection tool. Content analysis was applied in the analysis of the qualitative data. As a result of the content analysis of the data obtained from the interviews, codes, sub-themes and themes were created. As a result of the interviews, it was seen that women encountered problems related to their family and school life because of being school administrators. It was revealed that they experienced problems in time management, and problems related to their roles and responsibilities regarding family life. Regarding school life, it was seen that they had problems arising from the long working hours, social perception, and women's prejudices about themselves regarding school life. It was revealed that female school administrators have expectations such as salary increase, regulation of working hours, and regulation of responsibilities.

Keywords: Female administrators, Female school administrators, Roles and responsibilities, Social gender perception.

Okul Yöneticisi Olarak Kadınlar: Sorunlar ve Beklentiler (Kilis İli Örneği)

Öz: Bu araştırmada Kilis ilindeki kadın okul yöneticilerinin görevleriyle ilgili karşılaştıkları sorunlar ve beklentileri belirlenmeye çalışılmıştır. Araştırmada nitel yaklaşımlardan durum çalışması yöntem kullanılmıştır. Araştırmanın çalışma grubunu Kilis ilinde görev yapan 10 kadın okul yöneticisi oluşturmaktadır. Çalışma grubu amaçlı örnekleme tekniğinden yararlanılarak oluşturulmuştur. Araştırmada veri toplama aracı olarak; araştırmacı tarafından hazırlanan "Yarı Yapılandırılmış Görüşme Formu" kullanılmıştır. Elde edilen nitel verilerin analizinde içerik analizi uygulanmıştır. Görüşmelerden elde edilen verilerin içerik analizi sonucunda kod, alt tema ve temalar oluşturulmuştur. Yapılan görüşmeler sonucunda kadınların okul yöneticisi olmalarından dolayı aile ve okul hayatlarıyla ilgili sorunlarla karşılaştıkları belirlenmiştir. Aile hayatıyla ilgili olarak; zaman yönetiminde yaşanan sorunlar, rol ve sorumluluklarıyla ilgili sorunlar yaşadıkları belirlenmiştir. Okul hayatıyla ilgili olarak ise mesai süresinin uzunluğundan, toplumsal algıdan, kadınların kendileriyle ilgili ön yargılarından kaynaklanan sorunlar yaşadıkları belirlenmiştir. Kadın okul yöneticilerinin ücret iyileştirmesi, mesai sürelerinin düzenlenmesi, sorumluluk alanlarının düzenlenmesi gibi beklentileri olduğu belirlenmiştir.

Anahtar sözcükler: Kadın yöneticiler, Kadın okul yöneticileri, Rol ve sorumluluklar, Toplumsal cinsiyet algısı.

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Introduction

Gender is a multidimensional concept that explains the values, roles and judgments about the society's perception of women and men and the behaviors expected from them (Altınova & Duyan, 2013). This concept also affects the behaviors and gender-related roles and attitudes of individuals in societies with the behavior patterns given to women and men by the social structure (Parashar, Dhar, & Dhar, 2004). Behaviors, roles and responsibilities imposed on men and women cause different approaches in society for men and women. According to studies, women are expected to be self-sacrificing, dependent, emotional, sensitive, helpful and compassionate in social relations. Men are expected to be independent, rational, dominant, success-oriented, individual, pragmatist and competitive (Özen, 1998). These expectations cause discrimination between men and women in society. It can be said that this situation, expressed as discrimination based on gender, has sexist prejudices at its origin (Vatandas, 2007).

In addition, gender discrimination includes situations such as facing difficulties in working life, being exposed to harassment, injustice or oppression at work, not being a member of any union and not being able to participate in union activities (Demirbilek, 2007). Gender discrimination in working life, with its different dimensions, is among the most researched topics. Studies indicate that prejudices faced by employees and gender discrimination are an important problem in working life for both men and women. Classification of occupations as women's job or men's job is the most obvious indicator of gender discrimination in working life (Dalkıranoglu, 2006). This discrimination has an impact on the emergence of professions attributed to women and men by the society, and also the fact that women and men are chosen for a profession and tend to certain professions in their choice of profession. Considering that women have the natural ability to do fine work is regarded as the reason for their employment in certain jobs (Elson & Pearson, 1984). In the world, women mostly work in the service sector (Berber & Eser, 2008). In the service sector, it is seen that women are mostly seen in the field of education. Although their rate decreases in higher education levels in almost all regions of the world, the majority of primary school teachers are women (TÜSİAD, 2000). The fact that teaching is accepted as a female profession in almost all countries of the world is the main reason for this concentration.

In Turkey, according to 2017 data of the General Directorate of Women's Status, 52.5% of women in working life are in the service sector. This is because of the recognition that some areas in the service sector are socially appropriate for women. In the service sector, especially in the field of education, the high number of female employees is obvious. According to the 2019 data of the General Directorate of Women's Status, the number of female teachers in Turkey is more than the number of male teachers. This is an indication that the teaching in Turkey is more suited to women or that women see teaching as the most suitable profession for them to work. Although the majority of teachers are women, the situation is not the same in school management. The rate of women at managerial levels is very low compared to the rate of female teachers (Karatepe & Arıbaş, 2015). School management is mostly attributed to men and this is regarded as if it is the natural profession of men (Aktaş, 2007). Because women mostly work in the lower professional levels in the places they work and they are seen less in the upper levels, such as management, that require making decisions (Özçatal, 2009). In the studies on the subject, the low number of women in senior management attracted attention and discussions began on what should be done to prevent this situation (Çetin & Atan, 2012). The scarcity of female school administrators in the field of education, where women are mostly involved, draws attention. This situation shows that there are some problems that female teachers experienced or think they will face when they become school administrators. Due to these problems, women either stay away from school management or continue to maintain their administrative duties despite the problems encountered.

Although positive discrimination is applied to alleviate the difficulties faced by women in almost all business areas, the problems specific to women cannot be eliminated in working life. Especially women who have managerial duties face many difficulties because of their duties.

The aim of this study is to reveal the problems faced by female school administrators in the field of education, as in other business areas, to try to determine the problems that female school administrators in Kilis encounter in school and family life, and to contribute to this field by determining the expectations of female school administrators for the solution of these problems.

Considering the gender distribution of teachers working in schools affiliated to the Ministry of National Education in Turkey, it is seen that the ratio of female teachers is higher than the ratio of male teachers. The gender distribution of school administrators is totally opposite. The number of male school administrators is much higher than that of female school administrators. The rate of women among teachers and the rate of women among administrators do not match. This is a phenomenon that needs to be investigated.

In educational institutions which are crucial for the structure of society, female teachers should be school administrators in order to set an example for our children's future lives and to fully respond to various needs of our children. In order to enable female teachers to be school administrators, it is necessary to identify the problems about their being administrators and to solve these problems in line with the expectations of women. For this reason, it is thought that identifying the problems faced by female school administrators and their expectations for the solution of these problems will be beneficial for the solution of the issue. The increase in such studies is considered necessary and important in terms of contributing to the solution of the problems of female school administrators and encouraging female teachers to become school administrators.

So, based on all these explanations, the problems experienced by women due to being school administrators and determining their opinions and suggestions about these problems constitute the problem situation of the study.

The sub-problems related to this problem are as follows:

1. What are the problems encountered by female school administrators working in Kilis in school life due to being school administrators?
2. What are the problems encountered by female school administrators working in Kilis in their family life due to being school administrators?
3. What are the expectations of female school administrators working in Kilis for the solutions of the problems they encounter due to being school administrators?

Method

Model of the Research

In the study, it is seen that the number of female teachers in our country is higher than the number of male teachers. However, it is clear that the number of female school administrators is much less than the number of male school administrators. This shows a situation where there are some problems that women face in school management, these problems are noticed by everyone, but there is no in-depth understanding. Therefore, the case study design, in which qualitative data collection methods such as observation, interview and document analysis are used (Yıldırım & Şimşek, 2013), among the qualitative research designs, was preferred as a research method in order to enable the participants to present their perceptions in a realistic and holistic manner in the natural environment.

Interviews are the main data collection method of research conducted in this design. In the interviews, the situation which is the subject of the research is tried to be explained by using unstructured or semi-structured interview methods (Onat Kocabıyık, 2015). For this reason, semi-structured interview technique was used in the study. Open-ended and general questions were used to determine the problems and expectations women face due to being school administrators.

Study Group

Because the study aimed to find the problems and expectations of female school administrators working in public schools in the city center of Kilis, the study group was determined by the criterion sampling technique, which is based on the study of situations that meet a set of predetermined criteria (Marshall & Rossman, 2014). The study group consists of female school administrators working in public schools in Kilis city center in the 2020-2021 academic year. It was that a total of 26 female school administrators including 5 school headmistress, 21 vice-principals and 1 temporary assigned principal worked in Kilis city center at different education levels in the 2020-2021 academic year. Due to the limited number of headmistress working in Kilis city center, all school principals were chosen as participants. Therefore, all school principals were interviewed in the study. Among the vice principals, 5 female vice principals working in schools at different levels and agreeing to be interviewed were included in the study group. While choosing the participants to be interviewed, attention was paid to the fact that the participants were from different education levels in order to provide diversity and to reach the opinions of female school administrators in different working environments. Of the interviewed school principals, 1 works in high school, 1 in primary school, and 3 in kindergarten; 2 of the vice- principals work in primary school, 1 in secondary school, 1 in high school, and 1 in Science and Art Center. In addition, the marital status of the participants was also taken into account in order to have a more general view and to exemplify their working status in different working conditions. One of the participants is single, two of them are separated from their spouses and have children. Three of the participants have children under 6 years old. In addition, the marital status of the participants was also taken into consideration in order to have a more general view and to exemplify their working status in different working conditions. One of the participants is single, two of them are widow and have children. Three of the participants have children under 6 years old.

Data Collection Tool and Data Collection

While preparing the data collection tool, the relevant literature was scanned and the data collection tools used in studies similar to the research in the literature were analyzed. The data collection tool was prepared in 3 parts, accompanied by the researcher and the consultant. In the first part, there are 8 questions about the participant's professional information, in the second part there are 8 questions about the participant's personal information, and in the third part, there are 16 questions to determine the opinions of the participants about the subject. While preparing the data collection tool, the expert opinion was consulted, and in line with the expert opinion, the items addressing all school administrators except female school administrators and the directive items were removed from the data collection tool.

In the interviews, a relaxing atmosphere of conversation was tried to be created, in which the participants felt comfortable and they were allowed to express their opinions as they wished. In the process of obtaining the data, audio recordings of the interviews were taken, and the participants were informed that the audio recordings would only be used for the study and would not be shared with any other persons. Although the duration of the interviews varied from participant to participant, each interview lasted between 30 and 70 minutes, and in-depth interviews were conducted for more than 6 hours in total, and it was tried to reach the most appropriate data for the research purpose by trying to make the participants talk about the subject as much as possible.

Data Analysis

The audio recordings obtained from the interviews with the participants were listened to after the interviews, and a separate file was created for each participant in the Microsoft Word program and transcribed. While the participant's views were being written down, no changes were made in the views and the views were transcribed as they were. In the process of writing the opinions, the private information of the participants was not included, and the files were created by coding for the participants.(H: Headmistress, VP: Vice-Principal) Then, separate Word files were created for each

question, and the answers given by each participant to each question were brought together using codes and different text colors for the participants in order to ensure that the answers given by the participants to the same questions could be seen together. Then, codes were created based on the answers given, similar codes were brought together, first sub-themes and then main themes were created. Finally, codes were created depending on participant opinions and themes, and the themes and codes created were presented with figures. The data obtained in the research were analyzed by content analysis method. While creating the categories, coding was done according to the concepts obtained from the data.

Validity and Reliability

In order to ensure validity, the data collection tool was applied to a sample participant, and the validity was tried to be increased by removing the items that did not work and were not related the aim of the study. Open-ended, general and not leading questions were used in order to determine the problems and expectations women face due to being school administrators. Open-ended, general and non-directive questions were used to determine the problems and expectations that women experienced due to being school administrators. During the interviews, a comfortable environment was created and in-depth interviews were conducted as much as possible. During the interviews, it was ensured that no one else was present in the same environment apart from the researcher and the participant. Interviewees are usually more likely to be influenced by the researcher at the beginning of the interview. As the interview time gets longer, trust is created. For this reason, spreading the interaction between the researcher and the participant over a wide period of time increases the credibility of the data obtained from the research (Yıldırım & Şimşek, 2013). By keeping the duration of the interviews long, it was aimed to increase the validity of the study by getting more sincere answers from the participants. In order for the study to be qualitatively valid and reliable, it was tried to ensure that the themes and codes formed a consistent and meaningful whole with each other in order to ensure the integrity of the results. In order to ensure reliability in the study, the results were conveyed as they were found.

In addition, in order to increase the reliability of the study, the results were supported by different study results and it was tried to show that the resultss obtained in the study were compatible with the conceptual framework (Golafshani, 2003; Maxwell, 2008; Shenton, 2004).

Results

The codes obtained from the answers given by the participants to the questions were gathered under nine sub-themes, and these sub-themes were gathered under four main themes. The codes of the theme and sub-themes were shown separately in figures to create an overview and the results were analyzed.

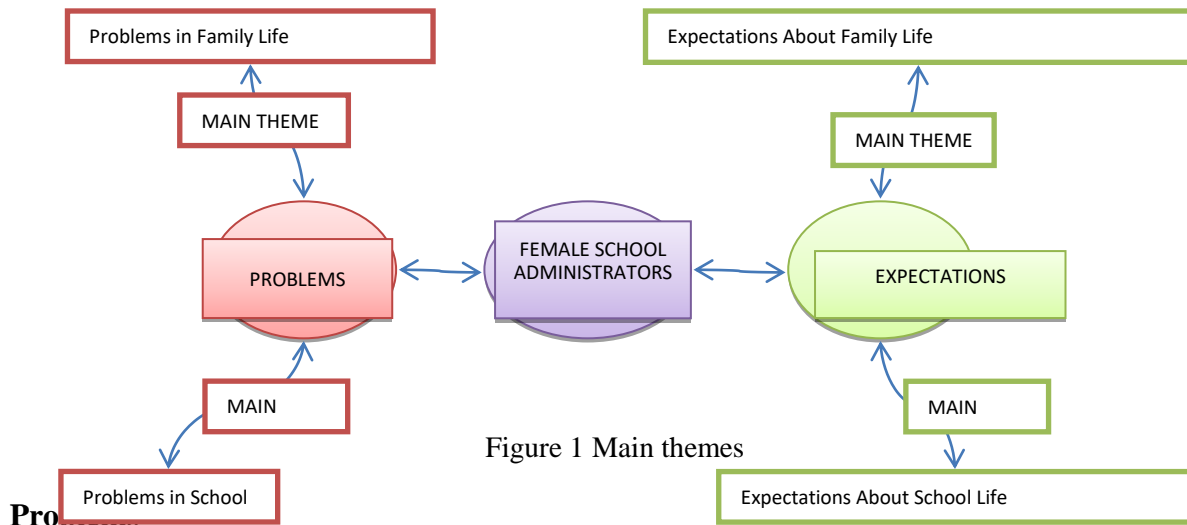


Figure 1 Main themes

The themes of "Problems Encountered in Family Life" and "Problems Encountered in School Life" were found based on the results obtained from the answers given to the questions asked to the participants in order to determine the problems faced by women due to being school administrators.

Problems Encountered in Family Life

Results obtained from participant views about the problems encountered by women in family life due to being school administrators were gathered under two sub-themes: 'Time Management' (Figure 3) and 'Role and Responsibilities' (Figure 4). Problems related to family life are presented in Figure 2.

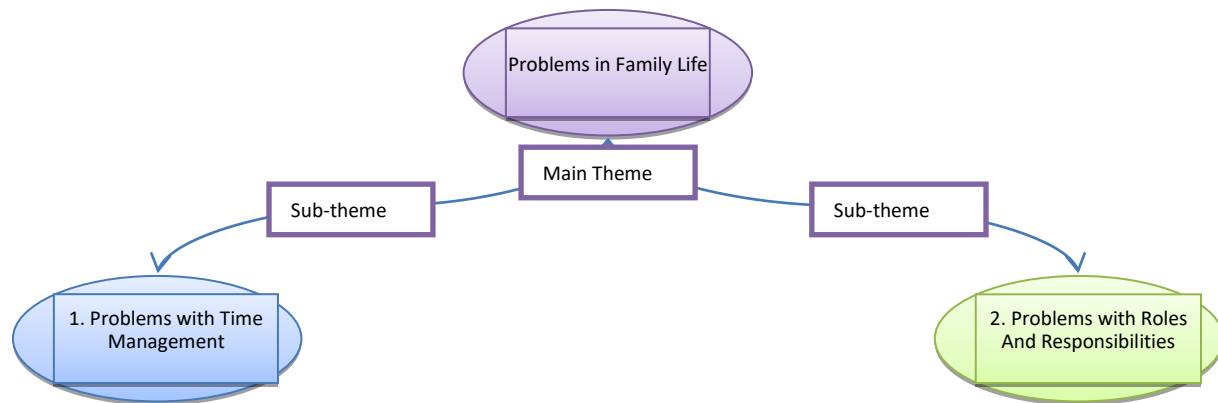


Figure 2 Sub-themes about problems related to family life

Results About the Problems in Time Management

The results based on the participants views on the problems experienced in time management are given in Figure 3.

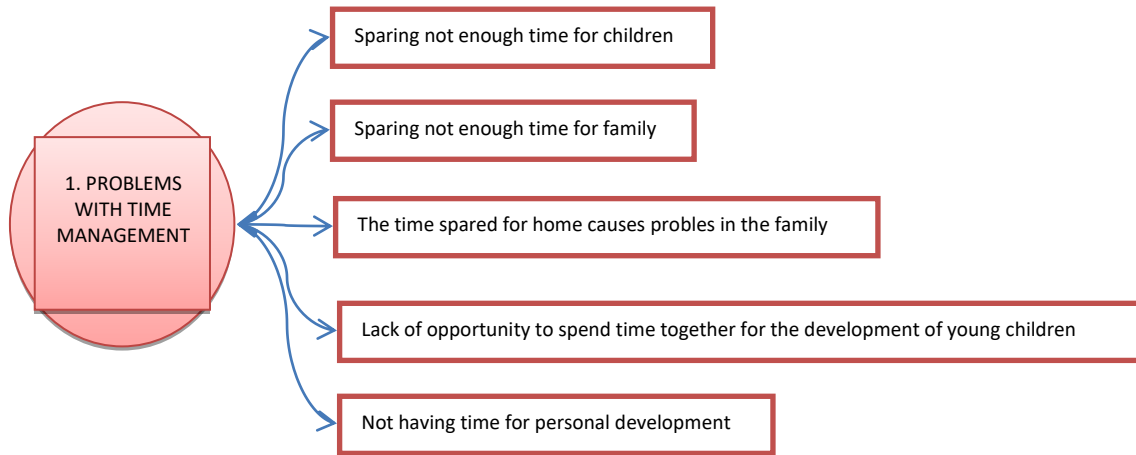


Figure 3 Results about problems in time management related to family life.

The following question was asked in order to determine the problems faced by women in family life due to being school administrators: "Do you think school management are suitable for women?" and they answered as follows.

...a teacher teaches a lesson and goes home. But we are responsible for the school from 8 to 5 or even at night.(H3)

No. You can't go out until 5 pm because you are busy. Since we also have to spend time with the child and devote time to the development of the child, I don't know what the future will be like.(VP1)

... I mean, it's really hard for a woman to be in one place all day.(VP2)

To the question of whether school management was suitable for women, female school administrators replied that it was suitable, but they expressed that they had problems stemming from working hours. It is thought that the responsibility of the school keeping women busy outside of school will create a problem especially for women with young children. In addition, they stated that while the woman should allocate time for her children, work shift ending at 5 pm was a problem.

Participants answered to the question: '*Do you think that when you become a manager, you take care of the work you need to do at home and your children enough, and that you spare enough time for them?*' The answers are as follows.

It would not have been possible if they were younger. I couldn't meet their needs, spending time together and playing games.(H1)

So now we are divided into 10 parts. We are trying to catch up by sacrificing some of our things. For example, I could not sleep to raise my own children.(H2)

There have been times when I thought I was giving up. I thought, "Would I be more interested in my child?" (H4)

As can be seen, women experience many problems related to time while trying to become school administrators. This problem arises from the fact that women have duties related to the house as well as school management and they have to carry out both responsibilities together. Women, who cannot get rid of the usual female roles stemming from current gender perceptions, must balance their work and family lives which are perceived to be different from each other, by adding new roles to their already existing roles. Women who have difficulty in balancing are sometimes faced with pressure and conflict related to business life (Bilican Gökkaya, 2011). Problems in time management are just one of these conflicts that women experience. In the study conducted by Bakır et al. (2017) and titled 'A Qualitative Research on Female School Administrators', similarly, this result was obtained 'the long

working hours of the administration and therefore the time that the person will allocate to his family, home and himself will decrease--women are not considered appropriate to be administrators. '

Roles and Responsibilities

Results based on participant views about roles and responsibilities are presented in Figure 4.

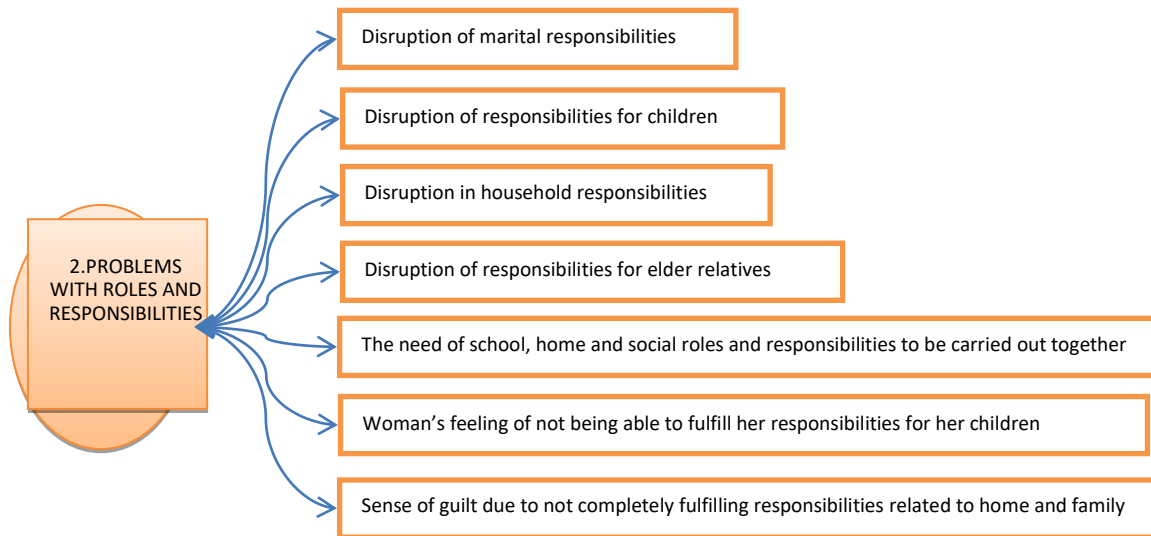


Figure 4 Results on problems related to roles and responsibilities

The question “*Do you think school management is suitable for women?*” was answered by the participants as follows.

A woman should devote a lot of time to her child, especially a 0-6 year-old child. If I had a 0-6 year old child, I wouldn't have considered it if they had offered me a managerial position. Why? Because my children have needs. (H2)

But despite this, the feeling that I am not enough for my family, that I cannot deal with their problems. In other words, if you are a woman, if you are a mother, if you have a family, I do not know. I emphasize that, I would never have continued to be an administrator without my husband ...if my children were younger, I think I would definitely resign. (H3)

When asked about whether school management is suitable for women, the participants expressed that it was difficult for women, especially because women with young children have to fulfill their children and families' needs.

The participants answered to the question “*Do you think that, after becoming a school administrator, you take enough care of the work you need to do at home and the children and spare enough time for them?*” as follows.

I sometimes thought I was giving up. I wish I hadn't been a manager. If only I was a teacher. If only my afternoon was free or my half day was free. I thought, "Would I be more interested in my child?" (H4)

Management is a difficult task, so I don't think I care enough. I do my best, but there may be negligence. Because sometimes we get exhausted. I try to pay attention to my child as much as I can, but there are days when I neglect it because I am too tired. (VP2)

A question was asked to the participants to determine whether female school administrators fully fulfill their responsibilities regarding home and children. They stated that they had a dilemma about whether they neglect their family responsibilities because of school management, they could not take fulfill family responsibilities enough due to the difficulty of their managerial position, these

responsibilities could be neglected, and therefore they also expressed that a sense of guilt could be experienced.

It is stated that women have difficulties in carrying out the school management duties together with their family responsibilities, sometimes they neglect their responsibilities related to the family, and this causes women to experience a sense of guilt.

The role confusion of women is an important obstacle to their being administrators. In the situations such as maternity responsibilities, income earning, home and work responsibilities, the woman may not decide about which one to prioritize. Women who have conflicting feelings among family responsibilities, managerial duties, and child care may experience sense of guilt. A woman who is in a dilemma about family and work can choose her family and give up her managerial position as a result of being pessimistic and experiencing role conflict (Aytaç, 2005). In the study "The Gender Factor in School Administration and School Management of Female Teachers" conducted by Koroğlu (2006), we found similar results to the result that women's dilemmas about the roles and responsibilities and their trying to manage their responsibilities both at home and work at the same time prevent women from tending to school administration in our study. It was seen that four male teachers participating in the related study expressed their opinions about reducing the duties of women at home.

Problems Encountered in School Life

Results obtained from participant views about the problems encountered by women in school life due to being school administrators were given under three sub-themes: 'Problems Related to Working Hours' (Figure 6), 'Problems Caused by Social Perception' (Figure 7), 'Prejudices Caused by Women Themselves' (Figure 8). Problems related to school life are presented as themes in figure 5.

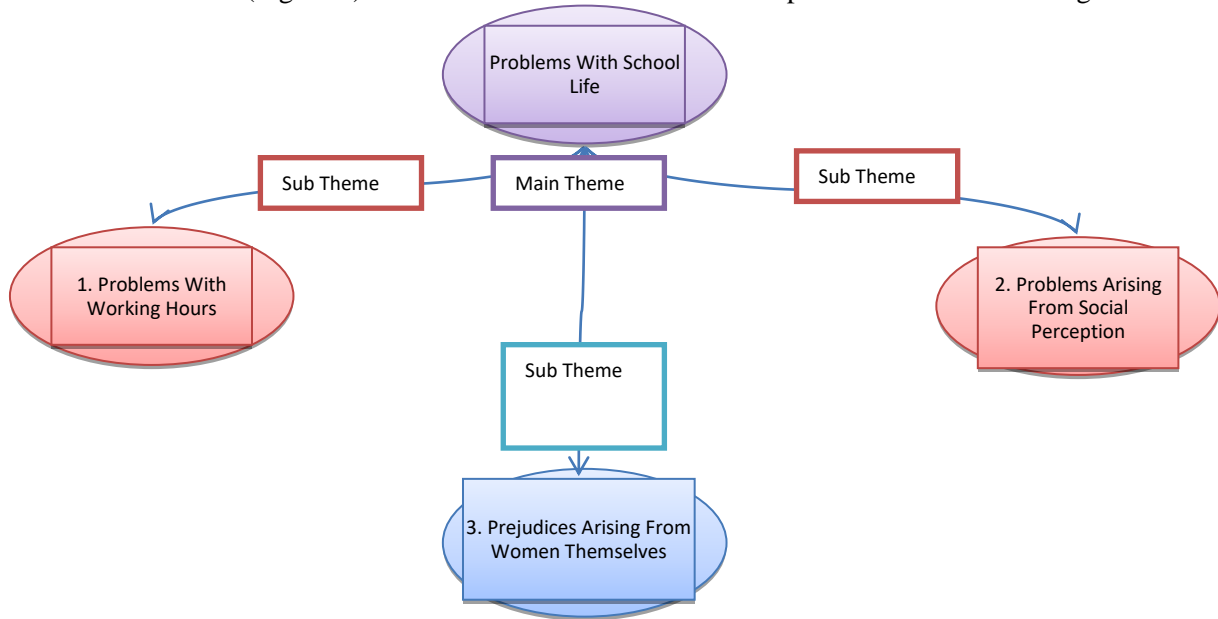


Figure 5 Sub-themes for problems related to school life

Working Hours

The results obtained from the participant views regarding the problems arising from working hours are given in Figure 6.

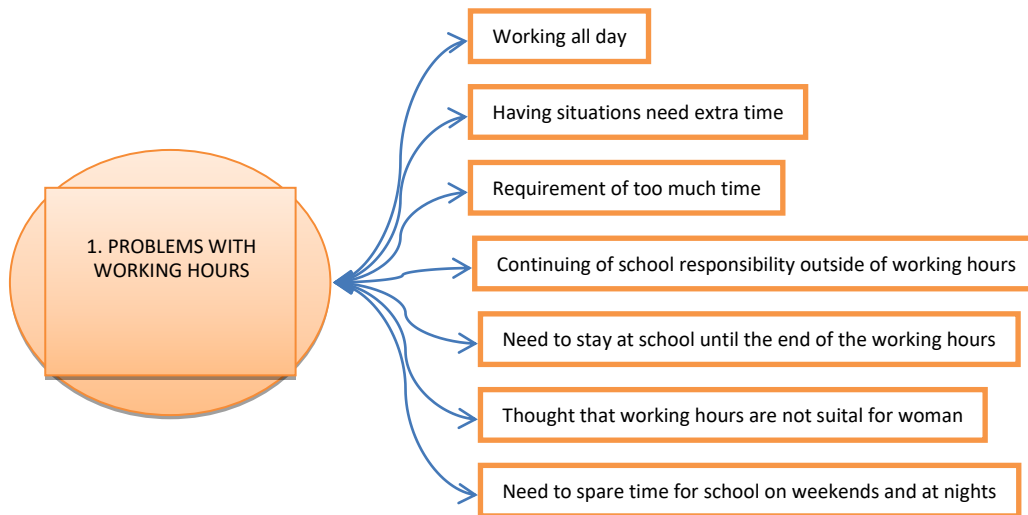


Figure 6 Results on problems related to working hours

The question 'Have you thought about resigning after becoming a manager? Why?' was asked to identify the problems women face in school life due to being school administrators and the participants expressed their opinions as follows:

...Why? Because I couldn't make it. You will work full time in administration, the burden of this is very heavy.(H2)

Sometimes you have to devote a lot of time to your work. You spend little time with your family. I said myself 'Should I leave it with this size. (H3)

...the only disadvantage is being at school all day. (VP1)

As can be seen, women perceive working hours as a problem. Not being able to allocate enough time to the family due to working hours and working all day are regarded as disadvantages of school management by women.

The participants answered the following question to the question "Is school management suitable for women?", which was asked to identify the problems that female school administrators experienced in school life due to being school administrators.

But we are responsible for school from 8 to 5 or even at night.(H3)

No. You can't go out until 5 p.m. because we are busy.(VP1)

School management is not a very suitable profession for women. ...Shift! And shift again. (VP2)

As it is seen in the answers, female school administrators stated that the time spent at school is not suitable for women, the working hours are long, school-related works continue outside of working hours and duties out of working hours are perceived as school shifts. Therefore, working hours in school management are perceived as a problem for women. In the study of Bakır et al. (2017) "A Qualitative Research on Female School Administrators", the result of long working hours we found in our study was reached, and 24 of the 82 participants who participated in this study described the length of work as a negative factor for school management.

Social Perception

The results obtained from the participant views on the problems arising from social perception are presented in Figure 7.

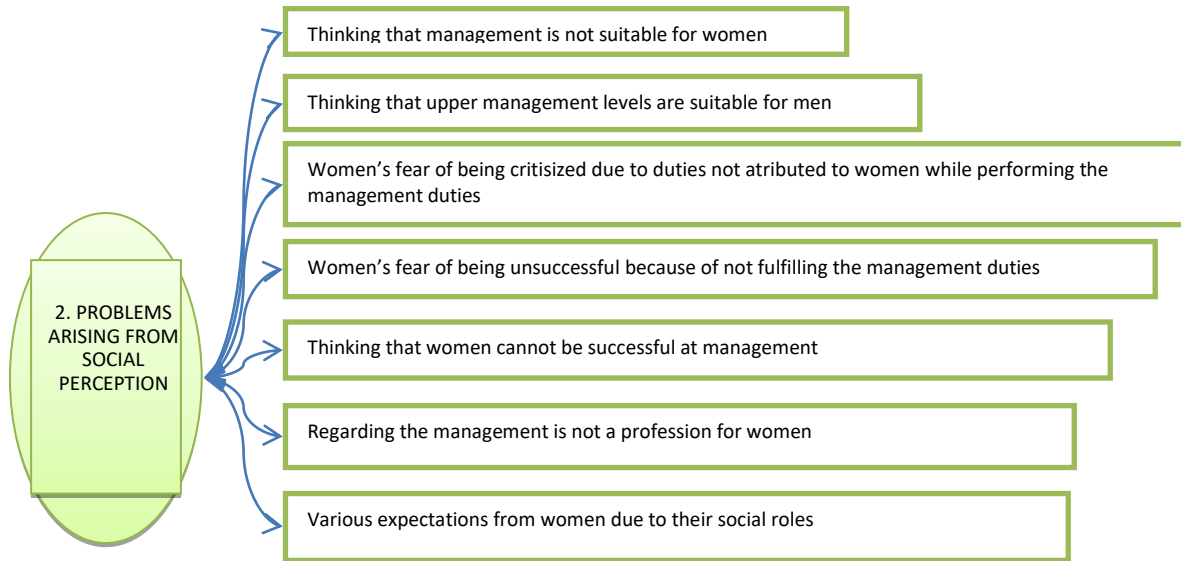


Figure 7 Results related to problems arising from social perception

The following question was asked to identify the problems women face in school life due to being school administrators: *'Have you thought about resigning after becoming an administrator? Why?'* and the participants answered as follows.

... let me tell you what is thought about me. She has the opportunity, let her resign or retire, what is she still doing in management? It's enough for a woman to work. Retire. If she really wants, she should go and set up her private nursery, I got this reaction. (H1)

...For example, it is more difficult for you to express yourself as a woman when communicating with someone. ... There is a social dimension. ... of course, because I'm a woman. ... you will protect the values of the society. You are afraid of being misunderstood.

... The woman failed, they say. I have never experienced such a problem. But I have always experienced this fear.(H3)

-There are ideas around whether a woman can become an administrator. But we are trying to show the woman that this job can be done by working hard. (VP2)

As can be understood from the participants views, school management is not considered suitable for women due to various reasons. Female administrators have difficulties in expressing themselves and communicating, are misunderstood because their approach to events, failures in professional matters are attributed to the image of female administrators, this causes them to experience stress due to their jobs, and therefore they experience uneasiness.

Expectations from women because of their role in society and responsibilities imposed on women in society are the biggest obstacle!(H1)

... the woman cannot comfortably enter there. ...let's say a social pressure. ... I don't know, there is social perception. ... they look at people very differently. (H5)

It is because of society. Can't I go to an organized industry region? I couldn't go alone. But a man is going alone...' You say, am I wrong? Was it somewhere I shouldn't have gone? But it's my job. I have to go. (VP4)

It is seen that the biggest obstacle for women to be school administrators is the roles of women in society and the responsibilities arising from these roles. The social perception that prevents women from intending to be an administrator continues even when the woman takes office. Since women's attainment of a responsible status will not remove their roles and responsibilities, these roles and responsibilities place an extra burden on women throughout their managerial duties and make it difficult for women to work as an administrator. In addition, the fact that women cannot move as

easily as men while carrying out their managerial duties, cannot enter and exit every environment as they wish, reveals that there are some perceptions that bind women due to social perception. The reactions that women faced, face or are worried to face due to social perception because of being an administrator show that women cannot comfortably carry out their managerial responsibilities as they wish.

It is clear that female school administrators face pressure from the society and question the correctness of their behavior while fulfilling the requirements of a profession that is not considered appropriate for women. For this reason, women administrators constantly experience problems because they cannot go beyond the limits of the roles that the society determine for them during their managerial duties.

Prejudices and social stereotypes carried by society and individuals regarding women's taking office in the upper levels create a negative situation for women. These stereotypes that prevent women from being promoted to the upper levels stem from prejudices about gender. Educational institutions are one of the areas where these prejudices are encountered most (Usluer, 2000). It should be accepted that such stereotypes about gender shape not only women's promoting to the managerial level, but also the way women in managerial positions use their authority (Simpson, 1997).

Prejudices Arising from Women Themselves

The results obtained from the participant views about the prejudices arising from the women themselves are shown in Figure 8.

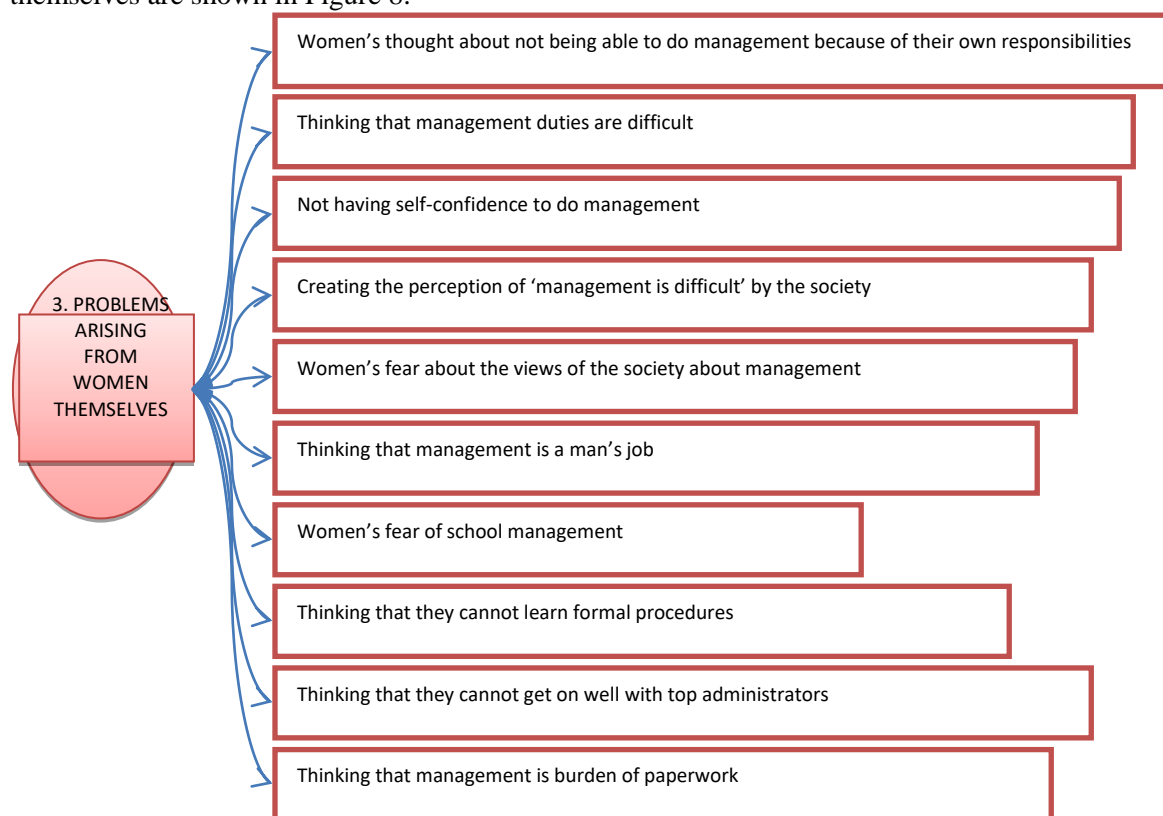


Figure 8 Results related to the prejudices arising from women themselves

The participants stated the following views about the question "Is school management suitable for women?", which was asked to determine the problems women encounter in school life due to being school administrators.

The woman thinks this. I have a child, I have housework at home, I have a day, I have a trip, I can't do it. This stems from herself.(H5)

... the responsibilities, unlimited work areas, lack of explicit boundaries all show the profession as difficult. Naturally, women remain recessive. Most of the women stay away from management because they do not have confidence in themselves. ... women are holding back, wondering if they could do it. Very rare women dare to do this jobs. (VP2)

The fact that women think that they cannot be administrators because of their familial responsibilities, that the responsibilities of school administrators show management as difficult for women, that the views about the difficulty of being administrators put pressure on women cause women to stay away by developing various prejudices about school management.

The following question was asked to identify the problems that women face in school life due to being school administrators: 'What kind of change about school management can make women prefer school management?' and the participants answered as follows:

Women are afraid. They regard this as men's job. ... I can't do this job, I can't do the paperwork. There is always such a thing as if it were a man's job.

Thinking that they can't do it. They have a prejudice. -Yes. For example, they say how will they learn to calculate salary, how will they control the students. There is a principal, what kind of a person is he? or a thousand kinds of negativite thoughts come to the mind.

There is prejudice. I can not do. I can't do that job. Being a vice principal is really hard. It has a lot of work.

Someone comes and says: I finished many duties today; another person comes and says: I did this job. So, people are afraid. She says I can't do this job. (VP1)

Women have various prejudices about school management. They think that school management is difficult, cannot be carried out together with family responsibilities, is not a suitable job for women, and it is hard to get on well with superiors. Studies on the subject revealed that women who are managers are more organized, more fair and more humanistic than men, but they have problems with their emotionality and self-confidence (trans. Tuzcular from Heller, 1997). It was revealed that these prejudices of female school administrators create an obstacle both for women to start managerial positions before becoming administrators and for women who are administrators to take charge in higher positions.

Expectations

Expectations for the Solution of Problems Encountered in Family Life

Expectations for the solutions of problems related to roles and responsibilities in family life

The results related to the expectations of women for the solutions of the problems they encounter in family life due to school management are shown in Figure 9.

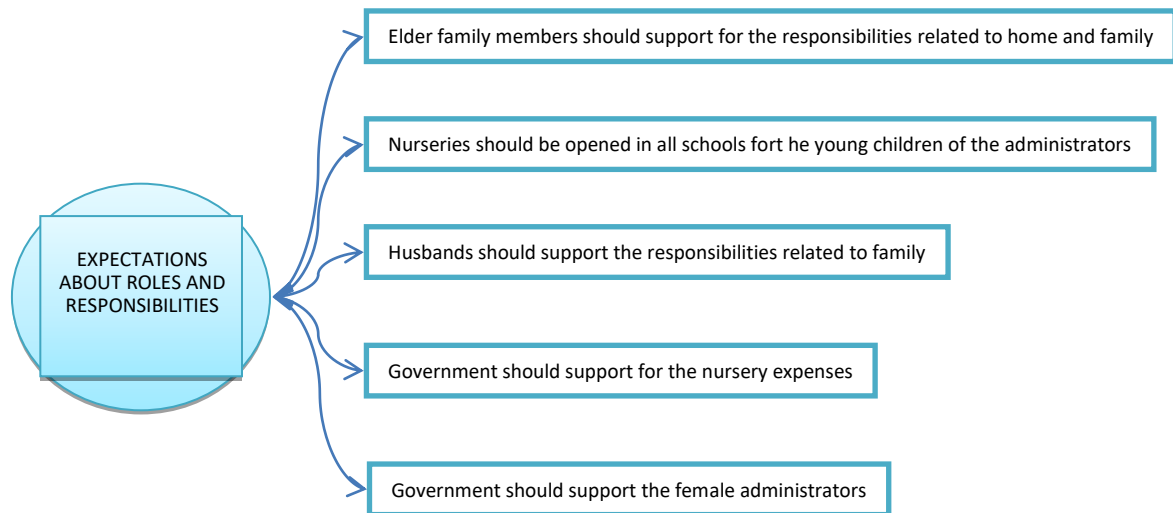


Figure 9 Expectations about roles and responsibilities

The following question was asked in order to determine the expectations of women about the solution of the problems they encountered due to being school administrators, "What kind of change about school management can make women prefer school management?" The participants expressed their opinions as follows:

A nursery can be opened in all schools where administrators can bring their children all day. Working with peace of mind, they should be able to leave their child. They should be able to go and supervise their child, and the child should be in front of their eyes, then they can feel relaxed and do the management. (H4)

Husbands should also help with childcare and household chores. Then women go one step further. In fact, women are more ambitious than men. (VP4)

Women administrators think that nursery should be built where they can leave their children while they are working at their schools, and that husbands should help the women with their family responsibilities, so they can do their job, school management.

The following question was asked in order to determine the expectations of women related to the solution of the problems they encounter due to being school administrators, "What do you think is the most important change that should be made regarding school management?" and the participants expressed their opinions as follows:

Or, I don't know, it can be a support for her children. The child's nursery expenses can be covered by the government... (H3)

For example, if the government supports the headmistress or vice-principals, if the government financially helps them to take care of their children. ... if there was someone who looked after my child while I was working. If a place was opened for a working woman in the institution where she works, where she can see her child... (VP1)

Female school administrators think that the government should support women about their responsibilities. They state that the biggest support is the opening of a kindergarten in the institution where the woman works.

Expectations for Solutions of the Problems Encountered in School Life

The results obtained from the participants' views about the expectations of women for the solutions of the problems they encountered in school life due to being school administrators were grouped under three sub-themes: 'Regulations Regarding Working Hours' (Figure 11), 'Regulations Regarding Salary Increase' (Figure 12), 'Regulations Regarding Responsibility Areas' (Figure 13).

Expectations about school life are given in figure 10.

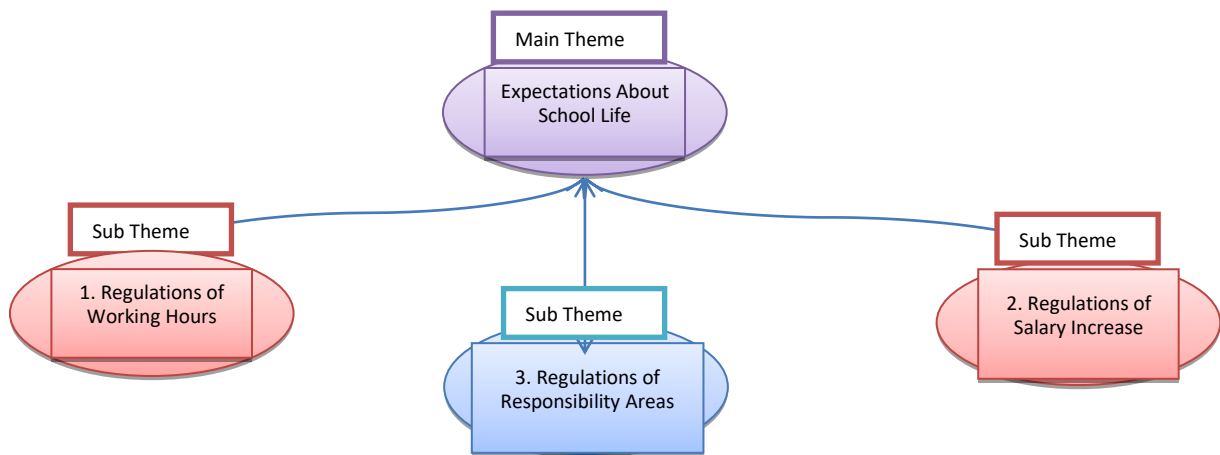


Figure 10 Expectations about school life

Working Hours

The results about the expectations of female school administrators regarding the regulations of working hours are given in Figure 11.

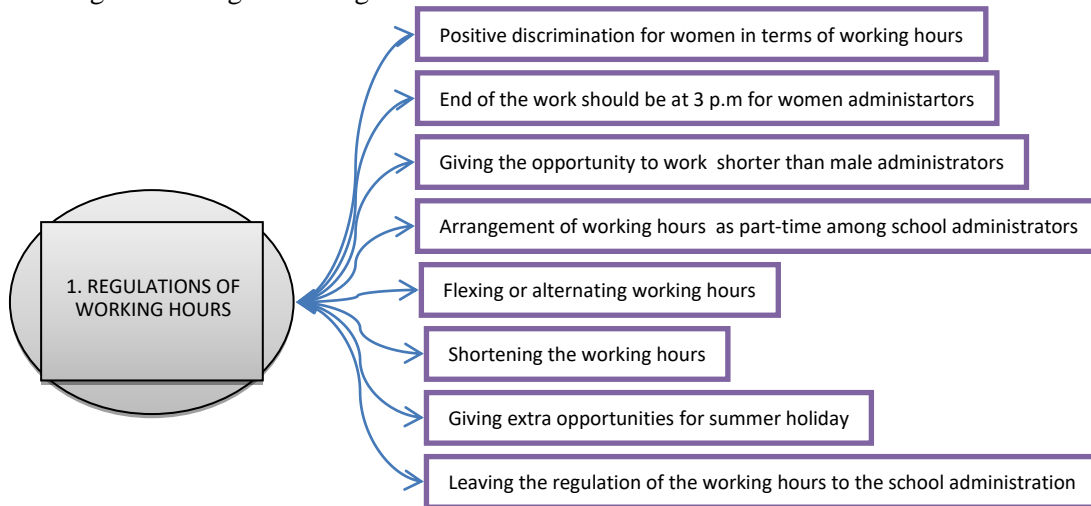


Figure 11 Expectations about working hours

In order to determine the expectations of female school administrators about school life, the following question was asked: "What kind of change about school management can encourage the women prefer school management?" The participants answered as follows:

A little more positive discrimination during working hours is especially important for those with young children.(H1)

...it could be better if she finished the job at 3, not at 5. Time to make a meal. Maybe it could be more attractive than extra money. (H2)

There has to be something in terms of time. She should work for a shorter time than men and be sufficient for her family so that the job could be more attractive. (H3)

... I think the concept of flexible working hours can also make it a little more attractive. (H4)

Flexible and alternating working hours can be better. (VP1)

There can be some flexibility in terms of working hours. (VP2)

Working hours. It may be less, maybe for the female administrators. (VP5)

As can it be understood from the participants opinions, female school administrators think that positive discrimination should be made in terms of working hours, especially for those with young children. Participants state that working hours should be shortened for female school administrators, and this would be more efficient than an increase in salary. In addition, the fact that the working hours of female administrators are shorter than male administrators, or that flexible working hours are applied or that the working hours are rotated will make school management more attractive for women.

The following question was asked in order to determine the expectations of female school administrators about school life; *“What do you think is the most important change that needs to be made regarding school management?”* The participants expressed their opinions as follows:

And when the working hours are suitable due to positive discrimination, she will not feel embarrassed towards her husband. There may also be changes in working hours. Or, the working hours during the day can be shortened. But its adjustment should be left to the administrators. (H1)

Regulating working hours, salary increase, more flexible working may be better. (H2)

...something can be done about time. (H3)

I think it's the working hours. If your working hours are slightly improved, the demand will be high. (VP2)

It is understood that women expect regulations about working hours related to school management. It is understood that this regulation will reduce the problem of the time women experience because of school management.

Results Related to the Expectations for Increase in Managerial Salaries

The results regarding the expectations of female school administrators for the regulations about salary increase are shown in Figure 12.

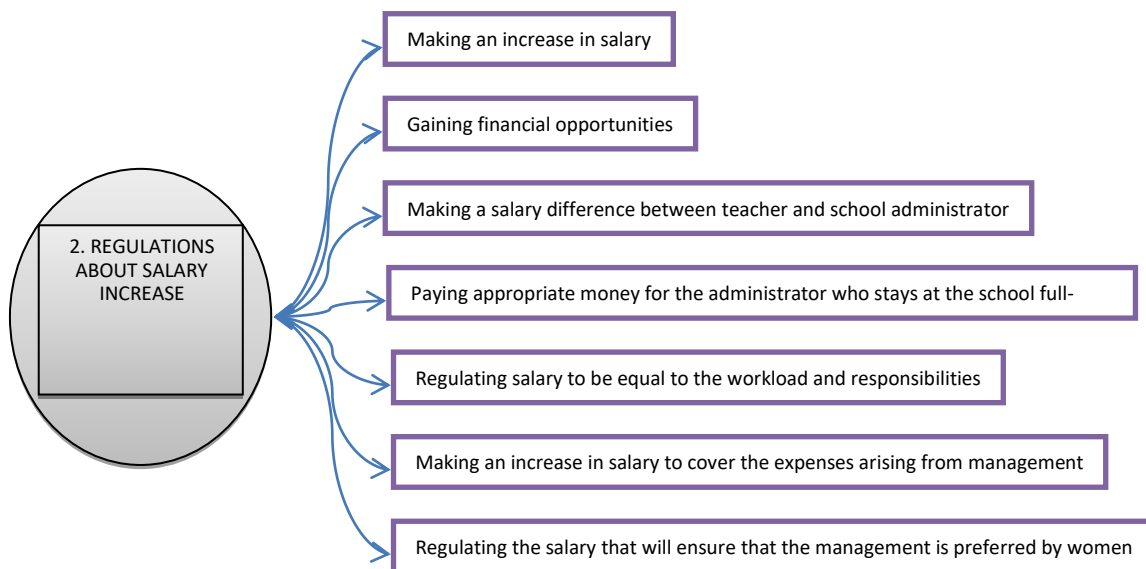


Figure 12 Expectations for salary increase

In order to determine the expectations of female school administrators about school life, the following question was asked: "What kind of change about school management can make women prefer school management?" The participants expressed their opinions as follows.

The wages should be worth making this sacrifice. (H1)

...money becomes effective. If there is an increase in salary, women's tendency to management will increase. (H2)

First of all, there must be something financially. There may be extra wage. (H3)

Maybe our teachers like it when the salary is high. There is a very small difference between me and my teacher. (H5)

I think salary is something that affects most people. Maybe our salary may need to be different, I do not mean the extra allowance. (VP5)

Women regard school management as a sacrifice and they think that the wage received for school management should be worth the work done. In addition, it is thought that when there is an increase in wages, the tendency of women to school management will increase.

In order to determine the expectations of female school administrators about school life, the following question was asked; "What do you think is the most important change to be made about school management?" The participants answered as follows:

Salary and positive discrimination. (H1)

... salary increase... (H2)

It is money. They prefer when there is a slight increase in salary. (H5)

...There are some injustices about salary. The salary of the administrator is the same as of the teacher. ... the salary is not enough either. Solving this would be a positive development. (VP2)

Of course, there must be an extra difference in terms of money. Salary of course. (VP5)

Participants think that an increase in wages should be made and that school administrators are treated unfairly in terms of wages. They think that the wage is not enough and that a regulation should be made about it. As can be seen, female school administrators stated that there is an injustice in terms of wages and that the wages of administrators should be increased and this will increase women's tendency to school management.

Results about the Expectations for the Regulation of the Responsibility Areas

The results about the expectations of female school administrators for the regulation of their responsibility areas are shown in Figure 13.

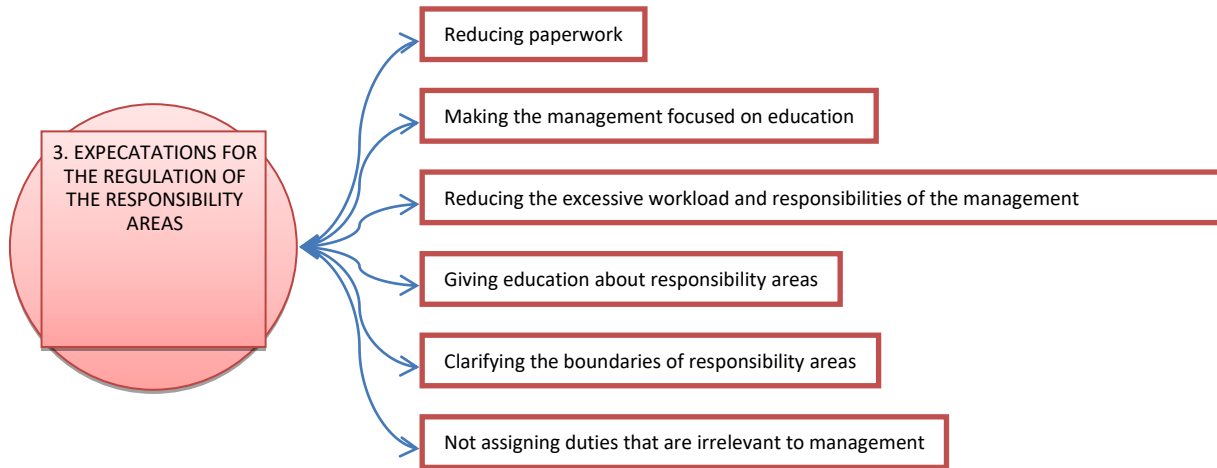


Figure 13 Expectations for the regulation of responsibility areas

In order to determine the expectations of female school administrators about school life, the following question was asked: "What kind of change about school administration can have women prefer school management?" The participants expressed their opinions as follows:

If there is less paperwork. If the concentration is on education, women will inevitably tend to do it. Limitations in paperwork may be increase this. (H5)

Female school administrators think that paperwork should be less, that the administrator should concentrate more on education, and that the limitation of paperwork will increase women's tendency to school management.

In order to determine the expectations of female school administrators about school life, the following question was asked, "What do you think is the most important change that should be made about school management?" The participants expressed their opinions as follows:

...I think that such a responsibility should not be placed on us. ... school administrators should be freed from these excessively unnecessary responsibilities. Our areas of interest must have definite boundaries. Because a female administrator will be peaceful and comfortable in a that kind of job. There will be more demand because she knows what to do and will not be responsible for something she doesn't know. (VP2)

Participants think that school administrators have too many responsibilities and that school administration should be freed from these unnecessary responsibilities. They state that the boundaries of responsibility of school administrators should be clarified, if so, women will want to be school administrators and they can carry out school management.

As it is seen, the excessive workload and responsibilities that are not related to education cause women to stay away from school management and make it difficult for women who are already administrators to maintain school management. Female school administrators expect school management to be more focused on education, its boundaries to be clearer and it to be freed from unnecessary responsibilities.

Discussion, Conclusion and Suggestions

Conclusion

In this section, the results obtained in the study are given.

- A. Results related to the sub-problem 'What are the problems that women face in family life due to being a school administrator?'

According to the results, the problems faced by women in family life due to being school administrators were found as: *Problems in Time Management, Problems related to Roles and Responsibilities.*

After joining the working life, it became crucial that women needed to allocate time for their duties in business life in addition to the time they spared for their home, family and husband. Karaca (2007) states that multiple roles undertaken by women cause women to experience tension and stress based on time pressure and that she is under pressure to do her best as a mother, wife, housewife and business woman and to keep up with all her duties. Female school administrators cannot allocate private time for themselves, and they spend all of their time outside of school with housework, children and family. For this reason, there may be situations where time is not enough. In such cases, the feeling that she cannot fully fulfill her responsibilities related to home and family, that she cannot spare enough time for her family, and neglects them causes the woman to feel uneasy. Such cases cause women to consider quitting school management. She tries to solve this time problem which arises due to school management by getting paid employee assistance or husband assistance, and tries to continue her school management in this way.

The main source of the time problem experienced by the woman due to being a school administrator is that although the woman joined the business life, the roles of mother, wife and housewife that the society imposes on women continue, and the society expects women to fulfill the responsibilities of these roles along with the responsibilities of school life. Women who are school administrators experience many problems while trying to fulfill their duties in both areas of responsibility. According to Aytaç (2005), a woman's sense of responsibility for her family and children can cause women to stay away from managerial duties. The desire of a woman to raise her child causes her career to be postponed or stopped. A woman's responsibilities such as marriage and children prevent her from dedicating herself to her profession, thus, women do not prefer management. Pur (1992) states that the woman who starts working life makes a great effort to fulfill the responsibilities of working life on the one hand and responsibilities of family life on the other hand; in addition, Pur also underlines that when the woman focuses on family life, she is put in the second place in her working life, and when she focuses on her working life, she feels uneasy because she thinks that she is neglecting the duty of being a good mother and wife, which she also considers important and sacred. It is seen that female school administrators sometimes experience disruptions while carrying out their home and work responsibilities together, they make a lot of effort to keep up with both duties, and they feel uneasy when there are problems in their family life. It is seen that women who prefer management while being a teacher get help from their relatives such as husband, mother, mother-in-law, and that these relatives undertake the basic responsibilities of women; childcare and housework etc. Very few female school administrators hire a person, who she does not know, for childcare and cleaning. It is seen that female school administrators, who cannot get support from close relatives or allocate a wage for an assistant employee for housework or childcare, have difficulty in carrying out managerial duties or consider leaving their managerial duties.

B. Results related to the sub-problem '*What are the problems women face in school life due to being a school administrator?*'

According to the results of the research, the problems faced by women in school life due to being school administrators are as follows: *Problems Related to Working Hours, Problems Caused by Social Perception, Prejudices Arising from Women Themselves.*

Due to the fact that the woman is a school administrator, beside the problems experienced in time management in family life, there are problems arising from the long working hours in school life. Long working hours cause women to not be able to allocate enough time for their roles and responsibilities at home and have problems with time management both at school and at home. The reason why female teachers do not prefer to be school administrators is that the working hours of school administrators are longer compared to teachers' working hours. Therefore, very few women want to be school administrators. According to Altınışık (1988), one of the reasons that keeps women

away from business life is working full time. Because a woman working full time will not be able to fulfill her duties of being a mother and wife. Working full-time is a requirement of management, so a woman stays away from being an administrator. In the study, regarding the common suggestions of female and male teachers and administrators, conducted by K rođlu (2006), it was seen that the suggestion of "Working hours of female administrators should be reduced" was accepted by all three groups. As seen in the results of similar studies, long working hours is an important problem faced by female administrators.

Another problem that women face when they want to be a school administrator is the gender-based perceptions of society that comes from the past. Social perceptions created various gender-related roles for men and women. Depending on social perceptions, occupations that are accepted as women's job and men's job emerged in working life. Gender-based stereotypes are the main source of prejudices that negatively affect women's promotion to management level. Prejudices about men being better administrators cause women to take less place in upper management levels ( ekten, 2004). While teaching is seen as the most suitable profession for women in Turkey, management is not considered very appropriate for women. In the study conducted by Sefer (2006), it was found that the society accepts management as a male profession, and since more time should be devoted to management than teaching, female teachers do not want to be administrators. In addition, it has been found that women, who are teachers, feel social pressure when they think of becoming administrators, as there is a perception that when women become administrators, they will not be able to fulfill their home-related responsibilities properly. Women who want to be administrators are basically faced with this social perception. In our study on the problems experienced by women who left the managerial position, similar to the results in the literature, it was seen that women who are school administrators have problems with the pressure stemming from social perception. Women's own prejudices about whether they can be school administrators is another result of the research. This reveals the self-confidence level of women in management and their negative thoughts about school management. In the study, the following conclusions were reached: women thought that the responsibilities of school administrators were too many, they could not get on well with the upper administrators, the tasks related to management were difficult, they did not have self-confidence to be an administrator, they regarded the management as a man's job, they were afraid of being an administrator, they thought management as a burden of paperwork. It was concluded that such prejudices of women not only prevent them from applying for management, but also women who carry out their managerial duties experience stress due to such prejudices and want to leave the managerial position. In addition, it was seen that these prejudices hinder women from working at higher levels, and that the female administrators participating in the study were hesitant to take charge in higher levels. Sezen (2008) stated that there is an invisible and unbreakable obstacle that prevents women from promoting to higher levels in organizations by ignoring the abilities and achievements of women. This concept, called 'Glass Ceiling', consists of three individual, organizational and social elements that prevent women from taking charge in higher levels. 'Individual Preference and Perception', which is one of the individual factors, refers to being aware of the obstacles related to the rise of the person and avoiding the problems that may stem from the rise (Tařkın &  etin, 2012). The results in the study also reveal that female school administrators are faced with invisible obstacles related to managerial duties.

B. Results related to the sub-problem 'What are the Expectations of Women for Solving the Problems They Face Due to Being School Administrators?'

According to the results of the research, the expectations of women for the solution of the problems they face due to being school administrators are as follows: Regulations about Working Hours, Regulations about Salary Increase, Regulations about Responsibility Areas. It was revealed in the study that the most common problem faced by female school administrators is the problem of time, since women have responsibilities related to their home and family as well as their duties at school. As a natural consequence of this situation, it was concluded that the first issue that women, who are school administrators, expected to be solved, is working hours. In the study, it was concluded that female school administrators expect positive discrimination in terms of working hours, and that they expect various alternatives to be considered in order to stretch, alternate or shorten the working hours.

Women think that there is nothing attractive about being a school administrator. They expect that they should have an advantage that will motivate them to become school administrators and attract them to endure the difficulties of administration. It was concluded that the participants in the study expected a regulation on wages that would contribute to the family budget. The fact that the wages of school administrators are not different from the wages of the teachers, the high workload and responsibility, and the long working hours prevent women from becoming school administrators. It was concluded that more different and increased wages than the wages of the teachers will motivate women to become school administrators. In addition to responsibilities about school life, women also have responsibilities related to family. These responsibilities cause a dilemma between home and work, and especially raising children, which is seen as the main duty of women, causes women to have difficulty in the managerial position. For this reason, female school administrators expect government to open nurseries for their children, to cover children's nursery expenses, and the family and husbands to support them.

Suggestions

In this section some suggestions are given based on the results of the study.

In order to solve the problems encountered by female school administrators in school and family life, women's responsibilities at home and work should be reorganized. Women, who have responsibilities in both areas, need time to fulfill their roles and responsibilities, so they experience time problems at home and work. Therefore, it is necessary to reorganize the responsibilities of women, and especially at home, it is necessary for the husbands to share responsibilities and help the women. In addition, positive discrimination should be applied to female school administrators, and the working hours should be rearranged in such a way that women can easily fulfill their responsibilities at home. It is necessary to make a reasonable wage increase that is worth the responsibility, workload and weariness of the school management. Although it does not prevent women from preferring school management, some rearrangements should be made in the appointment regulation to give priority to women. When women become school administrators, they have to struggle with some problems arising from the society. Perceptions in society impose women about what they should do in society. This shows itself while choosing a profession. The general view in the society is that school management is not suitable for women. Therefore, female school administrators are faced with social pressure. For this reason, it is necessary to eliminate the social pressure that women feel due to being school administrators. The number of female school administrators should be increased. By increasing this number, role models should be created for future generations. Female school administrators should come to the fore with their success, not with the problems they face. Therefore, they will cope with their problems better and women will be able to show themselves in school management as in all professions.

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An Investigation of Pre-school Education Policies in Turkey Between 2000-2019 According to Teachers' Views *

Yusuf SİMSAR**

Abstract: This study aims to examine pre-school teachers' views about the policies made in Turkey for the development of pre-school education between the years 2000-2019. In line with the purpose of the study, phenomenological research, one of the qualitative research methods, was used. In the study, semi-structured interview questions were determined as a data collection tool, and the study was carried out with 25 pre-school teachers. When the results of the data analysis are examined, it is stated that the prevalence of pre-school education has increased as a result of the policies made by teachers. In this direction, the resources for pre-school education are provided, and the child is taken to the centre of education due to the education policies. However, it was stated that different problems (such as education periods, lack of auxiliary personnel, lack of materials in the classrooms, excess classroom sizes) were observed in the following years, and policies should regulate these. Suggestions were made in line with the findings of the study.

Keywords: Educational policies, Phenomenological research, Pre-school education, Pre-school teachers.

2000-2019 Yılları Arası Türkiye’de Yapılan Okul Öncesi Eğitim Politikalarının Öğretmen Görüşlerine Göre İncelenmesi

Öz: Bu çalışmanın amacı 2000-2019 yılları arasında okul öncesi eğitimin geliştirilmesi adına Türkiye’de yapılan politikalar hakkında okul öncesi öğretmen görüşlerinin incelenmesidir. Çalışmanın amacı doğrultusunda nitel araştırma yöntemlerinden olgubilim araştırması kullanılmıştır. Çalışmada veri toplama aracı olarak yarı yapılandırılmış görüşme soruları belirlenmiş ve çalışma 25 okul öncesi öğretmeni ile gerçekleştirilmiştir. Veri analizleri sonucunda ortaya çıkan sonuçlar incelendiğinde, öğretmenlerin yapılan politikalar sonucunda okul öncesi eğitimin yaygınlaşmasının arttığı bu doğrultuda okul öncesi eğitime yönelik kaynakların sağlandığı ve eğitim politikaları sonucunda çocuğun eğitimin merkezine alındığı belirtilmiştir. Ancak ilerleyen yıllarda farklı sorunların (eğitim süreleri, yardımcı personel eksikliği, sınıflardaki materyal eksiklikleri, sınıf mevcutlarının fazlalığı, gibi) gözlemlendiği ve politikalarla bunların düzenlenmesi gerektiği belirtilmiştir. Çalışmanın bulguları doğrultusunda öneriler sunulmuştur.

Anahtar Kelimeler: Eğitim politikaları, Olgubilim araştırması, Okul öncesi eğitim, Okul öncesi öğretmenleri.

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Introduction

Education is one of the essential processes that build the future of a society in line with the goals of that society. Education, the primary source of the development of societies, is the locomotive that will lead society to its goals. Countries that know that education is essential to give importance to all the elements involved in the education process and encourage them in every field. Education can also be defined as providing the desired behavioural change in the individual. One of the most critical elements of these processes is the schools where education is applied first-hand. Pre-school education, the first step of education, is the day the child is born to the day he starts primary education. In this process, the child's physical, cognitive, social, psychomotor and language development is completed to a large extent. In order to ensure that children have the desired behavioural characteristics, it is necessary to know their developmental characteristics well (Alisinanoğlu & Kesicioğlu, 2010). Otherwise, many difficulties may be encountered, the upbringing of the child may be left to chance, and the child may be harmed without realizing it. From this point of view, the education is given in the pre-school period, which includes many critical periods, is very important (Aral, Kandır, & Can-Yaşar, 2003).

The pre-school period is when learning is the fastest and most intense, basic skills and habits are acquired in all developmental areas, and cognitive abilities are rapidly developed and shaped (Arslan-Karakuş, 2008; Bee & Boyd, 2009; Oktay, 2004). Meeting the needs of the child, supporting his/her development in all aspects and ensuring that he/she is prepared for life in the best way can be achieved with a qualified pre-school education that will be offered to him/her in these early years, and pre-school education is vital for the child's healthy development in all areas (Aslanargun & Tapan, 2015; Gültekin-Akduman, Günindi, & Türkoğlu, 2015; Kalkan & Akman, 2009; Simsar, 2021a).

In the pre-school period, the brain continues to develop rapidly, and this period is also the period when advances in brain development are most open to the effects of the environment. Thus, the environment is one of the factors that profoundly affect the child's general development and learning motivation in these early years (Simsar, 2021b). How many the child can explore, what he can learn and how fast he can learn; is closely related to how supportive the child's environment is and what opportunities are offered to the child (Bee & Boyd, 2009). Due to this rapid brain development in the first six years of life and the associated physical growth and maturation, children grow up very quickly and begin to become physically and cognitively competent in a short time (Bee & Boyd, 2009; Santrock, 2012). Thanks to the quality pre-school education opportunities that support this development and progress, the way for the child to realize his/her potential and be a productive member of the society is opened (Bekman & Gürlelel, 2005).

For pre-school education, each country takes various steps to gain social and cultural values. Regarding the inequality of opportunity in education, which is included in our country's 42nd article of the 1982 constitution, "No one can be deprived of the right to education and training. The scope of the right to education shall be determined by law and regulation. Primary education is compulsory for all citizens, male and female, and is free in public schools." statements are included. In addition, different support programs have been tried to be implemented for children from regions with low socioeconomic levels to ensure equality of opportunity in education. However, it is seen that the importance of pre-school education in our country has been realized late compared to other countries and it has been tried to organize pre-school education with the policies made since 2000. However, knowing how much the studies are understood by the "teacher", who is the cornerstone of this educational process, and seeing how much they are reflected in the practices is considered as the first process that should be done before creating a new policy. Every country gives importance to pre-school education and

allocates more resources to this field with different education policies in order to provide the human resources it will need, in line with the importance it attaches to pre-school education, which is the first step of education, in order to guarantee its future (Albrecht & Miller, 2004). Therefore, many studies have been carried out on Pre-School Education Policies between 2000-2019 in our country for the primary education of pre-school children, which is the most crucial step of education. This research aims to examine the Pre-School Education Policies between the years 2000-2019 and reveal what pre-school teachers' views are on this issue. For this purpose, answers to the following questions were sought:

- 1- What policies were produced regarding pre-school education between 2000-2019?
- 2- What are the views of pre-school teachers about the steps taken regarding Pre-School Education between 2000-2019?

Method

In the research method part, detailed explanations are given under the titles of research model, study group, data collection, and analysis.

Model of the Research

This research aims to reveal the opinions of pre-school teachers about pre-school education policies between 2000-2019. In line with the purpose of the study, phenomenology design, one of the qualitative research methods, was used in this study. The phenomenology design focuses on phenomena that we are aware of but do not have an in-depth and detailed understanding of (Yıldırım & Şimşek, 2013). Yıldırım and Şimşek (2013) explained their phenomenology studies as creating a suitable research ground for studies that aim to investigate the phenomena that are not entirely foreign to us and that we cannot fully comprehend. In this direction, it is thought that the phenomenology design is appropriate to reveal the views of pre-school teachers about pre-school education policies and changes in policies.

Working Group

In this research, 25 pre-school teachers in Kahramanmaraş Province Türkoğlu District were included in the study voluntarily as the study group. The demographic characteristics of the study group participating in the research are given in the table below:

Table 1
Demographic Characteristics of the Study Group

Participants	Gender	Age	Seniority	Educational Status	Branch
T1	Male	31	9	Licence	Pre-School Teacher
T2	Female	42	16	Licence	Pre-School Teacher
T3	Male	43	18	Licence	Pre-School Teacher
T4	Female	24	3	Licence	Pre-School Teacher
T5	Female	40	14	Licence	Pre-School Teacher
T6	Male	27	3	Licence	Pre-School Teacher
T7	Male	23	2	Licence	Pre-School Teacher
T8	Female	36	13	Licence	Pre-School Teacher
T9	Female	24	3	Licence	Pre-School Teacher
T10	Female	30	5	Licence	Pre-School Teacher

T11	Male	30	7	Licence	Pre-School Teacher
T12	Female	36	10	Licence	Pre-School Teacher
T13	Female	27	6	Licence	Pre-School Teacher
T14	Male	30	8	Licence	Pre-School Teacher
T15	Female	36	11	Licence	Pre-School Teacher
T16	Female	28	4	Licence	Pre-School Teacher
T17	Female	29	5	Licence	Pre-School Teacher
T18	Female	26	3	Licence	Pre-School Teacher
T19	Female	32	9	Licence	Pre-School Teacher
T20	Female	28	5	Licence	Pre-School Teacher
T21	Male	31	6	Licence	Pre-School Teacher
T22	Female	28	5	Licence	Pre-School Teacher
T23	Female	31	8	Licence	Pre-School Teacher
T24	Female	30	8	Licence	Pre-School Teacher
T25	Male	29	7	Licence	Pre-School Teacher

Data Collection Tool

The data of the research were obtained by interview. A structured formula was used through interviews. Six open-questions with semi-reflexive questions were asked by taking into account the form that will be grown by the researcher and making use of the field. The completion of the preparations for the place in the interview forms will be carried out by two students (in the pre-school education area and the preparatory course). Information for experts is given.

Data Collection

In order to collect the research data, 25 pre-school teachers in Türkoğlu District in the research sample were interviewed on different days and times between 02/12/2019 and 15/01/2020 in the schools where the teachers work. Before the interview, the participants were informed about the purpose of the study and the confidentiality of the interview, and the interviews were carried out after obtaining a consent form about whether they volunteered to participate. The interviews were conducted in the form of a conversation with the participants, and the researcher recorded the participants' answers by writing them on the forms. The interview with each person in the research sample lasted an average of 20 minutes. Although the questions posed to the participants during the interview were determined in advance, they were asked to ask differently without changing the content of the questions when necessary, and from time to time, they were asked again.

The following questions were asked to the pre-school teachers in the sample group at the interview stage.

1. How do you evaluate the policies in the field of pre-school education after 2000?
2. What do you think is the best step taken in pre-school education?
3. What are the shortcomings of the pre-school education policies developed between 2000-2019?
4. What are the highlights of the pre-school education policies developed between 2000-2019 in your opinion?

5. Which policies should be implemented as a priority for developing pre-school education?
6. What should be done to develop pre-school education in our country?

Data Analysis

The content analysis method, which requires the conceptualization of the data obtained from the interviews with the participants, and then the logical arrangement according to the emerging concepts and the Determination of the themes that explain the data accordingly, was used. The data were read and coded by the researcher, the researcher did a second reading, and at the end of the second reading, the concepts used to encode some data parts were changed. It has been studied under which themes the codes can be collected, and the themes that may occur were determined. After the researcher did the coding and theme creation work, coding on all the data and creating a theme from the codes were carried out by an expert in the field and an academician who has competence in content analysis methods. The codes and themes created by the researcher were compared with the codes and themes created by the expert.

Findings

Evaluation of Policies in Pre-School Education After 2000

The themes and codes related to the themes obtained as a result of the analysis of the answers given to the question "How do you evaluate the policies in the field of pre-school education after 2000?" are given in *Table 2*.

Table 2.
Teachers' Views on Policies in Pre-School Education After 2000

Theme	Code	Example Sentences	f	%
Education Policies	Schooling has become widespread	It started in the form of increasing the schooling rate. (T1)	12	48.00
		I think that the schooling rate has been increased. (T15)		
		I support pre-school education dissemination efforts. (T4)		
	Child-centred Education	Pre-School Education was tried to be widespread. (T12)	4	16.00
		Efforts were made to put the child in the centre and actively train him. (T1) (T11)		
	Increasing Physical Facilities	I support education programs with child-centred games. (T24)	3	12.00.
It is essential to increase kindergartens. (T22)				
Emphasis on Pre-School Education	Increasing the number of educational institutions is one of the positive practices (T15)	3	12.00	
	I think that the importance given to pre-school education has increased(T13)			
Sourcing	More importance has been given to pre-school education. (T25)	3	12.00	
	Expenditures for education have been increased. (T12)			
		Financial support was provided by giving importance to pre-school education. (T8)		

Resources	I think that a sufficient budget is not allocated because it is not included in the scope of compulsory education (T17) I think that the budget for pre-school is not enough. (T23)	2	8.00
The Decreased Social Value is Given to the Teacher	I think that the value given to the teacher has decreased. (T21) I do not think that the teacher is valued enough (T25)	2	8.00
Infrastructure Problem	It is the work done without an infrastructure. (T5) The school problem has been solved primarily in large settlements, but there are still not enough schools in villages and towns. (T17)	2	8.00
Education with Games	Education started to be done with games rather than memorization. (T7)	1	4.00
Staff Quality	I think that employees should receive better training. (T20)	1	4.00
Family Involvement	Programs that take the family into account were implemented in Pre-school education. (T9)	1	4.00
Ignoring Pre-School Education	I think pre-school education is not given importance. (T16)	1	4.00

When *Table 2* is examined, it is seen that the teachers in the study group mainly mentioned the dissemination of schools (48%) and the minor emphasis on pre-school education, staff quality, family participation, education with games (4%) for the evaluation of policies between the years 2000-2019 has been reached.

When *Table 2* is examined for the different findings related to the theme of education policies, it is seen that the child-centred education is 16%, the physical opportunities are increased, the pre-school education is given importance, the resource is 12%, the resource is not provided, the social value given to the teacher decreases and the infrastructure problem is related to the issues. Teachers expressed their opinions at the rate of 8%. Some examples of teachers' views are given below:

- "... It started in the form of increasing the enrollment rate." T1
- "...Try to put the child in the centre and actively train him." T11
- "...I think and support them as educational programs made with games that put the child in the centre."T24
- "...It is crucial to increase the number of kindergartens." T22
- "... Increasing the number of educational institutions is one of the positive practices."T15
- "...I think that sufficient budget is not allocated because it is not included in the scope of compulsory education." T17

The Most Beautiful Change Made in Pre-School Education Between 2000-2019

In line with the purpose of the research, to determine the participants' views about the best change in pre-school education, "What do you think is the best step taken in the field of pre-school education?" The question was asked, and the findings regarding the content analysis for the answers received are given in *Table 3*.

Table 3
Teachers' Opinions On The Best Step Taken In The Field of Pre-School Education

Theme	Code	Example Sentences	f	%
The Best Step Made in Education	Compulsory Pre-School Education	Studies on making pre-school education compulsory. (T9) Compulsory pre-school education (T4)	8	32.00
	Expansion of Schooling	Pre-school education was expanded. (T16) Dissemination of pre-school education. (T16) Studies to increase the schooling rate. (T14)	5	20.00
	Pre-School Education Program	Preparation of Pre-school education program. (T22)	4	16.00
	Duplication of Pre-School Education Institutions	Opening kindergarten in all school types. (T8,) Reproduction of the number of kindergartens. (T23)	3	12.00
	Personal Number	Increasing the number of kindergarten teachers. (T8,)	2	8.00
	Technology Use	Establishing the E-okul system and processing student information here. (T11) Ability to share events in EBA.(T17)	2	8.00
	Family Involvement	With the education calendar application, family participation in education increases. (T7) Families begin to give importance to Pre-School Education (T9)	2	8.00
	Child-Centred Education	It is the preparation of a child-centred education program. (T20)	1	4.00
	School Age Regulation	Extending the Pre-School Education age range. (T1)	1	4.00

When *Table 3* is examined, it has been found that the teachers in the study group, in their views on the best step in pre-school education after 2000, mainly mentioned that pre-school education should be compulsory with 32%. The least stated opinion was school-age regulation with 4%. When *Table 3* is examined for the different findings related to the best step in education, the pre-school education program issue emerges as 20% with the spread of schooling. The proliferation of pre-school education institutions, on the other hand, is one of the issues mentioned about the best step made in pre-school education after 2000 with a rate of 12%. The number of personnel, use of technology, and family involvement were mentioned at a rate of 8%, while child-centred education and school-age regulation were mentioned at 4%. Below are some quotations that may serve as examples of his explanations for The Most Beautiful Step Made in Pre-School Education After 2000.

- “... Studies on making Pre-School Education compulsory.” T9
- “...Preparation of Pre-School Education Program.” T22
- “...Opening kindergarten in all school types.” T8,
- “...It is the duplication of the number of kindergartens.” T23.

Weaknesses of Pre-School Education Policies Developed Between 2000-2019

In line with the purpose of the research, to present the participants' opinions about the deficiencies, they observed among the steps taken to ensure the development of pre-school education in our country, "What are the shortcomings of the pre-school education policies developed between 2000-2019?" The question was asked, and the findings regarding the content analysis for the answers received are shown in *Table 4*.

Table 4
Teachers' Opinions on the Deficiencies of Pre-School Education Policies Between 2000-2019

Theme	Code	Example Sentences	f	%
Weaknesses of Education Policies	Family Education	Activities to change parents' attitudes towards Pre-school Education. (T7) Not providing family training to change parent attitudes. (T10)	5	20.00
	Lack of Materials in Classes	Classes are insufficient in terms of materials. (T4) In-class material support is almost non-existent. (T14) There is a lack of materials in schools. (T16)	5	20.00
	Class Sizes	Crowded classrooms. (T2) In some schools, the number of students is low, and in some schools, it is very crowded. (T8) The number of students in the class is not at the average level. (T11) Class sizes are different. (T23)	5	20.00
	Pre-School Education Is Not Compulsory	Pre-primary education is still not compulsory. (T4) Pre-school education is not compulsory. (T15)	3	12.00
	The difficulty of Implementation of the Program	Pre-school program is challenging to implement. (T22) The program is challenging to implement considering the conditions of the schools. (T2)	3	12.00
	Increasing Physical Facilities	Lack of school numbers. (T21) An insufficient number of schools. (T11) Inability to arrange physical areas. (T23)	3	12.00
	Lack of Auxiliary Staff	There is a lack of auxiliary personnel in kindergartens. (T13) There are not enough auxiliary personnel in schools. (T16)	3	12.00
	Lack of Resources	Not enough resources. (T4) The budget allocated for Pre-school Education is meagre. (T15)	2	8.00
	Decreased Social Value Given to Teachers	Decreased respect and value of the teacher. (T6) Not increasing the social value given to the teacher. (T21)	2	8.00
	Absence of Lesson Breaks	No breaks during training hours. (T10)	2	8.00
	Lack of Personal Rights of Teachers	Lack of personal rights of teachers. (T25)	1	4.00
	Teacher Quality	Inadequate training for teachers (T10)	1	4.00

Ignoring Preschool Education	The importance and necessity of pre-school Education are not explained. (T21)	1	4.00
Opportunity Equality	Equality of opportunity in education could not be achieved. (T4)	1	4.00
Early School Starting Age	The age for starting school for 36-month-olds is very early. Children at this age need to stay with their mothers. (T15)	1	4.00
The necessity of Pre-School Education	The importance and necessity of pre-school Education are not explained. (T11)	1	4.00
Educational Status of Managers	The administrators who will implement the pre-school education program are not educators. (T5)	1	4.00
In-Service Training of Teachers	In-service training given to pre-school teachers is low. (T14)	1	4.00
Schooling Has Become Widespread	The schooling rate is still not at the desired level. (T1)	1	4.00
Technology Use	There is not enough content in EBA.(T14)	1	4.00
Providing Financial Resources	Pre-school education is still not supported by the state at the desired level. (T11)	1	4.00

When *Table 4* is examined, the questions asked to the teachers interviewed are: "What are the shortcomings of the pre-school education policies developed between 2000-2019?" Findings and comments about the question were discussed. In this theme, family education, lack of materials in the classrooms and class sizes appear the most mentioned topic, with 20% when the answers are given proportionate. It is understood that pre-school education is not compulsory, the program's implementation is complex, physical facilities are increased, and the lack of auxiliary personnel is the second most mentioned issue with 12%. The lack of resources, the decrease in the teacher's social value, and the absence of lesson breaks are the third most mentioned issue with 8%. After 2000, different teachers' views on the deficiencies of pre-school education policies are 4%, the lack of personal rights of teachers, the quality of teachers, the neglect of pre-school education, equal opportunities, early school starting age, the necessity of pre-school education, the education level of the administrators, the service level of the teachers. In-house education, widespread schooling, use of technology, and providing financial resources. The sentences to be given as examples of some of the teachers' views on this subject are as follows:

- "...Lack of activities to change parents' attitudes towards pre-school education."(T7)
- "...Classes are insufficient in terms of material." T4
- "...There is almost no in-class material support."T14
- "...Pre-school education is still not compulsory. " T4
- "... lack of personal rights of teachers. " T25
- "...The importance and necessity of pre-school Education are not explained."T21

Featured Issues in Pre-School Education Policies Developed Between 2000-2019

In line with the purpose of the research, in order to present the opinions of the teachers about the prominent issues among the steps taken to ensure the development of pre-school education in our country, the participants were asked, "What are the prominent issues in the pre-school education policies developed between 2000-2019?" The question was asked, and the findings regarding the content analysis for the answers received are shown in *Table 5*.

Table 5
Teachers' Views on the Prominent Issues in Pre-school Education Policies After 2000

Theme	Code	Example Sentences	f	%
Featured Issues in Education Policies	Expansion of Schooling	Dissemination of pre-school education. (T13) Studies to increase the schooling rate. (T3) Expansion of schooling (T12) Increasing the schooling rate. (T14)	7	28.00
	Studies on Compulsory Pre-School Education	Studies on making pre-school education compulsory. (T24) Compulsory pre-school education was coming to the fore. (T15)	6	24.00
	Technology Use	Studies to benefit from developing technology. (T6) Establishing the e-school system and processing student information here. (T18)	3	12.00
	Duplication of Pre-School Education Institutions	Opening kindergarten in all school types. (T7) Reproduction of the number of kindergartens. (T10)	2	8.00
	Student Socialization Studies	Preparation of programs on the socialization of the student. (T23)	2	8.00
	Personal Number	Increasing the number of kindergarten teachers. (T19)	1	4.00
	Learning by Doing	More active learning of students with learning by doing. (T1)	1	4.00
	Pre-school Education Program	Preparation of pre-school education program. (T22)	1	4.00
	The flexibility of the Pre- school Education Program	The flexibility of the pre-school education program(T11)	1	4.00
	The necessity of Pre-school Education	The necessity of pre-school education has been understood by society. (T8)	1	4.00
Child-centred Education	It is the preparation of a child-centred education program. (T24)	1	4.00	

When *Table 5* is examined regarding the teachers' views on the prominent issues in pre-school education policies after 2000, the prevalence of schooling is the prominent issue with a rate of 28%, followed by the studies that make pre-school education compulsory with a rate of 24% and the use of technology with a rate of 12%. It is seen that the increase of pre-school education institutions and the socialization of the students take place at the rate of 8%. After the 2000s, teachers' opinions on the prominent issues in pre-school education policies included the number of personnel, learning by doing, pre-school education program, the flexibility of pre-school education program, the necessity of pre-school education, and child-centred education at the rate of 4%. Here are some sample sentences in the teachers' views on the prominent issues in pre-school education policies after the 2000s. "

"...Okul öncesi eğitimin yaygınlaştırılması." T4

"...The efforts to make Pre-School Education compulsory."T24

"...E-school system can be established, and student information can be processed here."T18

"...It is the reproduction of the number of kindergartens."T10

“...Preparation of programs on the socialization of the student.”T23

“...Increasing the number of kindergarten teachers.” T19

“...More active learning of students through learning by doing.”T1

Policies to be Implemented for the Development of Pre-School Education in Our Country

In line with the purpose of the research, the participants were asked, "Which policies should be implemented as a priority for the development of pre-school education?" The question was asked, and the findings regarding the content analysis for the answers received are shown in Table 6.

Table 6
Teachers' Views on Which Policies Should Be Implemented Primarily for the development of Pre-School Education

Theme	Code	Example Sentences	f	%
Prospects or Educational Policies	Compulsory Pre-School Education	Pre-school education should be made compulsory. (T3)	7	28.00
	Sourcing	The state should support pre-school education. (T1) The budget should be allocated for pre-school education. (T12)	6	24.00
	Family Education	The number of activities to change parents' attitudes towards pre-school education should be increased. (T17) Family training should be given to change parent attitudes. (T10)	4	16.00
	Opportunity Equality	Equal opportunities should be provided in education. (T4)	4	16.00
	Lack of Materials in Classes	Classes should be enriched in terms of materials. (T13) The lack of materials in schools should be eliminated. (T11)	3	12.00
	Increasing Physical Facilities	The physical areas of the schools should be arranged. (T14)	3	12.00
	Expansion of Schooling	The schooling rate should be increased. (T16)	3	12.00
	Teacher Quality	The teachers who will implement the pre-school Education program should be well trained. (T16)	2	8.00
	Class Sizes	Class Availability should be reduced. (T2) The number of students in the class decreases the quality of education. (T1)	2	8.00
	Auxiliary Staff	Sufficient support staff should be available in schools. (T17)	2	8.00
	Project Preparations of Academicians	Academicians at universities should contribute to pre-school education by preparing projects. (T9)	1	4.00
	Personal Rights of Teachers	Teachers' rights need to be regulated. (T21)	1	4.00
	The difficulty of Implementation of the Program	The pre-school program should be reorganized. (T15)	1	4.00
	The necessity of Pre-School Education	The importance and necessity of pre-school education should be explained. (T19)	1	4.00
	At least 2 Years of Education	Pre-school education should be at least two years. (T14)	1	4.00

Lesson Breaks	It is necessary to take a break during the training hours. (T10)	1	4.00
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When *Table 6* is examined, regarding the opinions of the teachers in the study group about which policies should be implemented as a priority for the development of pre-school education, the most pre-school education is compulsory (28%) and the minor academics preparing projects, teachers' rights, school It has been reached that they mentioned the necessity of pre-education, at least two years of education and course breaks (4%). When *Table 1* is examined for the different findings related to the theme of priority expectations that need to be done, it is stated that providing resources is 24%, family education, equality of opportunity is 16%, lack of materials in the classrooms, increasing physical opportunities and expanding schooling is 12%. While teacher quality, class sizes, and auxiliary personnel were mentioned at 8%, it was seen that teachers' rights, the difficulty of the implementation of the program, the necessity of pre-school education, at least two years of education and class breaks were also mentioned at a rate of 4%. Examples of teacher opinions on prominent topics are as follows:

- “...Pre-school education should be made compulsory.” T3
- “...Pre-school education should be supported by the state.” T1
- “...A budget should be allocated for pre-school education.” T12
- “...The number of activities aimed at changing parents' attitudes towards pre-school education should be increased.” T17
- “...The enrollment rate needs to be increased.” T16
- “...The teachers who will implement the pre-school education program should be well trained.”T20

Development of Pre-School Education in Our Country

In line with the purpose of the research, the participants were asked, "What should be done to develop pre-school education in our country?" The question was asked, and the findings regarding the content analysis for the answers received are shown in *Table 7*.

Table 7
Teachers' Views on What Should Be Done for the Development of Pre-School Education

Theme	Code	Example Sentences	f	%
Prospects for the Development of Preschool Education in Our Country	Expanding Schooling	Pre-school education needs to be expanded. (T7)	6	24.00
	Family Education	It is necessary to organize some activities to change parents' attitudes towards pre-school Education. (T23)	6	24.00
	Elimination of Material Needs	Classes should be enriched in terms of materials. (T2) The lack of materials in schools should be eliminated. (T8)	6	24.00
	Lack of Auxiliary Staff	It is necessary to increase the number of auxiliary personnel in kindergartens. (T8)	6	24.00
	The necessity of Pre-School Education	The importance and necessity of pre-school education should be explained to all segments of society. (T11)	5	20.00
	Compulsory Pre-School Education	Pre-school education should be made compulsory. (T25)	4	16.00
	In-Service Training of Teachers	Pre-school education teachers can be provided with in-service training to increase their qualifications. (T2)	3	12.00
	Sourcing	The budget allocated to pre-school education should be increased. (T6) By allocating a budget to pre-school	3	12.00

	Education, families can avoid making expenses. (T13)		
Having Lesson Breaks	It is necessary to take a break during the training hours. (T10)	2	8.00
Increasing Physical Facilities	The physical facilities of schools should be increased. (T9)	2	8.00
Teacher Qualification	It is necessary to organize training for teachers. (T4) Language education should be given to the teachers during the candidacy process, and foreign language education should be given in the pre-school period. (T14)	2	8.00
Increasing the Social Value Given to the Teacher	In order to increase the social value given to the teacher, some studies should be started (T14).	1	4.00
Class Sizes	Class sizes should not exceed 15 students. (T7)	1	4.00
Establishment of Workshops	Workshops should be established in schools where children can have different experiences. (T15)	1	4.00
Opportunity Equality	Equal opportunities should be provided in education. (T13).	1	4.00
Regulation of the School Starting Age	The starting age for pre-school education should be regulated, and the age group, 3-4, should be included in pre-school education. (T13)	1	4.00
Number of Teachers	Pre-school teacher quotas should be increased in teacher appointments. (T8)	1	4.00
Improving Teachers' Personal Rights	Teachers' personal rights need to be improved. (T6)	1	4.00
Form of Teaching	Pre-school education should be carried out as a single education. (T24)	1	4.00

When *Table 7* is examined, the findings and comments regarding the question "What should be done for the development of pre-school education", which were asked to the teachers interviewed, were discussed. In this theme, expanding schooling, family education, meeting the material needs, and lack of auxiliary personnel are the most mentioned issues, with 24% when the answers are proportionate. When *Table 7* is examined for the different findings related to the opinions of teachers about what should be done for the development of pre-school education, it is seen that the necessity of pre-school education is 20%, pre-school education is compulsory 16%, in-service training of teachers is 12%, and resource provision is the most mentioned with 12%. are understood to be issued. The necessity, of course, breaks, increasing physical opportunities, and the quality of the teacher appear as different issues that are mentioned at the same rate with 8%. When *Table 7* regarding this theme is examined, we encounter different teachers' views as increasing the social value given to the teacher with a rate of 4%, class sizes, the establishment of workshops, equal opportunities, regulating the school starting age, number of teachers, improving the personal rights of teachers, and single education. Some of the teachers in the study group, who expressed their views on what needs to be done for the development of pre-school education, said:

"...Pre-school education needs to be expanded."T7

"...It is necessary to organize some activities in order to change the attitudes of parents towards pre-school education."T23

“...The importance and necessity of pre-school education should be explained to all segments of the society.” T11

“...Pre-school Education should be made compulsory.”T25

“...It is necessary to take a break during the training hours.” T9

Discussion and Conclusion

Evaluation of Policies in the Field of Pre-School Education

Pre-school education takes place within the integrity of the primary education, which provides rich, stimulating environment opportunities suitable for the developmental levels and individual characteristics of the children in the 0-72 month group, supports their physical, mental, emotional and social development, guides them in the best way in line with the cultural values of the society and prepares them for primary education. It is an educational process that takes place (Şahin, 1998). The pre-school period is when learning is the fastest and most intense, basic skills and habits are acquired in all developmental areas, and cognitive abilities are rapidly developed and shaped (Arslan-Karakuş, 2008; Bee & Boyd, 2009; Oktay, 2004). Meeting the needs of the child, supporting his/her development in all aspects and ensuring that he/she is prepared for life in the best way can be achieved with a qualified pre-school education that will be offered to him/her in these early years, and pre-school education is essential for the child's healthy development in all areas (Aslanargun & Tapan, 2015; Gültekin-Akduman, 2015; Kalkan & Akman, 2009). Many studies have been carried out on pre-school education policies in our country between 2000-2019 for the primary education of pre-school children.

As a result of the research, the interviewed teachers were asked, "How do you evaluate the policies in the field of pre-school education after 2000?" The positive opinions given to the question of the question were the spread of schooling, child-centred education, increasing physical opportunities, giving importance to pre-school education, education with games, family participation, providing resources, while the negative opinions were not providing enough financial resources, decreasing the social value given to the teacher, infrastructure problem in schools, personnel quality. Appears as the neglect of pre-school education.

The Best Step Taken in the Field of Pre-School Education

For pre-school education, each country takes various steps to gain social and cultural values. Regarding the inequality of opportunity in education, which is included in our country's 42nd article of the 1982 constitution, "*No one can be deprived of the right to education and training, and the scope of the right to education shall be determined by law and regulation. Primary education is compulsory for all citizens, male and female, and is free in public schools.*" statements are included.

In addition, different support programs have been tried to be implemented for children from regions with a low socioeconomic level to ensure equal opportunity in education. However, it is seen that the importance of pre-school education in our country has been realized late compared to other countries and it has been tried to organize pre-school education with the policies made since 2000. However, knowing how much these studies are understood by the "teacher", who is the cornerstone of this educational process, and seeing how much they are reflected in practices is considered a process that should be done before creating a new policy.

"In your opinion, what is the best step taken in the field of pre-school education?" The participants, who were asked the following question, expressed their views on the necessity of pre-school education, the expansion of schooling, the preparation of pre-school education

programs, the increase of pre-school education institutions, the number of personnel, the use of technology, family participation, child-centred education, and school-age regulation.

The issue of making pre-school education compulsory, which is the opinion expressed by many participants, has still not been made compulsory in the whole country as of 2019. However, it is tried to be made compulsory with the applications made in the pilot provinces. Countries where compulsory pre-school education should be selected and examined and results should be revealed by conducting large-scale research on these countries' education. The Ministry of National Education (MoNE) should make the necessary legal arrangements as soon as possible to make pre-school education compulsory.

Weaknesses of Pre-School Education Policies Developed Between 2000-2019

It has been decided to switch to 'dual education' in official kindergarten classes to increase the schooling rate by 21% for 4-6-year-olds. Although the child should receive a half-day education for a year before starting primary education, dual education should not be a permanent solution. 70% of the respondents to the questionnaire applied on the MoNE website stated that they found the dual system "positive". However, a study conducted on this subject determined that the social-emotional development of children who received half-day education was lower than those who received full-time education (Özguluk, 2006). Based on this result, it can be assumed that half-day education will prevent the child from reaching the desired level in other areas of development.

Pre-school education in Turkey is mainly given in kindergartens within primary schools. Almost all of the administrators, who are also responsible for the kindergarten classes of these schools, are outside the pre-school education field. When we look at the feedback received from the teachers in this study, it is seen that the administrators do not understand the importance of pre-school education enough, and they are reluctant to meet the needs of the kindergartens. However, Kurt (2015) examined the cooperation skills of pre-school education institution administrators, and it was found sufficient by the teachers in terms of cooperation skills of administrators and interpersonal communication skills. However, it is known that almost all of the inspectors in charge of inspecting pre-school education institutions are from outside the field. In-service training given to administrators and supervisors for pre-school should also be given by experts in their fields and should be continued increasingly. Pre-school education graduates who can fulfil the necessary conditions should also be supported to become managers and supervisors.

The participants were asked, "What are the deficiencies of the pre-school education policies developed between 2000-2019?" When we examine the answers given to the question of family education, lack of materials in the classrooms, class sizes, pre-school education is not compulsory, the difficulty of the implementation of the program, the lack of physical opportunities, the lack of auxiliary personnel, the lack of resources, the decrease in the social value given to the teacher, the absence of class breaks, the lack of teachers' rights. Neglecting pre-school education, providing financial resources, the necessity of pre-school education, early school starting age, equality of opportunity, educational status of administrators come to the fore. Similarly, Simsar (2021b) emphasized in his study that families should take a role in pre-school education with training to be organized for families. Likewise, Yazır, Çelik, and Kök (2008) emphasized that the first education should be given in the family in the pre-school period and stated the critical role of the family in pre-school education. However, Doğan, Yalçın, and Simsar (2017) emphasized in their study that there are not enough resources and materials to support a vital learning process, such as science activities in some pre-school classrooms. The new policies to be developed must focus on providing materials to the classes.

Things to be Done for the Development of Pre-School Education in Our Country

Ask them, "What should be done for the Development of Pre-School Education in Our Country?" teachers asked; dissemination of schooling, family education, eliminating the need for materials, lack of auxiliary personnel, the necessity of pre-school education, compulsory pre-school education, in-service training of teachers, providing resources, taking breaks, increasing physical opportunities, teacher qualification, increasing the social value given to teachers, They answered that class sizes, the establishment of workshops, equality of opportunity, regulation of school starting age, number of teachers, improvement of teachers' personal rights, regulation of teaching style are necessary. Similarly, Özkubat (2013) stated in his study that the quality of pre-school education environments should be improved, and the education to be given in the classrooms and the development of children should be supported.

In the 27th article of the MoNE Pre-School Education Institutions Regulation, it is essential to have a doctor who is an expert on child health in pre-school education institutions (MoNE, 2006). In the absence of a school doctor, government doctors, health centres, health education centres, if any, mother-child health centres and similar institutions are used for health services. Pre-school children are vulnerable to accidents because they cannot fully protect themselves. In addition, considering disaster situations such as earthquakes and fires, since there is no doctor in charge in every institution, administrators and teachers working in pre-school education institutions should be knowledgeable about first aid and emergency response. It is recommended that teachers who do not have sufficient knowledge on this subject be trained through in-service training and courses organized by non-governmental organizations.

In the transition from kindergarten and kindergarten to primary education, the physical environment and classroom rules differ with sharp lines, and there are plenty of toys in pre-school education institutions, a comfortable seating arrangement and flexible rules; On the other hand, the fact that the first grades of primary education are without toys and mainly in a row order creates serious adaptation problems for some of the children who start the first grade. Arranging the physical characteristics of the first grades of primary education similar to kindergarten and kindergarten classes and applying the rules more flexibly will reduce the adaptation difficulties of children who have just started school.

In the pre-school period, which forms the basis of an individual's life, the child acquires essential habits, interacts with his environment, socializes, and develops cognitive and affective skills and abilities. The opportunities and adult support to be given to the child during this period will ensure that the child is best prepared for life; Depriving the child of this support will cause him to encounter many difficulties in preparing for life. For this reason, pre-school teachers teach that children in the pre-school period are curious, willing to research, and have broad imaginations; Supporting the development of children in this direction can support their development by providing educational environments where they can research and question, develop their curiosity, establish cause-effect relationships and make predictions (Beatty, 1988). In order to achieve this situation, the importance of the programs to be developed in pre-school education is very high.

Recommendations

As a result of this research, teachers' policies in the field of pre-school education; widespread schooling, child-centred education, increasing physical opportunities, giving importance to pre-school education, education with games, family participation, providing resources, opposing opinions, insufficient financial resources, decrease in the social value given to teachers, infrastructure problem in schools, personnel quality, not caring about pre-school

education as they appeared. In this regard, introductory activities can be organized by the Ministry of National Education so that pre-school education policies are understood by pre-school teachers who are the implementers of these policies.

As it is known, lesson hours and break times are fixed in primary education, and there is a duty teacher application. In pre-school education, on the other hand, teachers are required to spend all their time in the institution with children. It is beneficial to have at least one assistant teacher, depending on the institution's availability, to rest the teachers at certain intervals and support them when needed (children with special education needs, excursions, emergency, accident, etc.). What is meant here is not the duty teacher practice in primary education institutions.

It is necessary to take teachers' opinions at the highest possible rate during the preparation of laws, regulations and by-laws in various scientific studies and published reports, National Education Councils, Development Plans, which are at the stage of determining education policies.

Various non-governmental organizations, public institutions and organizations, etc. An awareness of pre-school education can be created in the country by explaining the importance through several activities prepared jointly with groups.

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