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A New Outdoor Learning Geodesic Dome School Design

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Graphical Abstract

Abstract

In this study, it is aimed to ensure that out-of-school learning environments for a sustainable environmental education in our world, which is under the threat of global warming, are started to be implemented in science and mathematics disciplines as of pre-school period, apart from primary, secondary and high school levels. The procedures for obtaining permission for school managers and teachers, high operating costs, seen as dangerous and a waste of time for parents are the problems of reaching out-of-school learning environments. In order to eliminate these problems, a school model was designed, which is located in the school garden, with an architecture in the form of an atomic model and included workshops created as a geodesic dome.

Keywords: Science and mathematics, out-of-school, geodesic dome, workshops.

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Introduction

Out-of-school learning environments and sustainable environmental education are among the topics that have increased the interest strongly in recent years. Out-of-school activities are becoming an indispensable part of the learning-teaching process. The most effective strategies in education; It is thought that it is a teaching approach in which the student takes an active role in learning, learns by doing, associates the subjects learned with his environment, and establishes connections with social life. One of the methods in which this understanding can be applied most effectively is out-of-school learning methods, which have come to the fore with definitions such as “Out of School Education, Out of Class Education, Nonformal Education, Informal Education” in recent years and which advocate that information should be obtained by contacting the outer world (Saraç, 2017).

According to Saraç, 2017; out-of-school practices and activities in education-teaching processes comprisea very wide rangesuch as sightseeing-observation and field studies, excursions and visits to places with social, cultural, industrial and scientific functions (museums, natural history museums, science and technology museums, planetariums, botanical gardens, zoos, meteorology stations, water treatment plants, dams, industry) organizations, virtual reality applications, nature education, environmental club activities, homework and projects directly related to the place, sports activities, social, cultural and scientific programs (exhibitions, meetings, congresses, panels, conferences and symposiums) and lifelong learning.

Out-of-school learning environments are classified in two categories as non-formal and informal learning. Non-formal learning environments are the institutional areas outside the school that can be visited at specified time intervals, and informal learning environments are the areas that can be visited at any time in our close environment without institutional qualification (Saraç, 2017). Non-formal learning environments, which support the learning of individuals, enable the structuring and development of knowledge. In these environments, a more effective learning environment is created by guiding individuals. On the other hand, Informal learning environments include spontaneous learning processes in life. It is not purposeful and planned, but random.
Many studies have been carried out in various disciplines on the effect of out-of-school learning environments on education and teaching. Some of these studies on out-of-school learning environments are: Teachers And Teacher Candidates Participating In Field Trips And Natural Activities (Tatar & Bağrıyanık, 2012), Opinions Of Pre-Service Science Teachers About OutdoorEducation (Kubat, 2018). In addition, Aquarium As An Out-Of-School Learning Environment (Falk & Adelman, 2003), Museums And Science Centers (Aktekin, 2008; Sturm & Bogner, 2010), zoo (Yavuz, 2012) energy park (Balkan Kıyıcı & Atabek Yiğit, 2010;) , (Şen & Parmasızoğlu, 2011), botanical gardens (Wiegand, Kubisch, & Heyne, 2013), industrial establishments (Bozdoğan, Okur, & Kasap, 2015), national parks (Güler, 2009).

In addition to these, The Effect Of Trips Made To Out-Of-School Learning Environments On Academic Achievement And Attitude (Şentürk & Özdemir, 2014), Out-Of-School Learning Environments; Providing Students With Experience(Tatar & Bağrıyanık, 2012), Providing Permanent Knowledge With Observation Skills (Balkan Kıyıcı & Atabek Yiğit, 2010), Making It Easier For Students To Relate To Daily Life (Tortop & Özek, 2013), Enabling Students To Develop Cognitively And Emotionally (Tatar & Bağrıyanık, 2017) are also other studies.

Studies in the literature show that teachers have a positive view of learning in out-of-school environments, but they mostly do not prefer these environments (Tatar & Bağrıyanık, 2015). In the studies, as the reason; It has been revealed that teachers do not have sufficient knowledge and self-efficacy about field visits. In addition, it was stated that the teachers’ inability to provide guidance before and during the trip, and that teachers see time, cost, responsibility and bureaucratic work as a problem (Bozdoğan, 2008).

The pre-service teachers expressed the difficulties they experienced before the trip in the categories of transportation, group climate, bureaucracy and inexperience. The fact that the planned out-of-school environments are far away and the addresses of these places are not known exactly by the teacher candidates were emphasized as the most common problem. It can be said that the most inherent problem that can be experienced during out-of-school activities may be the transportation problem (Gürsoy, 2018).

It is an undesirable situation when the informal education environments are created that the teacher candidates have experienced a lot of trouble before the trip. The troubles they experienced before the trip may cause them not to enjoy the trip and to see the trip process as unnecessary. This situation may prevent educational trip environments from reaching their goals.

Developing out-of-school learning environments activities for science lessons and evaluation of the effects of students on scientific process skills (Erten & Taşçi, 2016), school administrators views on out-of-school learning environments (Aydemir &Toker Gökçe, 2016) In the studies conducted in the literature, there are opinions of parents that out-of-school learning environments can be risky and waste of time. Due to the fact that parents, who are an important part of education and training, do not see out-of-school learning environments as educational areas, it has been difficult to obtain the necessary permissions. (Bozdogan 2007), determined that the rate of families going to out-of-school learning environments with their children is low, and (Yavuz, 2012) made suggestions for changing the perceptions of parents about out-of-school learning environments. The findings obtained in this study showed that, despite such difficulties, out-of-school learning environments are alternative learning environments that support in-class education activities and contribute to the development of students. (Erten & Taşçı, 2016)

School administrators experience various problems before, during and after the utilization of out-of-school learning environments. These are financial deficiencies, official procedures, problems arising from student age difference, in-school problems and out-of-school learning environments. Financial deficiencies can bring the administrator and the teacher, the teacher and the parent, and the administrator and the parent face to face. The most common problems faced by administrators are that official letters take time, the time spent in the process of parental approval, vehicle inspection procedures, requesting appointments from institutions and organizations where the event will take place, traffic density and accident news in the press. (Aydemir& Toker Gökçe, 2016).

At the same time, it is seen that studies on the use of out-of-school learning environments are concentrated at primary, secondary and high school levels, and there are very limited studies in which science and mathematics activities are included in out-of-school learning environments in the pre-school period.(Uludağ, 2017)

In the light of all these research results, a school model has been designed in order to support out-of-school learning environments, where children can experience first-hand, gain knowledge through more than one sense organ, and examine the object, existence or event in their natural environment, through workshops designed in the form of a geodesic dome in the school garden.

School Gardens as an Out-of-School Environment

The benefits of using school gardens can be listed as follows (Loxley, 2016): It offers children an environment in which they are familiar and therefore feel comfortable. It provides the opportunity for children to see various patterns of nature (change of seasons) and to make observations over and over again. Children can carry on their research for days and weeks. They feel pretty responsible for their own learning. The use of the school garden is less complicated than taking the children to other out-of-school learning environments (transportation cost, health, safety, etc.).

In the first workshop, the cultivation of vegetables and fruits with soilless plant growing method (hydroponic) will be farmed by the children. In all processes, it will be ensured that children learn by doing and experiencing. Almost all of the world's vegetable production is carried out in soilless culture greenhouses. Hydroponic farming is practiced in many countries in the world such as the Netherlands, Spain, France, Belgium, Germany, Italy, Japan, South Korea, USA, Colombia and China. Soilless agriculture is achieved most intensively in the Netherlands in the world. In recent years, a serious trend towards soilless cultivation has been observed in other countries as well. Studies conducted in our country have revealed that the cultivation environment is suitable for our greenhouse conditions. In the cultivation environment, organic such as peat, sawdust, bark, rice husk and inorganic materials such as sand, gravel, perlite, vermiculite, volcanic tuff, rock wool and plastic foams can be used. Among these, especially perlite and volcanic tuffs are abundant in our country. These cultivation environment can be used alone or mixed with peat or mushroom compost waste (https://www.turktob.org.tr). It is met by giving the solutions by drip irrigation system. This hydroponic method completely eliminates the leading causes of houseplant death and achieves with little watering. Without soil, plants will also be much less likely to encounter disease or pest problems. Vegetables and fruits will be grown without the use of pesticides. Also, in hydroponic growing, daily maintenance will be reduced to a monthly watering. The energy obtained from solar panels will be used for the water circulation system. Some vegetables and fruits that you can easily grow are as follows; vegetables such as tomatoes, potatoes, green onions, carrots, eggplants, cucumbers, zucchini, peas, beans, spinach, lettuce, arugula, parsley, hot-sweet peppers, bell peppers and broccoli, corn, wheat, sugar beet, tea and cotton industrial plants, fruits such as watermelon, melon and strawberry (https://www.turktob.org.tr).

The second workshop will include sericulture and silk fabric making. Silkworm was first discovered 4000 years ago in China. It has also been kept a great secret by China for many years. Silk, after leaving China, first reached Anatolia and then Europe via the Silk Road. Silkworm farming is an auxiliary agricultural activity that provides an additional source of income. Mulberry leaves are the silkworm's only food source. Therefore, silkworm breeding can be carried out wherever mulberry trees can be grown. Silkworms have been cultivated in Anatolia for 1500 years. Although the climate and geographical features of Turkey are suitable for growing mulberry trees, this agricultural activity is losing its importance in Turkey day by day (Odabaş, Günbey et al., 2020). There are four different periods in the life of the silkworm. These are respectively egg - larva (caterpillar) - chrysalis and butterfly periods (https://www.tarim.gov.tr). Children will learn by doing the life cycle here. The only food of the silkworm is mulberry leaves, and about 500 kilograms of mulberry leaves are needed for one box of silkworms. The mulberry garden should be close to the silkworm feeding place (https://www.tarim.gov.tr).

In the third workshop, planetariums or observatories are the most effective training environments for astronomy education. Reed and Campbell (1972), Fletcher (1980), Mallon and Bruce (1982) concluded in their studies that planetariums have a very important place in astronomy education and student success. Because Fletcher (1980) stated that subjects that take hours for teachers to explain on the board and which may be difficult for students to comprehend and visualize in their minds can be comprehended more easily and more efficiently in a planetarium or observatory environment.(Sontay, Tutar et al. ,2016)

In the fourth workshop, archeology and the museum: Museums are places that invite individuals to experience, think, observe and learn by making connections through museum education. Especially considering the contribution of early childhood experience to learning, museum education is an important opportunity for the preschool period. Children find opportunities to observe, question, imagine and connect with their daily lives through activities in museums (Şentürk &Gülsen, 2021). UNESCO world heritage sites in the regions where they are located should be miniaturized and children should be able to discover and find them through excavations. Thus, children will be effective in establishing a connection between the past and the future, establishing a cause-effect relationship, cooperation, self-confidence, language development, and psychomotor skills.

Fifth workshop,wheat cultivation and transformation of wheat into flour: Bread is used synonymously with food in our country and in many parts of the world. Human's relationship with wheat began in the hunter-gatherer period. With the transition to the settled order (8500 BC), it was necessary to find food sources. Wheat and barley emerged as the most suitable plant sources. In recent years, some scholars state that the basis of Western civilization is not the Greek Civilization, but the Sumerian Civilization. The main resources of the Sumerian Civilization, which rose in the Fertile Crescent, were grain and ovine breeding. Among the cereals, wheat, barley and legumes were the most important species as they are today. Wheat, which later spread to the world from this region, has been the staple food of people on almost all continents until today. Aquarium in the sixth workshop; It is important to instill a love and awareness of animals in children, to make them realize that they live in other creatures other than themselves in the social areas they live in, to be able to distinguish differences by meeting animals they have never seen before, and to contribute to their cultural development. It will also be ensured that they have social responsibility by feeding living things.

The energies required for these geodetic workshops will be provided through solar panels. Solar energy; It is the conversion of the rays coming from the sun into electrical energy by using special technologies. Solar energy is the most abundant and clean energy in the world. It does not pollute the environment and is noiseless. It is a renewable and sustainable energy. Although solar energy accounts for only a small portion of overall global energy use today, the cost of installing solar panels is falling.

Most of the electricity sources we use today are fossil fuels, which produce harmful waste to the environment due to carbon dioxide. However, solar energy is the cleanest energy source that does not cause pollution and does not harm nature. When this situation is brought to pre-school children, today's children, tomorrow's adults, will be brought up with environmental education.

Method

In this study hypothetical model design was used. Here, the structural buildings architecture and educational buildings are united into outdoor environment buildings. The school departments and outdoor environment elements have brought together by semi meta-analysis method with incorporation readily theoretical framework. The resultant model designs were presented in sketched figures. The computer assisted program was used to obtain the final outdoor school environments.

Figures

The New School Model Project We Designed for Out-of-School Learning Environments

Figure 1. Schools and workshops designed as an Atom model

In Figure 1, the school building is centered in the school garden in the middle, and it consists of workshops with geodesic domes around it. This model is similar to the atomic model in appearance. Children are provided to learn by doing and living in the fields of chemistry and physics, as well as other disciplines. From the time of the historical Turkish states, triangular structures were rejected and it is seen that dome-shaped structures and tents resembling the sky were included. With these geodesic dome workshops, historical information can be given to children.

Figure 2. Workshops and Their Themes

There are 6 workshops in the picture in Figure 2, and hydroponic (soilless) farming activities will be carried out in the first one. The aim here is to compensate for our losses due to environmental pollution and global warming. Hydrooponicfarming is achieved most intensively in the Netherlands in the world. In recent years, a serious trend towards soilless cultivation has been observed in other countries as well. As of the pre-school period, it is aimed to give children within the scope of environmental education. Silkworm breeding will be produced in the second workshop. How silk fabrics are obtained will be learned from the very beginning by doing and experiencing with children. Shelving systems for silkworms will include mulberry trees to feed them. It is aimed to give children the cycle of emergence of silkworms from the cocoon and formation of fabric from silk.

In the third workshop, children will learn about the stages of wheat cultivation from wheat to flour by doing it themselves in the mills. In the fourth workshop, miniatures of historical places in the province where the children are located will be made and information such as how archeology studies are carried out and how to preserve the found artifacts will be presented to the children. Historical information will be told to children. In the fifth workshop, a plenatarium will be built and space, solar system, planets will be presented with virtual reality. Telescope will be used for sky surveys. In the sixth workshop, an aquarium will be created, and children will learn by doing and living in processes such as maintaining the aquarium, feeding sea creatures, and cleaning the aquarium.

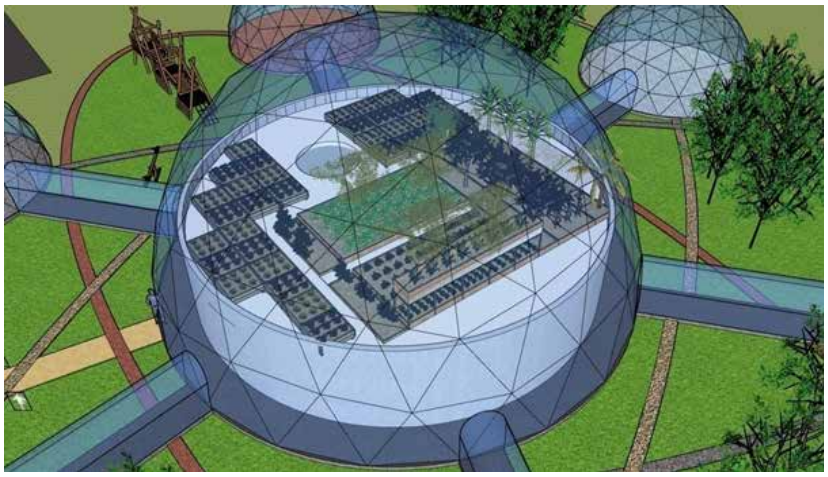

Figure 3. The School Located In The Center

In the picture in Figure 3, there are tunnels that will provide passing from school to workshops in the school model located in the center. While passing through the tunnels, children will be given mathematical information about the concept of time and the size of the tunnels. Children will decide for themselves which workshop they want to work in during the day. The botanical garden will be located in the upper part of the school. The glass coverings inside the dome will be in the shape of a triangle. In this way, children will see their knowledge of geometric shapes in a concrete way.

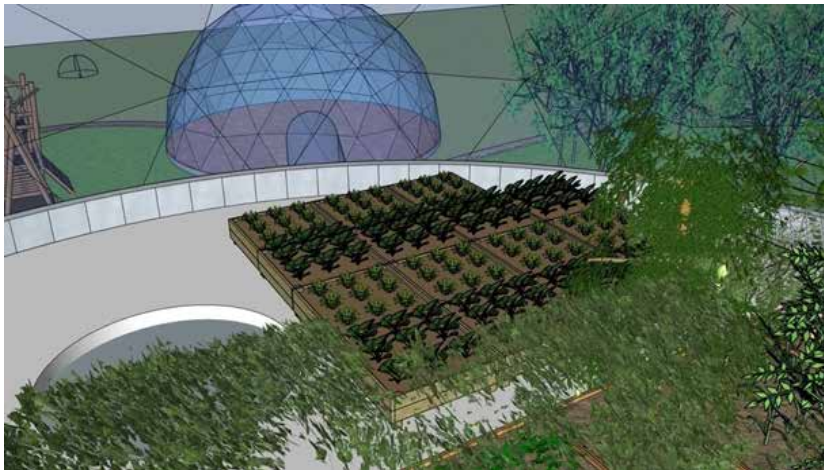

Figure 4. Botanic Garden

The picture in Figure 4 shows the images of the botanical garden on the roof of the school. This garden will be reached by the stairs passing through the middle of the building. Geodesic domes will be covered with glass. In this way, children will have the chance to examine natural events in more detail. They will see the sight of rain and hear the sounds of falling raindrops. In the same way, they will be able to watch the snowflakes and observe the melting and freezing events.

Figure 5. Garden, on the outside of the school and workshops

In the picture in Figure 5, the open areas outside the workshop will be afforested. By examining the growth of fruits and vegetables on the ground, it will be ensured that they consume the fruits and vegetables they have cultivated. At the same time, they will be able to see the difference between hydroponic agriculture and ground agriculture. Children will learn in both open and closed workshops. Furthermore, solar energy panels will be placed in the open area of the garden and the required energy will be produced with these panels by using geodesic dome-shaped workshops. Environmental education and the foundations of sustainable development will be given to children from an early age.

Conclusions and Recommendations

Environmental education should consider the environment as a whole consisting of natural and artificial, technological and social elements, and should be carried out as a life-long education in all formal and non-formal education stages, starting from pre-school education. (Sever& Yalçınkaya, 2018)

Computer-aided models, simulations or animations may be the best educational program options for learners (Seven, 2013). As Dahlqvist (2000) quoted from Scaife and Rogers (1996), he stated that “a picture is better than words, an animation is better than a photograph” and the argument put forward for the use of multimedia in educational settings follows the “more, more” approach. Computer-based materials are very successful tools in offering different possibilities that support 3D presentations (Seven, 2013). 3D computer models are an effective and scientific way to embody some abstract concepts. Students understand and learn processes that are not in their minds. In the field of education, virtual environments supported by three-dimensional materials provide many benefits to students. They argued that three-dimensional worlds would provide students with experiences that make them feel the essence of being in a certain environment and that the students could give meaning to the concepts with their own experiences. The use of computers, with the help of applications such as three-dimensional models, animations, simulations and virtual laboratories, allows for more effective teaching of hard to understand physical phenomena. In addition to these benefits, it is very important that especially “abstract” concepts and subjects are concretized, facilitating their intelligibility and presenting their representations. For computer-aided applications, both technical equipment and well-prepared instructional software are required.(Kıllı& Seven, 2013)

Through these workshops, it is aimed to ensure that children receive out-of-school education in safe environments, without the need for permissions and procedures, and to gain concrete experiences at first hand. At the same time, it is aimed to provide children with scientific process skills in mathematics and science by providing cooperation with school administrators, families and teachers. In the field of mathematics for children through geodesic domes; geometric shapes, measuring by observing the growth of plants, length by passage through tunnels, time spent passing through tunnels, the concept of area with the placement of materials in geodesic domes, water channels used for plant growth and volume concepts. In the field of science, physical science is reached with silkworm breeding and life science, our planet and space with the planetarium, temperature, humidity and light processes in the area created for the growth of plants.

The geodesic dome workshops will be in the form of an atomic model when viewed from above, and the children will be introduced to the atomic model with the help of 3D in the workshops. It is thought that these workshops will make an important contribution to the development of spatial animation skills.

Sustainable development is structured on the fact that people deserve a healthy and productive life in harmony with nature. Through this system, the foundations of environmental education and sustainable development will be given to children at an early age.

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Investigation of Master's and Doctorate Theses on Preschool Period Science Education in Turkey

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Highlights

1. There are 37 studies on science education in pre-school period in Turkey.
2. The studies found were classified in terms of thesis type, years, institutes, universities, method, study group and subject.
3. This is the most up-to-date study on the examination of master's and doctoral theses on pre-school science education in Turkey.

Abstract

The objective of this study conducted in Turkey pre-school period is the examination of science education on graduate and doctoral theses. The data were analyzed by content analysis method.
Within the scope of the study, 37 studies, which were reached in the last 17 years, were grouped according to their years, thesis types, qualitative / quantitative / mixed approach, university and institute to which the thesis belongs, study group and it's subjects. According to the findings obtained from the study, it was found that more master's theses were reached in preschool science education, there were more studies on this field in recent years, studies were carried out in 25 different universities and 5 different institutes, the study group mostly worked with teachers and It was found that the subject of study was the attitudes of teachers. According to the approach of the studies, it was found that the quantitative approach was used more often.

Keywords: Science education, pre-school, preschool science education, thesis review.

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Introduction

The development of man starts from the moment he first falls into the womb and continues until death. Among these periods, the pre-school period is a period in which the child meets life, learns and discovers. It is also known as a period when various areas of development were greatly developed. Considering that children are absorbent like sponges during this period, it can be said that it is a productive process in terms of preparing them for life. During this period, the child learns something new with everything he discovers, and new connections are formed in his brain with everything he learns. The pre-school period has a critical importance in terms of the speed of brain development and the formation of meaningful connections in the brain.

What is pre-school education?

In order for the child to realize the above-mentioned learning, explore and do mental activities like this, a rich and stimulating environment should be provided to the child as much as possible. All families may not have the same favorable conditions for providing this environment. This is where pre-school education comes into play.

It is the education that prepares children for the next years of their lives by considering the interests, needs and developmental characteristics of children in the first six years of pre-school life. Preschool education includes the development of cognitive development, social and emotional development, language development, motor development and self-care skills of children.

Objectives of preschool education

The aims of preschool education in the 2013 preschool education program (Meb, 2013) are as follows sorted:
1. To enable children to develop body, mind and emotion and to gain good habits,
2. To prepare them for primary school,
3. To create a common upbringing environment for children from unfavorable environments and families,
4. To ensure that children speak Turkish correctly and beautifully.(p.10)

Science Education

When talking about preschool education, it is mentioned about the cognitive development of children, preparing them for life and introducing life to them. Science education plays a major role in this regard. Many situations that the child discovers or observes in or around nature are related to science. Science activities are very effective when explaining these situations to children.

Effective science education has an important place in the child's discovery of nature, recognizing life and gaining scientific process skills.

In addition to all these, if preschool science education has an important task, it is to enable the child to develop a positive attitude towards science and science.

Related Studies

In a study (Kiras, B, 2019) in which theses on science education were examined, it was stated that the theses written were mostly master's theses, and the universities that wrote the most theses were Gazi University, Middle East Technical University, Atatürk University, Marmara University, Dokuz Eylül University and Karadeniz Technical University, respectively. It has been stated that it is mostly written about teaching method approach, strategy and techniques in terms of subject. It was found that there were the highest number of secondary school students as a sample and the most quantitative method was used as a method. In addition, it has been found that they do not give much methodical features in many of the theses.

Karamustafaoğlu (2009) in his study on basic trends in science and technology education, after examining the papers presented and published in 12 journals and three national congresses, determined that measurement-evaluation was the subject with the most studies in eight different categories according to the subject titles.

When Gürdal, Bakioğlu and Öztuna analyzed the 36 theses they reached in their study (2005) on the examination of science education graduate theses, it was determined that the most quantitative method as the research method, the state school students the most as the sample group, and the trial model the most as the research model. In addition to these, it is among the findings that there is no great disproportion in the gender distribution of the researchers, and that the theses mostly belong to the science teaching department and the physics teaching department as the department.

The studies in which the above-mentioned science education theses were examined were not particularly studies on pre-school science education.

Preschool science education; content analysis of national and international studies on the subject in the context of viewing Mantas Ozpir on fire (2018) in their study between 2003 and 2017 National 100, 80 preschool science education international study in 2010 examined most of the work in Turkey and in the world in 2014 stated that they had encountered. As a sample, the most Preschool Teachers are used in Turkey, while preschool students are used in the world. While he determined that the most studied subject in Turkey is teacher education, he determined that the most studied subject in the world is my concept teaching. When the studies were examined according to the method, it was seen that while the most quantitative method was used in Turkey, the qualitative method was more common in the world. As a data collection tool, the most interview techniques have been used in Turkey and the world.

Purpose Of The Study

This study aims to analyze the distribution of graduate theses on science education in pre-school period in Turkey by thesis type, distribution by years, distribution by study group, universities and institutes, distribution by method and subjects.

In the study, the answers to the research questions given below were sought:

What is the distribution of dissertations on science education for preschool education conducted in Turkey by dissertation type?
What is the distribution of theses on pre-school science education conducted in Turkey by year?
What is the distribution of the theses on science education in the pre-school period conducted in Turkey between the universities and institutes to which they belong?
What is the distribution of theses on pre-school science education conducted in Turkey according to the method?
What is the working group distribution of theses on pre-school science education conducted in Turkey?
How are the subject distributions of theses on science education in preschool education conducted in Turkey?

Method

This section covers the design of the study, its sampling, the process of data collection and the process of analyzing the data.

The Pattern Of Study

This study was carried out by document analysis from a qualitative research pattern. Since it may be difficult to study graduate theses for science education in preschool age by traditional methods, it was thought that it would be more appropriate to use a qualitative research method in order to provide more in-depth information. (Büyüköztürk et al., 2016).

Sampling

The sample of the study is comprised of graduate theses on pre-school science education conducted in Turkey. There are 37 theses in the sample, 28 of which are master's and 9 are doctoral.

The Process of Data Collection

In the research process, the YÖK Thesis Center was used to obtain theses on science education in preschool education in Turkey. When searching for theses, the keywords “preschool”, “science education” were written in the summary section in the detailed search section and the Deceses that came out were scanned. Without selecting an institute, 37 of the 696 theses listed with the keyword “science education” were found to be related to science education in the preschool period. The screening of the data was based on the years Dec004-2020.

Analysis of the Data

In the analysis of the data, the content analysis method was used.
Stages of content analysis ;
Provision of relevant work Jul
Determination of categories and codes to be used in the content analysis of related studies
Analysis in the light of categories (Özpir Mantaş, Coştu, 2018)
After collecting the data, the categories and codes were determined.
The data are grouped according to the type, year of the thesis, the university and institute to which it belongs, the study group, the method and the subjects of the thesis. The findings obtained are illustrated with tables.

Findings

In this part of the study, the findings obtained within the framework of the research questions included in the purpose of the study were analyzed and interpreted. The findings obtained were visualized with tables. First, it was thought that it would be a good start to make an analysis according to the type of theses. 28 of them are master’s theses and 9 of them are doctoral theses when theses on science education in preschool education have been examined in Turkey since 2004. The first two of the doctoral dissertations were awarded in 2014. Finally, two doctoral theses were obtained in 2020. 10 of the 28 master’s studies have been given in the last two years.

Table 1. Types of theses on Pre-School Science Education in Turkey

Type of Thesis	f
Master’s DegreeThesis	28
Doctoral Thesis	9
Total	37

As a second, a classification was made for the distribution of theses on science education in preschool education in Turkey by year.

According to the results obtained, it is seen that there are no serious study Dec in the first years of the pre-school science education studies conducted between 2004 and 2020. It is seen in the data given in the table that no studies have been given in some years. It is seen that studies in the related field are given every year in 2014 and in the following years. In addition, it is observed that the number of studies conducted in the field of pre-school science education for the last seven years has increased compared to previous years. In particular, it is observed that the largest number of studies have been given in the last two years compared to other years.

Table 2. Distribution of the theses on pre-school science education in Turkey by years

Years	f
2020	6
2019	7
2018	2
2017	3
2016	3
2015	3
2014	4
2013	0
2012	2
2011	1
2010	2
2009	1
2008	0
2007	1
2006	2
2005	0
2004	0

Then, the distribution of studies in the field of pre-school science education in Turkey towards universities and institutes is visualized in table3 and table4.

Table3. Distribution of the theses on pre-school science education in Turkey by universities

University Name	Master's Degree	Doctoral	Total
Gazi University	4	1	5
Çukurova University	2	1	3
İstanbul Aydın University	3	0	3
Abant İzzet Baysal University	2	0	2
Çanakkale Onsekiz Mart University	2	0	2
Eskişehir Anadolu University	2	0	2
Hacettepe University	0	1	1
Marmara University	0	2	2
Ankara University	0	1	1
Boğaziçi University	1	0	1
Celal Bayar University	1	0	1
Erciyes University	0	1	1
Fırat University	1	0	1
İnönü University	1	0	1
Kafkas University	1	0	1
Karadeniz Teknik University	0	1	1
Kütahya Dumlupınar University	1	0	1
Okan University	1	0	1
Ondokuz Mayıs University	0	1	1
Orta Doğu Teknik University	1	0	1
Recep Tayyip Erdoğan University	1	0	1
Trakya University	1	0	1
Uşak University	1	0	1
Yeditepe University	1	0	1
Yıldız Teknik University	1	0	1
Total	28	9	37

When the studies on science education in the pre-school period are examined, it is seen that Gazi University has the highest number of studies in this field. Çukurova University and Istanbul Aydın University are the two universities that follow this ranking.

Table4. Distribution of the theses on pre-school science education in Turkey by institutes

Institute Name	f
Institute of Education Sciences	18
Social Sciences Institute	11
Graduate School of Natural and Applied Sciences	5
Graduate School of Education	2
Health Sciences Institute	1
Total	37

When the institutes to which the theses on preschool science education belong were examined, 5 different institutes were encountered. Among these institutes, the institute that gave the most theses with 18 theses within the scope of the related subject was the education institute, while the institute that followed it and gave the second most theses with 11 theses on the related subject was the institute of social sciences. This is followed by the institute of science with 5 theses in the third place, and the graduate education institute with 2 theses in the fourth place. In the last place is the health sciences institute with a thesis.

Of the 18 theses in the education institute, 7 are doctoral theses and 12 are master's theses. Of the 11 theses in the social sciences institute, one is a doctoral thesis and 10 is a master's thesis; One of the 5 theses in the institute of science is doctorate and 4 of them are master's thesis.

All of the theses in the graduate education institute and the thesis in the health sciences institute are the master's thesis.

When the distribution of the theses on pre-school science education in Turkey is examined according to the method, the findings are visualized in Table 5.

Table 5. Distribution of the theses on pre-school science education in Turkey according to their method

Research methods	f
Qualitative	9
Quantitative	16
Mixed	12
Total	37

When the prepared theses were examined, according to the approaches of the theses, 9 of them were prepared with qualitative method, 17 of them with quantitative method and 12 of them with mixed method. Based on the result obtained in the table, it was determined that the researchers preferred the quantitative method the most, while the least preferred method was the qualitative method.

When the study groups of the theses on pre-school science education in Turkey are examined, the findings are given in Table 6.

Table 6. Sample distribution of theses on pre-school science education in Turkey

Sample	f
Teacher	20
Student	17
Pre-School Teacher Candidate	4
Executive	2
Mothers of Preschool Students	1
Headmen (old/new)	1
Document	1

In the studies, it was seen that the researchers mostly determined the teachers as the study group. After the teachers, the most common study group was the students.

Finally, when the distribution of the subjects in the examination of the theses on pre-school science education in Turkey is examined, the data obtained are given in table 7.

Table 7. Subject distribution of theses on pre-school science education in Turkey

Concepts on Topics	f
Attitudes (teachers and teacher candidates)	11
Opinions (teachers and teacher candidates)	6
Science Applications	6
Variables on Children's Science Process Skills	6
Self-Efficacy Levels	5
Concept Development	2
Science education programs	2
STEM	3
Knowledge Level of Teachers	2
Scale Development	1
Establishing a Science Education Execution Standard	1
The Effect of the Environment on the Quality of Science Education	1
Out-of-School Learning Environments in Science Education	1
The Effect of Preschool Science Education on Science Process Skills at High School Level	1
Review of Materials and Resources	1
Developing Science Activities	1
Cognitive Flexibility	1
Teacher's Science Education Pedagogical Content Knowledge	1
Problems in Science Education	1
Content Analysis of Academic Studies	1
Use of Guide Materials	1
Teacher Competence	1

While determining the concepts they focus on in the subjects of the studies, it was thought that the attitudes and opinions of the teachers should be taken under the same concept. However, since a difference of almost half was detected between the two, it was thought that examining both concepts under separate headings would provide clearer results.

When the data obtained are examined, it is seen that the researchers mostly include the attitudes of teachers or teacher candidates in their theses. So much so that there is almost twice as much difference between the subject of teachers' opinions that follow it.

When we look at the studies on the variables of teacher / pre-service teachers' opinions, science applications and children's science process skills, it is seen that they all have the same frequency.

This ranking is followed by the issue of self-efficacy level with a slight difference. There are three studies on STEM and two each on concept development, science education programs, and teachers' knowledge level.

Conclusion and Recommendations

When the findings obtained in the study were compared with the findings obtained in similar studies in the literature, some common and divergent points were determined.

According to the results obtained from the research, 28 of the 37 theses prepared on pre-school science education in Turkey are master's theses and nine are doctoral theses.

Making science education more efficient in the pre-school period will only be possible by determining the needs of teachers and the problems in the planning and evaluation stages of the science education process (Alisinanoğlu et al., 2017). For this reason, studies on pre-school science education are of great importance in order to increase efficiency. The importance of this will be understood, as an increase has been observed in the number of thesis studies on the subject, especially in the last two years, which is based on the study. Until 2014, it is seen that at most two studies were carried out per year. However, after the restructuring of the science and technology curriculum in 2013, an increase was observed in pre-school science education studies in 2014 (Taş et al., 2019). However, with seven studies, 2019 was the year with the most studies. The significant increase in theses in 2019 and 2020 gives the result that in recent years, pre-school science education has been given more place in the literature compared to other years.

Gazi University has the highest number of theses among universities; Among the institutes, the most came from the institute of educational sciences. A consistent result was obtained when compared with the data of Kiras (2019). In both studies, Gazi University was the university to which the most studies belonged.

While the most quantitative research method was used, the teachers were mostly used as a sample. As a sample, students are in the second place by a small margin.

The fact that the most used research method is quantitative is a result that overlaps with many studies in which document analysis of previous studies in science education was conducted (Aydoğdu, 2015; Kiras, 2019; Gürdal,Bakioğlu, & Öztuna, 2005; Özpir Mantaş, Coştu,2018).

When the studies are examined according to the sample, a result consistent with the studies of Özpir Mantaş and Coştu has been obtained. However, in some other studies (Gürdal, Bakioğlu and Öztuna 2005; Kiras 2019), it is seen that the sample consists mostly of students. It should be taken into account that the student population of the studies on the difference in this comparison is not pre-school students.

When theses are examined in terms of their subjects, “attitudes” come first with a clear difference. This is followed by “opinions”, “science practices” and “variables on children’s science process skills” in equal numbers. This result is consistent with the finding of Özpir Mantaş and Coştu(2018) that most of the teacher education subjects are studied in their studies. It has been stated that Özpir Mantaş and Coştu’s (2018) teacher education code includes teacher attitude competencies.

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EXAMINATION OF BOOK READING HABITS OF SECONDARY SCHOOL STUDENTS

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Abstract

This research reveals the reading habits of the secondary school students. The research group consist of 243 students who attends secondary school in the first term of 2021-2022 educational year in Kastamonu.
A questionnaire was prepared in order to collect personal information from the participants. There are 23 items in the questionnaire form to collect information about the variables. The reading habits of secondary school students with the survey questions, which were prepared by taking advantage of the opinions of academicians and teachers who have applications for the habit of reading books specialized in their fields; were analyzed statistically according to their gender, grade level, educational status of parents and monthly income. The analysis of the quantitative data obtained in the research was made using SPSS 26 Windows Package Statistics Program. During the analysis of the data, the Pearson Correlation Test was used to examine the relationship between variables, as well as descriptive statistics. Significance level was accepted as $p<0.05$
According to the findings of the research; 35% of the students participating in the research stated that they read books regularly, 57.2% stated that they read books occasionally, 7.8% stated that they did not have a habit of reading.
According to the type of reading, students stated that 63,4 % of them read novels and stories,16 % of them read scientific books, while 20,2% of them stated that they read books regardless of the type of book.
It is revealed that 96.7% of the students read from books, 2.5% of them read from the mobile phone.
According to daily reading habits, respecting the number of pages, 76.5% of the students read an average of 0-50 pages per day, 15.2% read an average of 50-100 pages per day, 7% read an average of 100-200 pages per day, 1.2% stated that they read an average of 200 pages or more per day.
Regarding the importance of visuality in choosing a book, 58% of the students stated that the book cover and visuals are important for selecting books, and 42% stated that the book cover and visuals aren't important for selecting books.
Regarding access to the book, 84.4% of the students stated that they can reach the books they want according to their settlements, and 15.6% stated that they had problems in reaching the books.

Keywords: Reading habits, Pandemic, reading book, secondary school

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Introduction

The perception of the environment in reading, the interpretation of the perceived environment, constitute the first step in the formation of the understanding of life. The primary education process, which continues from the 1st grade to the end of the 8th grade, covers the process starting from the first step of the reading habit and continuing until the interpretation of the perceived environment. Acquiring the habit of reading and making it permanent also have a significant impact on other courses in academic terms. It is expected that students who can use the language well in oral and written language with the skills gained in Turkish lessons in primary schools will also be successful in other lessons (MEB, 2005).

The development of cognitive, affective, literary and aesthetic fields is directly related to reading habits. Reading habits enable students to develop their critical thinking (Kaçan Softa & Ulaş Karaahmetoğlu, 2015; Karatay, 2015). The Ministry of National Education (2019 / 1-8th Grades) Turkish Language Curriculum requires students to grow up as individuals with literary and aesthetic values, with the article “Free reading texts that support the themes should be included in the course books and have literary and aesthetic values”.

It is known that effective and fluent reading improves reading comprehension skills (Başaran, 2013; Yıldırım, Rasinski, & Kaya, 2017). Ministry of Education; e-books, digital literacy, technology literacy, z-books, etc. to the subject suggestions related to the themes that are foreseen to be processed in the learning-teaching processes and to be included in the teaching materials for the development of comprehension skills in gaining the reading habit. added recommendations (MEB,2019). With the program, which also includes a critical literacy topic proposal, both tools have been increased and the reading process has been supported by technological developments in ensuring fluent reading and transforming the reading process into an acquisition.

Acquiring the habit of reading also affects social development. Today, a connection is established between the number of individuals reading books and the level of development of societies (Aydoğdu, 2020: 201). The importance of critical perspective, interpretation and inferences in today’s understanding of civilization is indisputable. At this point, the level of cognition of the individual has a direct effect on the development of individual rights. There are numerous ways to access information. The majority of these ways are related to reading, which is basically the way of acquiring knowledge (Sünbül, 2010: 1). Reading skill; It enables the student to reach different sources and encounter new information, events, situations and experiences. In this sense, reading skill; It also includes a process that enables learning, research, interpretation, discussion and critical thinking (Bekaroğlu, 2006). Initiating and maintaining this process at an early age will accelerate the process of accessing information and transforming knowledge into gain, and will also contribute to social development.

The act of reading; Reading the next text from beginning to end is an interaction between the past, present and future of our life (Göktürk, 1997: 132). Measurement and evaluation in Turkish lessons differ from other lessons in terms of methods and measurement tools. The individuality and contribution of the student is more evident in the transformation of the aims in the Turkish lesson into behavior. In Turkish lessons, knowledge is used at the level of usability rather than the level of recall (Poyrazoğlu 1993:240). In this sense, reading habit is of great importance in preparing students for life.

In order for Turkish teachers to follow the process in gaining reading habits, they need to know the interests of the students well. Demiray (1970:46–48) lists the reading tendencies by age as follows: 75% of the children read fairy tales until the age of 10 for girls and 9 for boys. After a period of hesitation starting from the age of 12, lasting until the age of 14 for girls and 16 for boys, interest in novels arouses. He says that books about nature, explorers, inventions, geography and history gain more value after the age of 10-11. The initiation of the reading process and its efficient and effective continuation are directly related to the communication to be established with the students.

Today, the most important factor that makes it difficult to follow the process in the acquisition of reading habits has been the pandemic. The pandemic has minimized teacher-student communication with the implementation and follow-up of educational activities, and even completely finished it in places. The pandemic (Covid 19), which is defined as the spread of a disease or infection between countries, continents or a very wide area such as the whole world, entered our country’s agenda on March 11, 2020, when the first case was seen (T.R. Ministry of Health, 2020).

The restrictive practices of the pandemic have caused some changes, albeit partial, in the acquisition of reading habits. In this period, reading types such as e-books and digital literacy entered our education life. Practices aimed at gaining the habit of reading in the distance education process have become more directly related to the existence of technological opportunities.

The basis of our understanding of education is the preparation of each student for life and for higher education by being trained in terms of their interests and abilities. An individual who reads, understands what he reads and gains the ability to interpret will contribute greatly to the development of the country with his own development.

Secondary school is one of the most important steps of post-primary education where basic education skills are acquired. The information to be gained in secondary school and to be added to the knowledge gained in primary school has a primary importance in preparing the student for life. For this reason, the readiness level of secondary school students for higher education is directly related to the positive results of their future expectations.

Purpose Of The Research

The effect of reading habit, reading by understanding and interpreting, on Turkish lessons and other lessons is very great. In this context, the aim of the research is to examine the extent to which the reading habit is acquired, together with the effects of the parent-material opportunities-pandemic process, and to interpret the results. Within the framework of this general purpose, answers to the following questions were sought:

a) The students' reading habits, the types of books they read, the place where they obtained the books before and during the pandemic, the methods of reading the books, the number of pages they read daily, the number of pages in the selection of the book, the effect of the book cover and visuals, the factors related to the book selection, the book preferences. What are the information about the information, reading habits in the pandemic process (Covid 19), accessing the books they want according to their places of residence, author meetings, book selection situations about authors, author selection situations, what are the situations of the habit of reading books in expressing themselves?

b) Do their reading habits, their preferences for the type of book they read, the number of pages they read daily, their reading habits during the pandemic (Covid 19) epidemic, and the self-expression of their reading habits differ significantly according to their gender and grade levels?

c) Do their reading habits differ significantly according to father and mother education levels and monthly income status, where they obtained books before and during the pandemic (Covid 19) epidemic, author meetings and participation in autograph events?

Method

It is a descriptive study designed to examine the situation of secondary school students in terms of reading habits. According to this model, the data were collected from the relevant sources along with the literature review and from the students with the survey technique.

Working Group

The study group of this study consists of 243 students participating in the research in 1 secondary school in the first semester of the 2021-2022 academic year in Kastamonu. A study was conducted in a school, taking into account the pandemic (Covid 19) conditions and the number of students. The differences in the socio-economic distribution of the parents, the implementation of author meetings and book reading activities at the school within a certain program and the evaluation of the data, and being a stakeholder school in the book reading activities implemented at the national level are the other criteria taken into consideration in the selection of the school.

Table 1. Personal Information of Participants

Gender	Number (N)	Percentage (%)
Boy	109	44,9
Girl	134	55,1
Class		
5th grade	62	25,5
6th grade	68	28,0
7th grade	65	26,7
8th grade	48	19,8
Father Educational Status		
Primary School	22	9,1
Middle School	46	18,9
High School	92	37,9
Associate degree	27	11,1
Licence	40	16,5
Graduate	16	6,6
Mother Education Status		
Primary School	58	23,9
Middle School	39	16,0
High School	77	31,7
Associate degree	23	9,5
Licence	37	15,2
Graduate	7	2,9
None	2	,8
Monthly Income Status		
2000 TL and below	16	6,6
2001-3000 TL	30	12,3
3000-5000 TL	72	29,6
5000-7000 TL	57	23,5
7001 TL and more	68	28,0
Total	243	100,0

Data Collection Tools

A questionnaire form was prepared in order to collect personal information from the participants. There are 23 items in the questionnaire to collect information about the variables. The data was transferred to the online Google form and collected from the students via the Google form.

Analysis and Interpretation of Data

The data obtained in the research were used SPSS 26 Windows Package Statistics Program, frequency, mean, cross table, Chi-Square analysis and Pearson Correlation test. Significance level was accepted as $p<0.05$.

Results

In this section, the findings of the data obtained in the research are discussed and interpreted in order according to the sub-problems.

3.1 Sub-Problem 1: The reading habits of the students who participated in the research, the types of books they read, the place where they obtained the books before and during the pandemic, the methods of reading the books, the number of pages they read daily, the number of pages in the selection of the book, the effect of the book cover and visuals, the factors related to the book selection What are the information about book preferences, reading habits during the pandemic (Covid 19), accessing the books they want according to their places of residence, author meetings, book selection situations about authors, author selection situations, what are the situations of book reading habits in expressing themselves?

Table2. Reading Habits of the Students Participating in the Research

About Reading Habits	Number (N)	Percentage (%)
I read books regularly	85	35,0
I occasionally read books	139	57,2
I don't have the habit of reading books	19	7,8
Total	243	100,0

While 35% of the students participating in the research stated that they read books regularly, 57.2% stated that they read books occasionally, 7.8% stated that they did not have a habit of reading.

Tablo3. Types of Books Read by Students Participating in the Research

Types of Books	Number (N)	Percentage (%)
Novel, story books	154	63,4
Poetry books	1	,4
Scientific books	39	16,0
I read regardless of the type of book	49	20,2
Total	243	100,0

While 63.4% of the students participating in the research stated that they read novels and story books, 16% stated that they read scientific books, 20.2% stated that they read books regardless of the type of book.

Tablo 4. The Place where the Students Participating in the Study Provided Pre-Pandemic Books

Book Supply Place	Number (N)	Percentage (%)
From the stationery	146	60,1
Online	77	31,7
Second-hand booksellers	3	1,2
From the library	17	7,0
Total	243	100,0

60.1% of the students participating in the research stated that they bought the books from stationery, 31.7% from the internet, 7% from the library, 1.2% from the second-hand booksellers, before the pandemic.

Table 5. Information on How Books Are Procured During the Pandemic Process (Covid 19) of the Students Participating in the Research

How to Provide Books	Number (N)	Percentage (%)
From the stationery	123	50,6
Online	102	42,0
Second-hand booksellers	6	2,5
From the library	12	4,9
Total	243	100,0

During the pandemic, 50.6% of the students participating in the research stated that they purchased the books from stationery, 42% online, 4.9% from the library, and 2.5% from second-hand booksellers.
2.5% of the students stated that they read it over the mobile phone.

Table 6. Information on How the Students Participating in the Research Read the Books

The Method of Reading Books	Number (N)	Percentage (%)
I read on tablet	1	,4
I read through the book	235	96,7
I read on mobile	6	2,5
I read on computer	1	,4
Total	243	100,0

96.7% of the students who participated in the research stated that they read the books over the book, and 2.5% of the students stated that they read it over the mobile phone.

Table 7. Information on Daily Book Reading Habits of the Students Participating in the Research

Daily Book Reading Habit	Number (N)	Percentage (%)
I read an average of 0-50 pages per day	186	76,5
I read an average of 50-100 pages per day	37	15,2
I read an average of 100-200 pages per day	17	7,0
I read an average of 200 pages or more per day	3	1,2
Total	243	100,0

76.5% of the students participating in the research read an average of 0-50 pages of books per day, 15.2% of them read an average of 50-100 pages per day, 7% of them read an average of 100-200 pages per day, 1.2% of them stated that they read an average of 200 pages or more per day.

Table 8. Information on the Number of Pages in the Book Selection of the Students Participating in the Research

Number of Pages in Book Selection	Number (N)	Percentage (%)
The number of pages in the book is important.	75	30,9
The number of pages in the book is not important.	168	69,1
Total	243	100,0

30.9% of the students participating in the research stated that the number of pages is important in the selection of the book, and 69.1% stated that the number of pages is not important in the selection of the book.

Table 9. Information on Book Covers and Images in the Book Selection of the Students Participating in the Research

Book Cover and Images in Book Selection	Number (N)	Percentage (%)
The cover and images of the book are important.	141	58,0
The cover and images of the book are not important.	102	42,0
Total	243	100,0

58% of the students participating in the research stated that the book cover and visuals are important in the selection of the book, and 42% stated that the book cover and visuals are not important in the selection of the book

Table 10. Information on the Book Selection of the Students Participating in the Research

Book Selection	Number (N)	Percentage (%)
I choose books according to my interests.	162	66,7
Every book interests me.	31	12,8
I choose a book based on the advice of my friends.	10	4,1
I choose books based on the advice of my teachers.	40	16,5
Total	243	100,0

While 66.7% of the students participating in the research stated that they chose books according to their interests, 16.5% according to the advice of the teachers, 4.1% according to the advice of their friends, 12.8% stated that each book attracted their attention.

Table 11. Information on the Book Preferences of the Students Participating in the Research

Book Preference	Number (N)	Percentage (%)
I prefer to buy the latest books	20	8,2
I prefer to buy books with a large number of prints	11	4,5
The content of the book is important	212	87,2
Total	243	100,0

87.2% of the students participating in the research stated that the content of the book is important when choosing a book, 8.2% preferred to buy the latest books, 4.5% preferred to buy books with a large number of prints.

Table 12. Information on the Reading Habits of the Students Participating in the Research During the Pandemic Process (Covid 19)

Book Reading Habit	Number (N)	Percentage (%)
My reading habit has increased	90	37,0
My reading habit has decreased	41	16,9
The pandemic process did not affect my reading habit	112	46,1
Total	243	100,0

46.1% of the students participating in the research stated that the habit of reading books was not affected during the pandemic (Covid 19), 37% stated that the habit of reading books increased, and 16.9% stated that the habit of reading books decreased.

Table 13. Information on the Status of Accessing the Books They Wanted According to the Place of Residence of the Students Participating in the Research

Situations of Reaching the Books You Want	Number (N)	Percentage (%)
I can find the books I want	205	84,4
I'm having trouble reaching the books I want	38	15,6
Total	243	100,0

84.4% of the students participating in the research stated that they could reach the books they wanted according to their settlements, and 15.6% stated that they had problems in reaching the books they wanted.

Table 14. Information on the Participation of the Students Participating in the Research in Author Meetings

Author Meetings	Number (N)	Percentage (%)
I attended author meetings and autograph events	115	47,3
I did not attend the author meeting and autograph events	128	52,7
Total	243	100,0

While 47.3% of the students participating in the research stated that they participated in author meetings and autograph events, 52.7% stated that they did not participate in author meetings and autograph events.

Table 15. Information on the Book Selection of the Students Participating in the Research about the Authors

Book Selection by Authors	Number (N)	Percentage (%)
I choose a book based on its author	21	8,6
The content of the book is more important than the author	222	91,4
Total	243	100,0

While 91.4% of the students participating in the research stated that the content of the book is more important than the author in the selection of the book, 8.6% of them chose the book according to the author.

Table 16. Information on the Author Selection Criteria of the Students Participating in the Research

Author Recommendation	Number (N)	Percentage (%)
Our teachers' advice is important to me	189	77,8
Advice from my friends is important	23	9,5
It is important that the author is well-known throughout the country.	31	12,8
Total	243	100,0

77.8% of the students who participated in the research stated that the advice of the teachers was important in the selection of the author, 12.8% stated that it was important for the author to be known throughout the country, and 9.5% stated that the recommendation of their friends was important.

Table 17. Information on the Effect of Reading Habits of the Students Participating in the Study on Expressing Theirself

Self-Expression Effect	Number (N)	Percentage (%)
I think it has a positive effect on expressing myself	212	87,2
I don't think it has a positive effect on expressing myself	31	12,8
Total	243	100,0

While 87.2% of the students participating in the research stated that they thought that the habit of reading books had a positive contribution to expressing themselves, 12.8% stated that they thought that it had no positive contribution to expressing themselves.

Sub-Problem 2: Do their reading habits, their preferences for the type of book they read, the number of pages they read daily, their reading habits during the pandemic (Covid 19) epidemic, the self-expression of their reading habits differ significantly according to their gender and grade levels?

Table 18. Descriptive Data and Chi-Square Analysis by Gender of the Students Participating in the Research

Gender	I don't have the habit of reading books			Total
	I read books regularly	I read books regularly	I don't have the habit of reading books	
Boy	27	70	12	109
	24,8%	64,2%	11,0%	100,0%
Girl	58	69	7	134
	43,3%	51,5%	5,2%	100,0%
Total	85	139	19	243
	35,0%	57,2%	7,8%	100,0%

X^2 = 10,164, sd = 2, p = ,006

When Table 18 is examined, there is a significant difference in terms of reading habits according to gender in Chi-Square analysis (sig= .006<0.05). While 24.8% of male students stated that they read books regularly, 43.3% of female students stated that they read books regularly. While 11% of male students stated that they did not have a habit of reading, 7% of female students stated that they did not have a habit of reading.

Table 19. Descriptive Data and Chi-Square Analysis of Book Type Preferences by Gender of Students Participating in the Research

Gender	Book Genre Preference				Total
	Novel, story books	poetry books	scientific books	I read regardless of the type of book	
Boy	61	0	22	26	109
	56,0%	0,0%	20,2%	23,9%	100,0%
Girl	87	140	21	13	134
	50,3%	53,2%	63,6%	59,1%	100,0%
Total	173	263	33	22	243
	100,0%	100,0%	100,0%	100,0%	100,0%

X^2 = 5,065, sd = 3, p = ,113

When the result in Table 19 is examined, there is no significant difference in terms of book type preference according to gender in Chi-Square analysis (sig= ,113>0.05).

Table 20. Descriptive Data and Chi-Square Analysis of Daily Book Reading Habits of the Students Participating in the Research by Gender

Gender	Daily Book Reading				Total
	I read an average of 0-50 pages per day	I read an average of 50-100 pages per day	I read an average of 100-200 pages per day	I read an average of 200 pages or more per day	
Boy	92	9	5	3	109
	84,4%	8,3%	4,6%	2,8%	100,0%
Girl	94	28	12	0	134
	70,1%	20,9%	9,0%	0,0%	100,0%
Total	186	37	17	3	243
	76,5%	15,2%	7,0%	1,2%	100,0%

X^2 = 13,229, sd = 3, p = ,004

When Table 20 is examined, there is a significant difference in daily reading habits according to gender in Chi-Square analysis (sig= .004<0.05). While 84.4% of male students stated that they read an average of 0-50 pages of books per day, 70.1% of female students stated that they read an average of 0-50 pages of books per day. While 8.3% of male students stated that they read an average of 50-100 pages of books per day, 20.9% of female students stated that they read an average of 50-100 pages of books per day.

Table 21. Descriptive Data and Chi-Square Analysis of the Reading Habits of the Students Participating in the Study According to the Gender of the Pandemic (Covid19) Epidemic

Gender	The Habit of Reading Books During the Pandemic (Covid19) Process			Total
	My reading habit has increased	My reading habit has decreased	I don't have the habit of reading books	
Boy		Didn't affect my reading habit	50	109
	29,4%	24,8%	45,9%	100,0%
Girl	58	14	62	134
	43,3%	10,4%	46,3%	100,0%
Total	85	90	41	112
	35,0%	57,2%	7,8%	100,0%

X^2 = 10,457, sd = 2, p = ,005

Table 22. Descriptive Data and Chi-Square Analysis of the Reading Habits of the Students Participating in the Research According to their Gender Expression

Gender	Book Reading Habit		Total
	I think it has a positive effect on expressing myself	I don't think it has a positive effect on expressing myself	
Boy	92	17	109
	84,4%	15,6%	100,0%
Girl	120	14	134
	89,6%	10,4%	100,0%
Total	212	31	243
	87,2%	12,8%	100,0%

X^2 = 1,432, sd = 1, p = ,232

When the result in Table 22 is examined, there is no significant difference in terms of expressing themselves by gender in the Chi-Square analysis (sig= ,232>0.05).

Table 23. Chi-Square Analysis of the Grade Levels of the Students Participating in the Study According to their Book Reading Habits

Grade Level	Reading Habits			Total
	I read books regularly	I read books regularly	I don't have the habit of reading books	
5 th grade	19	40	3	62
	30,6%	64,5%	4,8%	100,0%
6 th grade	29	35	4	68
	42,6%	51,5%	5,9%	100,0%
7 th grade	19	39	7	65
	29,2%	60,0%	10,8%	100,0%
8 th grade	18	25	5	48
	37,5%	52,1%	10,4%	100,0%
Total	85	139	19	243
	35,0%	57,2%	7,8%	100,0%

X^2 = 5,625, sd = 6, p = ,467

When the result in Table 23 is examined, there is no significant difference in terms of reading habits according to grade level in Chi-Square analysis (sig= ,467>0.05).

Table 24. Descriptive Data and Chi-Square Analysis of the Book Type Preferences of the Grade Levels of the Students Participating in the Research

Grade Level	Book Genre Preference				Total
	Novels, story books	poetry books	scientific books	I read regardless of the type of book.	
5 th grade	47	0	5	10	62
	75,8%	0,0%	8,1%	16,1%	100,0%
6 th grade	40	1	10	17	68
	58,8%	1,5%	14,7%	25,0%	100,0%
7 th grade	39	0	14	12	65
	60,0%	0,0%	21,5%	18,5%	100,0%
8 th grade	28	0	10	10	48
	58,3%	0,0%	20,8%	20,8%	100,0%
Total	154	1	39	49	243
	63,4%	0,4%	16,0%	20,2%	100,0%

X^2 = 10,455, sd = 9, p = ,315

When the result in Table 24 is examined, there is no significant difference in terms of book type preference according to grade level in Chi-Square analysis (sig= ,315>0.05).

Table 25. Descriptive Data and Chi-Square Analysis of the Grade Levels of the Students Participating in the Research on Daily Book Reading Situations

Grade Level	Daily Book Reading				Total
	I read an average of 0-50 pages per day	I read an average of 50-100 pages per day	I read an average of 100-200 pages per day	I read an average of 200 pages or more per day	
5 th grade	48	10	4	0	62
	77,4%	16,1%	6,5%	0,0%	100,0%
6 th grade	53	12	2	1	68
	77,9%	17,6%	2,9%	1,5%	100,0%
7 th grade	52	5	7	1	65
	80,0%	7,7%	10,8%	1,5%	100,0%
8 th grade	33	10	4	1	48
	68,8%	20,8%	8,3%	2,1%	100,0%
Total	186	37	17	3	243
	76,5%	15,2%	7,0%	1,2%	100,0%

X^2 = 8,410, sd = 9, p = ,493

When the result in Table 25 is examined, there is no significant difference in daily book reading rate according to grade level in Chi-Square analysis (sig= ,493>0.05).

Table 26. Descriptive Data and Chi-Square Analysis of the Class Levels of the Students Participating in the Study on their Reading Habits during the Pandemic (Covid19) Epidemic

Grade Level	The Habit of Reading Books During the Pandemic (Covid19) Process			Total
	My reading habit has increased.	My reading habit has decreased.	Didn't affect my reading habit	
5 th grade	23	15	24	62
	37,1%	24,2%	38,7%	100,0%
6 th grade	26	7	35	68
	38,2%	10,3%	51,5%	100,0%
7 th grade	25	11	29	65
	38,5%	16,9%	44,6%	100,0%
8 th grade	16	8	24	48
	33,3%	16,7%	50,0%	100,0%
Total	90	41	112	243
	37,0%	16,9%	46,1%	100,0%

X^2 = 5,304, sd = 6, p = ,505

When the result in Table 26 is examined, there is no significant difference in the case of reading habits in the pandemic (covid19) period according to the class level in the Chi-Square analysis (sig= ,505>0.05).

Table 27. Descriptive Data and Chi-Square Analysis of the Reading Habits of the Students Participating in the Study Expressing themselves by Grade Levels

Grade Level	Book Reading Habit		Total
	I think it has a positive effect on expressing myself	I don't think it has a positive effect on expressing myself	
5 th grade	57	5	62
	91,9%	8,1%	100,0%
6 th grade	61	35	68
	89,7%	7	100,0%
7 th grade	54	68	65
	83,1%	11	100,0%
8 th grade	40	8	48
	83,3%	16,7%	100,0%
Total	212	31	243
	87,2%	12,8%	100,0%

X^2 = 3,270, sd = 3, p = ,352

When the result in Table 27 is examined, there is no significant difference in terms of reading habits according to grade level in Chi-Square analysis (sig= ,352>0.05).

Sub-Problem 3: Do their reading habits, the availability of books before and during the pandemic (Covid 19) epidemic, the situation of participating in author meetings and autograph events differ significantly according to the education levels of the father and mother and their monthly income?

Table 28. Chi-Square Analysis of the Students Participating in the Study According to their Father's Education Status and their Book Reading Habits

Father Education	Reading Habits			Total
	I read books regularly	I occasionally read books	I don't have the habit of reading books	
Primary school	9	12	1	22
	40,9%	54,5%	4,5%	100,0%
Middle School	14	29	3	46
	30,4%	63,0%	6,5%	100,0%
High school	31	52	9	92
	33,7%	56,5%	9,8%	100,0%
Associate degree	9	25	5	48
	33,3%	14	10,4%	100,0%
Licence	15	4	19	243
	37,5%	24	7,8%	100,0%
Graduate	85	139	19	243
	35,0%	57,2%	7,8%	100,0%
Total	85	139	19	243
	35,0%	57,2%	7,8%	100,0%

X^2 = 5,667, sd = 15, p = ,842

When the result in Table 28 is examined, there is no significant difference in terms of reading habits according to father's education level in Chi-Square analysis (sig= ,842>0.05).

Table 29. Chi-Square Analysis of the Levels of Father Educational Status of the Students Participating in the Research by the Locations of the Books Procured Before the Pandemic (Covid19) Epidemic

Father Education	Where They Provided Books Before the Pandemic (Covid19) Outbreak				Total
	From the stationery	Online	Second-hand booksellers	From the library	
Primary school	14	3	0	5	22
	63,6%	13,6%	0,0%	22,7%	100,0%
Middle School	34	8	1	3	46
	73,9%	17,4%	2,2%	6,5%	100,0%
High school	61	24	1	6	92
	66,3%	26,1%	1,1%	6,5%	100,0%
Associate degree	17	9	0	1	27
	63,0%	33,3%	0,0%	3,7%	100,0%
Licence	13	25	1	1	40
	32,5%	62,5%	2,5%	2,5%	100,0%
Graduate	7	8	0	1	16
	43,8%	50,0%	0,0%	6,3%	100,0%
Total	146	77	3	17	243
	60,1%	31,7%	1,2%	7,0%	100,0%

X^2 = 38,837, sd =10, p = ,001

When the result in Table 29 is examined, there is a significant difference in the Chi-Square analysis according to the educational status of the father, in terms of the place where they obtained the books before the Pandemic (Covid 19) epidemic (sig= .001<0.05). Before the pandemic, students whose fathers had undergraduate and graduate degrees mostly obtained the books online.

Table 30. Chi-Square Analysis of the Fathers Educational Status of the Students Participating in the Research According to the Places They Provided Books During the Pandemic (Covid 19)

Father Education	Where Books Provided During the Pandemic (Covid19) Outbreak				Total
	From the stationery	Online	Second-hand booksellers	From the library	
Primary school	13	5	0	4	22
	59,1%	22,7%	0,0%	18,2%	100,0%
Middle School	25	14	3	4	46
	54,3%	30,4%	6,5%	8,7%	100,0%
High school	54	34	1	3	92
	58,7%	37,0%	1,1%	3,3%	100,0%
Associate degree	13	14	0	0	27
	48,1%	51,9%	0,0%	0,0%	100,0%
Licence	11	26	2	1	40
	27,5%	65,0%	5,0%	2,5%	100,0%
Graduate	7	9	0	0	16
	43,8%	56,3%	0,0%	0,0%	100,0%
Total	123	102	6	12	243
	50,6%	42,0%	2,5%	4,9%	100,0%

X^2 = 35,111, sd =15, p = ,002

When the result in Table 30 is examined, in the Chi-Square analysis, there is a significant difference in the place where they obtained the books during the Pandemic (Covid 19) according to the educational status of the father (sig= .002<0.05). During the pandemic, students whose fathers have an associate degree, undergraduate and graduate degree, mostly obtain books over the internet.

Tablo 31. Araştırmaya Katılan Öğrencilerin Baba Eğitim Durumlarının Yazar Buluşmaları ve İmza Günü Etkinliklerine Katılma Durumlarına Göre Ki-Kare Analizi

Father Education	Author Meetings		Total
	I attended author meetings and autograph events	I did not attend the author meeting and autograph events	
Primary school	6	16	22
	27,3%	72,7%	100,0%
Middle School	15	31	46
	32,6%	67,4%	100,0%
High school	50	42	92
	54,3%	45,7%	100,0%
Associate degree	12	15	27
	44,4%	55,6%	100,0%
Licence	23	17	40
	57,5%	42,5%	100,0%
Graduate	9	7	16
	56,3%	43,8%	100,0%
Total	115	128	243
	47,3%	52,7%	100,0%

X^2 = 11,627, sd = 5, p = ,040

When the result in Table 31 is examined, there is a significant difference in the chi-square analysis in terms of participation in author meetings and autograph events according to father's education level (sig= .040<0.05). Students whose fathers are primary, secondary and associate degree graduates have less participation in author meetings and autograph events than students whose fathers have undergraduate and graduate degrees.

Table 32. Chi-Square Analysis of the Mother Education Status of the Students Participating in the Study by their Book Reading Habits

Mother Education	Reading Habits			Total
	I read books regularly	I occasionally read books	I don't have the habit of reading books	
Primary school	25	30	3	58
	43,1%	51,7%	5,2%	100,0%
Middle School	11	24	4	39
	28,2%	61,5%	10,3%	100,0%
High school	20	50	7	77
	26,0%	64,9%	9,1%	100,0%
Associate degree	9	10	4	23
	39,1%	43,5%	17,4%	100,0%
Licence	18	19	0	37
	48,6%	51,4%	0,0%	100,0%
Graduate	1	5	1	7
	14,3%	71,4%	14,3%	100,0%
None	1	1	0	2
	50,0%	50,0%	0,0%	100,0%
Total	85	139	19	243
	35,0%	57,2%	7,8%	100,0%

X^2 = 16,043, sd = 12, p = ,189

When the result in Table 32 is examined, there is no significant difference in terms of reading habits according to the mother's education level in the Chi-Square analysis (sig= ,189>0.05).

Table 33. Chi-Square Analysis of the Levels of Mother Education Levels of the Students Participating in the Research by the Places They Procured the Books Before the Pandemic (Covid19) Epidemic

Mother Education	Where They Provided Books Before the Pandemic (Covid19) Outbreak				Total
	From the stationery	Online	Second-hand booksellers	From the library	
Primary school	40	10	0	8	58
	69,0%	17,2%	0,0%	13,8%	100,0%
Middle School	26	11	0	2	39
	66,7%	28,2%	0,0%	5,1%	100,0%
High school	50	20	1	6	77
	64,9%	26,0%	1,3%	7,8%	100,0%
Associate degree	11	11	1	0	23
	47,8%	47,8%	4,3%	0,0%	100,0%
Licence	15	21	1	0	37
	40,5%	56,8%	2,7%	0,0%	100,0%
Graduate	2	4	0	1	7
	28,6%	57,1%	0,0%	14,3%	100,0%
None	2	0	0	0	2
	100,0%	0,0%	0,0%	0,0%	100,0%
Total	146	77	3	17	243
	60,1%	31,7%	1,2%	7,0%	100,0%

X^2 = 34,742, sd = 18, p = ,010

When the result in Table 33 is examined, there is a significant difference in terms of the place where they obtained the books before the Pandemic (Covid 19) according to the mother's education status in the Chi-Square analysis (sig= ,010<0.05). Students whose mothers graduated from undergraduate and graduate degrees during the pandemic Books are mostly available online.

Table 34. Chi-Square Analysis of the Mother Education Status of the Students Participating in the Research by the Locations of the Books Procured During the Pandemic (Covid 19)

Mother Education	Where They Provided Books Before the Pandemic (Covid19) Outbreak				Total
	From the stationery	Online	Second-hand booksellers	From the library	
Primary school	37	16	1	4	58
	63,8%	27,6%	1,7%	6,9%	100,0%
Middle School	21	16	1	1	39
	53,8%	41,0%	2,6%	2,6%	100,0%
High school	37	32	2	6	77
	48,1%	41,6%	2,6%	7,8%	100,0%
Associate degree	11	11	1	0	23
	47,8%	47,8%	4,3%	0,0%	100,0%
Licence	12	23	1	1	37
	32,4%	62,2%	2,7%	2,7%	100,0%
Graduate	3	4	0	0	7
	42,9%	57,1%	0,0%	0,0%	100,0%
None	2	0	0	0	2
	100,0%	0,0%	0,0%	0,0%	100,0%
Total	123	102	6	12	243
	50,6%	42,0%	2,5%	4,9%	100,0%

X^2 = 18,361, sd = 18, p = ,432

When the result in Table 34 is examined, in the Chi-Square analysis, there is no significant difference in terms of the place where they obtained the books during the pandemic (covid19) epidemic according to the mother's education level (sig= ,432>0.05).

Table 35. Chi-Square Analysis of the Mother Education Status of the Students Participating in the Research According to their Participation in Author Meetings and Autograph Events

Mother Education	Author Meetings		Total
	I attended author meetings and autograph events	I did not attend the author meeting and autograph events	
Primary school	21	37	58
	36,2%	63,8%	100,0%
Middle School	20	19	39
	51,3%	48,7%	100,0%
High school	37	40	77
	48,1%	51,9%	100,0%
Associate degree	9	14	23
	39,1%	60,9%	100,0%
Licence	22	15	37
	59,5%	40,5%	100,0%
Graduate	5	2	7
	71,4%	28,6%	100,0%
None	1	1	2
	50,0%	50,0%	100,0%
Total	115	128	243
	47,3%	52,7%	100,0%

X^2 = 7,580, sd = 6, p = ,271

When the result in Table 35 is examined, there is no significant difference in the Chi-Square analysis in terms of participation in author meetings and autograph events according to mother's education level (sig= ,271>0.05).

Table 36. Chi-Square Analysis of the Monthly Income Status of the Students Participating in the Research by their Book Reading Habits

Monthly Income Status	Reading Habits			Total
	I read books regularly	I occasionally read books	I don't have the habit of reading books	
2000 TL and below	6	8	2	16
	37,5%	50,0%	12,5%	100,0%
2001-3000 TL	9	19	2	30
	30,0%	63,3%	6,7%	100,0%
3000-5000 TL	24	43	5	72
	33,3%	59,7%	6,9%	100,0%
5000-7000 TL	21	29	7	57
	36,8%	50,9%	12,3%	100,0%
7001 TL and more	25	40	3	68
	36,8%	58,8%	4,4%	100,0%
Total	85	139	19	243
	35,0%	57,2%	7,8%	100,0%

X^2 = 4,299, sd = 8, p = ,829

When the result in Table 36 is examined, there is no significant difference in terms of reading habits according to family monthly income in Chi-Square analysis (sig= ,829>0.05).

Table 37. Chi-square Analysis of the Monthly Income Status of the Students Participating in the Research by the Places They Provided Books Before the Pandemic (Covid 19)

Monthly Income Status	Where They Provided Books Before the Pandemic (Covid19) Outbreak				Total
	From the stationery	Online	Second-hand booksellers	From the library	
2000 TL and below	13	0	0	3	16
	81,3%	0,0%	0,0%	18,8%	100,0%
2001-3000 TL	20	7	0	3	30
	66,7%	23,3%	0,0%	10,0%	100,0%
3000-5000 TL	51	15	1	5	72
	70,8%	20,8%	1,4%	6,9%	100,0%
5000-7000 TL	35	17	2	3	57
	61,4%	29,8%	3,5%	5,3%	100,0%
7001 TL and more	27	38	0	3	68
	39,7%	55,9%	0,0%	4,4%	100,0%
Total	146	77	3	17	243
	60,1%	31,7%	1,2%	7,0%	100,0%

X^2 = 36,793, sd = 12, p = ,000

When the result in Table 37 is examined, there is a significant difference in the status of the place where they obtained the books before the Pandemic (Covid 19) according to the monthly income status in the Chi-Square analysis (sig= ,000<0.05). Students with a monthly income of 7001 TL or more are more likely to obtain pre-pandemic books over the internet.

Table 38. Chi-Square Analysis of the Monthly Income Status of the Students Participating in the Research According to the Places They Provided Books During the Pandemic (Covid 19) Process

Monthly Income Status	Where They Provided Books Before the Pandemic (Covid19) Outbreak				Total
	From the stationery	Online	Second-hand booksellers	From the library	
2000 TL and below	12	0	1	3	16
	75,0%	0,0%	6,3%	18,8%	100,0%
2001-3000 TL	16	11	1	2	30
	53,3%	36,7%	3,3%	6,7%	100,0%
3000-5000 TL	47	21	1	3	72
	65,3%	29,2%	1,4%	4,2%	100,0%
5000-7000 TL	27	26	3	1	57
	47,4%	45,6%	5,3%	1,8%	100,0%
7001 TL and more	21	44	0	3	68
	30,9%	64,7%	0,0%	4,4%	100,0%
Total	123	102	6	12	243
	50,6%	42,0%	2,5%	4,9%	100,0%

X^2 = 41,109, sd = 12, p = ,000

When the result in Table 38 is examined, there is a significant difference in terms of the place where they obtained the books during the Pandemic (Covid 19) process according to the monthly income status in the Chi-Square analysis (sig= ,000<0.05). Students with a monthly income of 7001 TL and more are getting their books more online during the pandemic process.

Table 39. Chi-Square Analysis of the Monthly Income Status of the Students Participating in the Research According to Their Attendance at Author Meetings and Signature Days

Monthly Income Status	Author Meetings		Total
	I attended author meetings and autograph events	I did not attend the author meeting and autograph events	
2000 TL and below	3	13	16
	18,8%	81,3%	100,0%
2001-3000 TL	12	18	30
	40,0%	60,0%	100,0%
3000-5000 TL	32	40	72
	44,4%	55,6%	100,0%
5000-7000 TL	29	28	57
	50,9%	49,1%	100,0%
7001 TL and more	39	29	68
	57,4%	42,6%	100,0%
Total	115	128	243
	47,3%	52,7%	100,0%

X^2 = 9,158, sd = 4, p = ,057

When the result in Table 39 is examined, there is no significant difference in the chi-square analysis in terms of participation in author meetings and autograph events according to monthly income (sig= ,057>0.05).

Discussion and Conclusion

The study group of this study consists of 243 students who participated in the research in 1 secondary school in the province of Kastamonu in the 2021-2022 academic year. Of the total number of students participating in the survey, 44.9% are male students (109 students), and 55.1% are female students. While the participation rate on the basis of branches in the 5th, 6th and 7th grades was very close to each other, the number of students participating in the research in the 8th grades remained low with 19.8%. It is thought that the preparatory work for the high school placement process is effective here.

Considering the situation of the students' parents who participated in the research, it is seen that the parents who graduated from high school (father 37.9% – mother 31.7%) are in the majority; In addition, it was observed that the income status of the parents was between 29.6% and 3000-5000 TL, and 28.0% with 7001 TL and above. Based on these data, it should be considered that the educational status and financial opportunities of the parents who contribute to the research of reading habits are at medium and high levels.

While 35% of the students participating in the research stated that they read books regularly, 57.2% stated that they read books occasionally. At the point of continuity, a rate of 35% should be considered an acceptable rate. In his research, Mete (2012) examined the attitudes of 8th grade students towards reading habits. In the study, in which criteria such as gender and socio-economic levels were taken into consideration, the rate of students' reading was found to be high. Considering the book reading campaign implemented throughout the city, the rate considered high in reading rate and the average rate we obtained as a result of the research (46.1%) suggest that the compared results can be related. The rate of reading books over books was determined as 96.7%. This is a high level desired in terms of perception and eye health. The ratio of 0-50 pages in the number of daily book reading pages was determined as 76.5%, and it should be considered as an acceptable rate when the processes such as preparation for the lesson and homework are taken into account.

63.4% of the students stated that they read novels and story books. Choosing books based on events or fiction is an expected result in terms of age, level and interests of the students participating in the research. In the study conducted by Temizyürek, Çolakoğlu, and Coşkun (2013), it was revealed that the students most liked to read novels. Considering the closeness of 9th grade students to secondary school students in age, it is thought that there is a confirmatory parallelism between the research conducted and our research. Acıyan (2008) found in his research that a large part of the students (55.5%) prefer to read novels.

In his research, Tekgül (2013) determined that 72.4% of the participants liked the novel / story type book. When the result obtained in our research is evaluated together with other studies, it shows parallelism in terms of results. Likewise, Batur, Özcan, and Sağcan (2019) revealed in their research that secondary school students prefer to read books in the genre of stories and novels the most.

While 60.1% stated that they bought pre-pandemic books from stationery and 31.7% over the internet; In the pandemic period, 50.6% of them stated that they bought the books from stationery and 42% of them bought them over the internet. Considering the restrictions and quarantine conditions, the rate obtained as a result of the research should be accepted as reliable data. It has been determined that the status of parents who are considered to have a high level of education in online shopping is higher than other parents. This rate shows that parents with a high level of education directly affect the reading habits of students.

While it was concluded that the number of book pages is not important with a rate of 69.1%, the conclusion that the book cover and visuals are important in the selection of books with a rate of 58% is considered as the effect of the 5th grade students on the research. It is the desired level in which the number of pages is not important in reading books (69.1%), and it supports the daily regular book reading rate (35%), which we consider to be sufficient in terms of continuity in the book reading rate.

While 66.7% of the students participating in the research stated that they chose books according to their interests, 87.2% stated that the content of the book was important in choosing a book. A. Yasar-Nesrin Zengin (2006: 67) states that the subjects of interest of students vary according to their class and age. The results obtained in this area show how much of an effect Turkish teachers have in acquiring and maintaining reading habits. Turkish teachers,

- Knowing their reading tendencies by age,
- Knowing which texts are suitable for age groups,
- Selecting texts according to the levels of the classes,
- Adopting the importance of having texts read according to the level in Turkish teaching,
- They need to know which age children's reading tendencies appeal to. (Bekaroglu 2006)

In the study of Temizyürek, Çolakoğlu and Coşkun (2013), the factors determining students' interest in reading are respectively; students are shown as their own wishes, teachers and families. The studies carried out are both comparable in terms of the accuracy of the results of our research and are important in terms of showing how important the areas of interest are in reading books.

37% of the students participating in the study stated that the habit of reading books increased during the pandemic process. In the research, the fact that the students can easily reach the books according to the place of residence, that the advice of their teachers is important in the selection of books and that their reading habits have a positive contribution to their self-expression are the results that support each other and show the validity of the research when compared with other studies.

While 24.8% of male students stated that they read books regularly, 43.3% of female students stated that they read books regularly. In terms of the number of pages, the average number of pages read by female students per day is higher than male students. During the pandemic period, the reading rate of female students increased significantly compared to male students. In his research, Balcı (2009) aimed to determine the attitudes of students towards reading habits according to gender, educational status of parents and socio-economic status. In the study, a significant difference was found among 8th grade students in favor of female students. In this sense, there is a parallelism between the results of the research conducted by Balcı (2009) and the results of our research.

In addition to teacher-student communication, the support of parents in the process is of great importance in acquiring the habit of reading books.

It is an important result that should be emphasized that it is determined that students whose fathers have undergraduate and graduate degrees both before the pandemic and during the pandemic period obtain the books mostly over the internet. The fact that students whose fathers are primary school, secondary school and associate degree graduates participate less in author meetings and autograph events than students whose fathers have undergraduate and graduate degrees shows the contribution of parents in the acquisition and continuation of reading habits. Yılmaz (1995) found in his research that reading habits decrease as one moves from the upper socio-economic region to the lower socio-economic regions. This study, which was conducted in 1995, is important in terms of comparison of the data obtained, although socio-economic levels were not considered as a clear criterion in our study.

Although studies conducted abroad show that similar results are obtained in the habit of reading books, it shows that there are differences in the selection of books. Gudakovska (1996), in his research on the reading habits of 5th, 6th, 7th grade students in Lithuania, revealed that the science fiction genre is the most preferred book. Although Creel (2007) found that 44% read more than one book a week, similar to our research, in the study conducted by Creel (2007) for the 11-14 age group, it is obvious that the cultural characteristics of the countries and education systems are effective in both reading and book selection.

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