Message from the Editor-in-Chief

Hello from TOJNED

TOJNED welcomes you. TOJNED looks for academic articles on the issues of education science and may address assessment, attitudes, beliefs, curriculum, equity, research, translating research into practice, learning theory, alternative conceptions, socio-cultural issues, special populations, and integration of subjects. The articles should discuss the perspectives of students, teachers, school administrators and communities. TOJNED contributes to the development of both theory and practice in the field of education science. TOJNED accepts academically robust papers, topical articles and case studies that contribute to the area of research in education science.

The aim of TOJNED is to help students, teachers, school administrators and communities better understand the new developments about teacher education. Submitted articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJNED. TOJNED provides perspectives on topics relevant to the study, implementation and management of learning with technology.

I am always honored to be the editor in chief of TOJNED. Many persons gave their valuable contributions for this issue.

TOJNED supports INTE-22 Conference. The INTE-2022 (www.int-e.net) will be held in July, 2022.

Call for Papers

TOJNED invites article contributions. Submitted articles should be about all aspects of teacher education and may address assessment, attitudes, beliefs, curriculum, equity, research, translating research into practice, learning theory, alternative conceptions, socio-cultural issues, special populations, and integration of subjects. The articles should also discuss the perspectives of students, teachers, school administrators and communities.

The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJNED.

For any suggestions and comments on the international online journal TOJNED, please do not hesitate to send email.

January 01, 2022

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21ST CENTURY SKILLS AND ACADEMIC SUCCESS OF THE STUDENT

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ABSTRACTS
The changing needs of individuals and societies necessitate renewal and development in the field of education as well as in every field. Based on this requirement, countries first aim to prepare a more effective and applicable teaching-learning environment for students by updating their curricula. 21st century skills are skills that are important for students to acquire and develop, as they include competencies and competencies required in every aspect of an individual's life. This research aims to reveal the relationship between 21st century skills and student achievement. For the purpose of the research, the relevant literature was searched and the relationship between the two concepts was revealed. Studies show that 21st century skills are an important element that increases the academic success of students.

Keywords: 21st century skills, academic achievement, student

Introduction
One of the most important aims of education is to provide students with various skills in order to facilitate their daily lives and to prepare them for life and the business world (Trilling & Fadel, 2009). In today's world, there are different developments in many areas of education and technology. Since the 1980s, developments in the field of information and communication accelerated competition and cooperation (Kaya, 2017).

While it is known that the need for problem solving, critical thinking, information literacy and global awareness skills has been constantly present since the first periods of human history, these skills are needed more in the 21st century (Rotherham & Willingham, 2009). Although it is argued that there is no significant change in the skills that people need, it is stated that the skills have changed in terms of meaning and scope.

Educators should prepare their students for the rapidly changing world and the society in which they live, and within this, they will continue to work in the 21st century. teach their skills to their students. 21st century The training of skills should not be added to the lessons, but integrated into every subject (Larson & Miller, 2011). One of the main duties of teachers is to prepare students for a participatory and global world based on living, learning, working life and technology (Lemke, 2010). Studies conducted in the 21st century. It was aimed to determine what their skills were. Accordingly, in the 21st century. skills, critical thinking, problem solving, questioning, access to information, analysis and synthesis, communication, innovation, creativity, curiosity, imagination, ethical decision making, quick decision making, adaptability, flexibility, universal citizenship, intercultural interaction, cooperation, entrepreneurship, self-management, productivity, responsibility and leadership skills.

In the modern education system, teachers are held responsible for choosing the most appropriate teaching method in which learning will be provided. With these methods, it is aimed to increase academic success by ensuring active participation of students in classes (Yücel & Kanyılmaz, 2018). According to Xin (2003), academic success is explained by the level of gains that students get from the courses they attend. The indicator of academic excellence is to be successful. In the literature review, 21st century. It has been determined that there are various studies that show that academic achievement is related to academic achievement (Turiman et. al., 2012).

The purpose of this research is to investigate the relationship between the use of 21st century skills and the academic achievement of students.

21st Century Skills
In today's understanding of education, it is no longer just to give information to students directly, but rather the ways that students should discover to access information, how and where they should use information, and studies are carried out on this (Kalemkuş, 2020).

Different theories and models have been synthesized in order to raise the individuals needed in the 21st century and to meet the national characteristics and needs (Silva, 2009). The acquisition of 21st century skills is extremely important both nationally and internationally. While the acquisition of these skills can enable students
to compete in the global market in the future and to develop active coping methods with problems, it helps to
develop positive attitudes towards being productive individuals (Pratiwi et. al., 2018).

According to the framework called P21 (Partnership for 21st Century Skills) created by different institutions, organizations and companies working together in the USA; students must have in order to be successful in working life and in daily life. These skills are as follows:

![Required Skills for Students According to the P21 Framework](image)

Figure 1. Required Skills for Students According to the P21 Framework (Partnership For 21st Century Skills, 2019).

21st century skills; It consists of ways of thinking, ways of working, tools of work and integration into the world. ways of thinking; creativity and openness to innovations, using learning strategies, problem solving, critical thinking and decision making sub-categories. Communication skills and teamwork are the ways of working. Working tools consist of information and technology literacy, integration into the world consists of life and career awareness, universal and local citizenship, and social responsibility awareness categories (Çepni, 2018).

**Academic success**

While explaining academic success, all behavioral changes of individuals except psychomotor and affective developments are taken into consideration. When it comes to success in education, it comes to mind that the grades obtained by the students as a result of the exams are high and that these grades are appreciated by the teachers (Tooley & Borfreundl, 2013). Academic success is taken as an important criterion in students' behavioral acquisitions and seen as an important factor in transitioning to a higher education institution and professional life (York, Gibson & Rankin, 2015).

The success of the students affects their commitment to the school. While successful students have higher levels of school engagement, unsuccessful students may experience dropouts from school. While some of the factors that determine academic success are related to the student, some of them are related to factors other than the student. The intense interest of the environment or family towards the student increases the success in some cases, while in some cases it decreases the success (Fonseca, 2011).

**21st century Skills and Academic Success**

Academic success; It is determined by demonstrating skills, cognitive competence and classroom performance. It is a very important fact that students’ performance can be measured accurately (Saavedra & Opfer, 2012). In the measurement and evaluation of the current level of success, the ways of determining the place of the students in the group or observing the individual progress of each student are preferred. In this process, there is no output
that can give information about the self-knowledge and development of the students. Students' grades are generally shaped by exams and teachers' opinions (Eisenhower, Baker, & Blacher, 2007).

Measuring academic success involves a more difficult and complex process than all students taking the same exam and getting a high score. Making individual evaluations according to the progress of each student will give more positive results. For this reason, the development of students should be constantly monitored and the development should be revealed more clearly with applications such as rubrics, performance tasks and checklists. In addition, taking into account the situations that affect the motivation and readiness level of the students, spreading the assessment over a period rather than a single exam will enable more accurate measurements to be made (Kuh et. al., 2010).

21st century skills include the skills necessary for students to be successful in daily life, school and work life by providing the blending of knowledge. Students who are assertive and have the ability to manage themselves can manage their goals and time, while they can set their own goals and success criteria. In addition, while they can create short and long-term goals, they have the awareness of commitment to lifelong learning with the ability to work independently (Ledward & Hirata, 2011).

Conclusion and Recommendations
While basic knowledge and skills of people are necessary for literacy, literacy is also necessary for individuals to reach competence. Considering that people's knowledge is constantly increasing, it is inevitable that there will be changes in the meaning of the skill. In this case, it shows that skills cover complex mental processes and that they need to be developed (Ball, Joyce & Anderson-Butcher, 2016). Educators should prepare their students for the rapidly changing world and the society they live in. In this, 21st century skills should be taught to students. The education of 21st century skills should not be added to the lessons, but integrated into every subject. One of the main duties of teachers is to prepare students for a participatory and global world based on living, learning, working life and technology (Lemke, 2010; Larson & Miller, 2011).

It is necessary to develop the skills of students in order to reveal their potential. With the development of skills, the potential of the students will also be developed, so that they will be better prepared for school and social life and future business life. Skills are seen as an important element that increases the academic success of students.

References
A REVIEW OF RESEARCH ON E-ASSESSMENT IN TURKEY: A CONTENT ANALYSIS

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ABSTRACT
In this research, articles, doctoral dissertations and master's theses published so far on E-Assessment (Electronic Evaluation), Web-Based Evaluation, Online Evaluation, E-Exam, which have gained importance within the scope of Emergency Distance Education in Turkey, were searched. In the light of the studies carried out to date, it is aimed to determine the research trends in e-assessment in Turkey. With this main purpose, 4 doctorate, 12 master's and 13 articles related to e-assessment, which is an important sub-title of Distance Education, were examined in terms of years, university, applied educational institution, research designs, research design types, creation of measurement tools. Since it is a current topic, no year limit has been made and all studies on this subject that include one or more of the above-listed E-Assessment, Web-Based Assessment, Online Assessment, E-Exam concepts have been tried to be included in the research. The content analysis method was used in the analysis of the data by making document analysis with the descriptive approach of the studies found. The findings obtained from the research were discussed in line with the literature and suggestions were made for future studies. It is thought that the results obtained will contribute to determining the future trends in future research on e-assessment.

Keywords: E-Assessment, Web Based Assessment, E-Exam, Online Assessment, Research Trends, Content Analysis.

Introduction
The disease, which the World Health Organization (WHO) called Covid-19 caused by the corona virus on February 11, was first encountered in Wuhan, China in December 2019 (BBC News- Turkish, 2020) and after spreading all over the world, it was declared a "pandemic", meaning a global epidemic, by the World Health Organization in March 2020 ("COVID-19 pandemic", 2020).

Due to the epidemic, the operation and flow has been turned upside down all over the world. There was an opportunity to question the norms and practices that have been used for a long time (Zhao, 2020). Education systems have also had their share from the pandemic, and face-to-face education has come to a standstill all over the world due to the closure. 92% of students in the world have been affected by this closure (Can, 2020). Apart from the concept of distance education, which was used before, the concept of emergency remote education has also entered our agenda due to the conditions of the day. Due to the pandemic, within the scope of emergency distance education, open and distance education opportunities have been started to be used for all students, covering all education levels worldwide (Bozkurt, 2020). The distance education method, which has been used for a long time, has been adapted to education systems, and the emergency distance education model has been adopted all over the world. The long duration of the pandemic has also affected the academic calendars applied in education.

As a result of the education, decisions are made on issues such as selection and placement, guidance and orientation, teaching, and the success of the students. Making the right decisions depends on reliable and valid measurement and evaluation in education (Alıcı, et al., 2011). Due to the closure of schools and the need to suspend face-to-face education, many measurement methods in use have been disabled. Online measurement and flexible evaluation methods, which are not used under normal conditions, have been started to be used in order to prevent the unjust treatment of students during the pandemic process. Although these methods are considered acceptable within tolerance due to the conditions brought by the process, primarily disturbed the educators by staying away from a fair evaluation in terms of measuring academic achievements, and according to the findings emphasized in the reports, students and parents were also disturbed in this regard. This emerging problem can be considered as an opportunity to bring new approaches in measurement and evaluation methods and to adapt and use them in the education system (Sarı & Nayır, 2020)

Today, countries with strong economic and social life gain all their gains from caring about education and restructuring their educational institutions in accordance with the conditions of the day. (Şentürk, 2008) Therefore, it is obvious that the creation and implementation of an effective e-measurement and evaluation system will contribute greatly to the development of both individuals and our country. As a result of our research on this subject, it has been understood that although there are studies on e-assessment, there are not enough
numbers.

**Aim of the Study**
The aim of this research is to analyze the doctoral theses, master's theses and article studies on e-assessment made in Turkey, without any year restriction, by using the content analysis method. For this purpose, answers were sought to the following questions. In this study, 4 doctoral theses, 12 master's theses and 13 articles related to e-assessment;

1. How is it distributed over the years?
2. How is it distributed by university?
3. How is it distributed according to the educational institution applied?
4. Which research design was used?
5. What are the types of research designs used?
6. How is the distribution according to the measurement tool used?

**Methodology**
In this study, the descriptive research method, which was determined to be suitable for the purpose of the study, was adopted. Descriptive research is expressed as interpretation by bringing together the data that are close to each other, which is frequently used in qualitative research, in the category of certain concepts and topics, and by arranging these data in a way that readers can understand (Yıldırım & Şimşek, 2016). In this study, descriptive content analysis method was used. Doctoral theses, master's theses and articles found in the study were analyzed and explained in terms of various variables.

**The Scope of the Study**
In this study, it is aimed to determine research trends under the title of e-assessment by reviewing articles, doctorate or master's theses, which include one or more of the concepts of E-Assessment, Web-Based Assessment, Online Assessment, E-Exam as keywords regardless of the year criteria. For this purpose, a total of 29 studies, including 13 articles, 4 doctoral theses and 12 master's theses, were included in the research.

**Data Collection Tool**
In the study, a thesis review form was created to systematically examine the studies found. An examination was made under the headings to determine the research trends.

**Data Analysis**
In the study, content analysis technique was used in the evaluation of the obtained data. Studies found under the title of e-assessment using related concepts were downloaded electronically and analyzed in six basic categories that we determined beforehand. The goal in content analysis is to examine the collected data in more detail and to reach the themes and concepts that can explain this data (Yıldırım & Şimşek, 2016).

Studies made on the basis of concepts that are close to each other or have the same meaning within the scope of e-assessment were questioned in electronic sources and a copy of the relevant ones was taken. In this context, the data related to the variables of the year, university, educational institution applied, research designs, types of research designs, and the creation of measurement tools of the theses examined were analyzed descriptively. The frequencies of the data obtained in response to the answers to each research question regarding the recorded data in the created database and the percentages depending on the frequency were found. The numerical data obtained were converted into tables and presented in tables.

**Screening Criteria**
Within the framework of the study, it has been previously published in the electronic environment at the website tez.yok.gov.tr belonging to the National Thesis Center of the Higher Education Council Publication and Documentation Department, at scholar.google.com belonging to Google Scholar and at dergipark.org.tr belonging to Dergi Park Academy. A search was made based on the words E-Assessment (Electronic Evaluation), Web-Based Evaluation, E-Exam, Online Evaluation. With these criteria, a total of 29 studies, including 13 articles, 12 master's theses, 4 doctoral theses, were found and examined in terms of "year, university, applied educational institution, research designs, research design types, measurement tools".

**Findings**
As a result of the research, the studies related to e-assessment, the analyzes made in terms of different variables and the findings are included. Under the headings of year, university, educational institution applied, research designs, types of research designs, creation of measurement tools, the findings were tabulated in order as frequency and percentage results of the theses, and table interpretations were made.
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|          | 29 | 100 |

When the distribution of studies on e-assessment by years is analyzed in Table 1, 4 (13.79%) in 2018 and 2014, 3 (10.34%) in 2020, 2 in 2019-2017-2016-2013-2012-2009 (6.90%), 1 (3.14%) in 2021-2010-2008-2007-2006-2004, 0 (0.0%) in 2015-2011-2005. Studies on the subject, which did not exceed the number 1 before 2012, except for 2009, increased after 2012, except for 2015. Considering that 2021 has not been completed and the pandemic process continues, there is a possibility that there will be an increase in e-assessment this year. In the study, no study was found that complies with the criteria of pre-2004.
<table>
<thead>
<tr>
<th>University Name</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atatürk University</td>
<td>2</td>
<td>5,56</td>
</tr>
<tr>
<td>Bahçeşehir University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Bartın University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Baskent University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Beykent University</td>
<td>2</td>
<td>5,56</td>
</tr>
<tr>
<td>Bilecik Şeyh Edebali University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Dicle University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Erzincan University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Eskisehir Osmangazi University</td>
<td>3</td>
<td>8,33</td>
</tr>
<tr>
<td>Fatih University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Firat University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Gazi University</td>
<td>3</td>
<td>8,33</td>
</tr>
<tr>
<td>Gaziosmanpasa University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Hacettepe University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Hacı Bayram Veli University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Istanbul University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Land Forces NCO Vocational School</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Necmettin Erbakan University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Nevşehir Halil İncekara Science and Art Center</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Middle East Technical University</td>
<td>1</td>
<td>2,78</td>
</tr>
<tr>
<td>Pamukkale University</td>
<td>2</td>
<td>5,56</td>
</tr>
<tr>
<td>Sakarya University</td>
<td>2</td>
<td>5,56</td>
</tr>
<tr>
<td>Selçuk University</td>
<td>2</td>
<td>5,56</td>
</tr>
<tr>
<td>Sofia University</td>
<td>2</td>
<td>5,56</td>
</tr>
<tr>
<td>Universitat Oberta De Catalunya</td>
<td>2</td>
<td>5,56</td>
</tr>
</tbody>
</table>

| Total                                                | 36            | 100            |

When Table 2 is examined, it is seen that Eskişehir Osmangazi University and Gazi University have 3 (8.33%) each, Atatürk University, Beykent University, Pamukkale University, Sakarya University, Selçuk University, Universitat Oberta De Catalunya and Sofia University 2 each (5.56%) were found to have researches.

Başçeşehir University, Bartın University, Başkent University, Bilekik Şeyh Edebali University, Dicle University, Erzincan University, Fatih University, Firat University, Gaziosmanpasa University, Hacettepe University, Hacı Bayram Veli University, İstanbul University, Land Forces Petty Officer Vocational School, Necmettin Erbakan University, Nevşehir Halil İncekara Science and Art Center and Middle East Technical University have 1 (2.78%) studies. The most studied universities are Eskişehir Osmangazi University and Gazi University. It was determined that there was joint participation in the studies from 2 foreign universities, Sofia University and Universitat Oberta De Catalunya. One study was carried out from the Land Forces NCO.
Vocational School. In addition, it is seen that there is a study on e-assessment in Nevşehir Halil İncekara Science and Art Center.

**Table 3. Distribution of the Studies Found by Educational Institution**

<table>
<thead>
<tr>
<th>Research Group</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>14</td>
<td>41.18</td>
</tr>
<tr>
<td>No Research Group</td>
<td>5</td>
<td>14.71</td>
</tr>
<tr>
<td>Teacher</td>
<td>3</td>
<td>8.82</td>
</tr>
<tr>
<td>Master Degree</td>
<td>2</td>
<td>5.88</td>
</tr>
<tr>
<td>Instructor</td>
<td>2</td>
<td>5.88</td>
</tr>
<tr>
<td>Middle School</td>
<td>2</td>
<td>5.88</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>2</td>
<td>5.88</td>
</tr>
<tr>
<td>Primary school</td>
<td>1</td>
<td>2.94</td>
</tr>
<tr>
<td>Senior Manager</td>
<td>1</td>
<td>2.94</td>
</tr>
<tr>
<td>Field Specialist</td>
<td>1</td>
<td>2.94</td>
</tr>
<tr>
<td>Continuing Education Center Students</td>
<td>1</td>
<td>2.94</td>
</tr>
</tbody>
</table>

34 100,00

When the table 3 regarding the distribution of study groups by educational institution in the studies discussed is examined, 14 (41.18%) undergraduate students were seen as the most preferred study group, while no study group was used in 5 (14.71%) studies. There were 3 (8.82%) studies for teachers. There were 2 studies (5.88%) for postgraduate, lecturer, associate degree, secondary school students, and 1 (2.94%) study for primary school, senior administrators, field specialists, and continuing education center students.

**Table 4. Distribution of the Studies Found by Research Designs**

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative</td>
<td>9</td>
<td>31.03</td>
</tr>
<tr>
<td>Qualitative</td>
<td>6</td>
<td>20.69</td>
</tr>
<tr>
<td>Mixed</td>
<td>9</td>
<td>31.03</td>
</tr>
<tr>
<td>Application Development</td>
<td>5</td>
<td>17.24</td>
</tr>
</tbody>
</table>

Total 29 100

When the table 4 regarding the distribution of study groups according to research designs in the studies discussed is examined, quantitative research is 9 (31.03%), qualitative research is 6 (20.69%), mixed research is 9 (31.03%). In 5 (17.24%) studies, application development was made, but user opinions about it were not investigated. It is seen that mostly mixed studies and quantitative researches are done.
Table 5. Distribution of the Studies Found by Research Designs

<table>
<thead>
<tr>
<th>Method Description</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Experimental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully Experimental</td>
<td>1</td>
<td>3.45</td>
</tr>
<tr>
<td>Descriptive</td>
<td>3</td>
<td>10.34</td>
</tr>
<tr>
<td>Quantitative Non-experimental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparative</td>
<td>2</td>
<td>6.90</td>
</tr>
<tr>
<td>Scanning</td>
<td>3</td>
<td>10.34</td>
</tr>
<tr>
<td>Qualitative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interactive research→Phenomenological pattern</td>
<td>2</td>
<td>6.90</td>
</tr>
<tr>
<td>Interactive research→Situation analysis</td>
<td>4</td>
<td>3.79</td>
</tr>
<tr>
<td>Mixed Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualitative and Quantitative</td>
<td>10</td>
<td>34.48</td>
</tr>
<tr>
<td>Research for Design</td>
<td>4</td>
<td>13.79</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>

When the table 5 regarding the explanation distribution of the research designs of the studies found is examined, it is seen that in quantitative experimental designs fully experimental 1 (3.45%), quantitative non-experimental descriptive 3 (10.34%), comparative 2 (6.90%), survey 3 (10%), qualitative studies with phenomenological design 2 (6.90%), situation analysis 4 (13.79%). While 10 (34.48%) mixed research designs were found in the related studies, 4 (13.79%) design-based studies were found.

Table 6. Distribution of the Studies Found According to the Preparation of the Measurement Tool

<table>
<thead>
<tr>
<th>Measuring tool</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Tool Developed by the Researcher</td>
<td>15</td>
<td>65.22</td>
</tr>
<tr>
<td>Measurement Tool Developed by Someone Else</td>
<td>6</td>
<td>26.09</td>
</tr>
<tr>
<td>Mixed Measurement Tool</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

When the table 6 regarding the Distribution of the Measurement Tool According to the Preparation of the Studies found is examined, it is seen that the measurement tool developed by the researcher is 15 (65.22%), the measurement tool developed by someone else is 6 (26.09%), and the measurement tool prepared as mixed is 2 (8.70%).

Discussion, Conclusion and Recommendations

A total of 29 studies including one of the concepts of E-Assessment, Web-Based Evaluation, Online Evaluation and E-Exam were reached in the study, which was carried out without any date limitation. Of these studies, 13 are articles, 12 are master's thesis, and 4 are doctoral dissertations. Considering the distribution of studies in Table 1 by years, no study related to e-assessment was found before 2004. Although the number of studies has increased since 2012, in some of the years after 2012, no studies were found or only 1 was found. It is seen that the most studies were in 2018 and 2014 with 4 studies per year. When we look at 2021, we see that there is 1 study. It is obvious that the year is not over, in case this is misunderstood, and the emergency distance education process, as well as the e-assessment process, which is a part of this process, has not been completed because the pandemic has not come to an end. Even if the pandemic is over in the next period, it is expected that the speed in distance education studies will continue to increase.

It is seen that the universities with the most studies on e-assessment are Gazi University and Eskişehir Osmangazi University with 3 studies each.

As the educational institutions where the examined studies are applied, a listing can be made as undergraduate, graduate, associate degree and continuing education center students and lecturers, primary and secondary school students and teachers, as well as senior administrators and field specialist personnel. It has been determined that the examined studies are mostly aimed at undergraduate students in universities as the institution in which they...
are applied. In this context, it is noteworthy that there are 14 studies. In addition, within the scope of design-oriented research on e-assessment, it was determined that 5 studies aimed at making applications did not conduct a qualitative or quantitative research.

When the distribution of the studies in Table 4 according to the research designs is examined, it can be seen that the quantitative research and mixed research design used in 9 studies are the most preferred methods.

When the research designs are examined, the mixed research method draws attention with 34.48%. It is seen that the non-experimental sub-titles of quantitative research are more adopted. In the explanation distribution of the research designs, it was found that the interactive research case analysis, which is one of the qualitative studies, is twice as much as the phenomenology. In quantitative research, it is seen that full experimental research is done.

When the preparation of the measurement tools of the 29 studies is examined, it is seen that the measurement tools developed by the researcher were used in fifteen of the studies. This draws attention with 65.22% compared to the total study.

With this research, the article made within the scope of Turkey under the title of e-assessment, which has a very important place in emergency distance education applications due to the pandemic, provides an overview of the changes experienced in recent years in doctoral thesis and master's thesis research. It will also contribute to future research trends.

For further research on e-assessment, studies that include the studied subject areas and that can be prepared under headings by categorizing the conclusion sections can be suggested. By detailing the advantageous and deficient aspects of e-assessment, by making it the subject of research, the distance education and e-assessment studies that will continue to be in our lives can be increasingly continued in order to place them on a healthier and more solid ground.

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Deutsche Welle. (2020, May 13). Retrieved from: https://www.dw.com/tr/dso-koronavir%C3%BCs-kal%C3%B6r-de-
CUBA EDUCATION SYSTEM; COMPARATIVE EDUCATION

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TRNC Ministry of National Education, National Education Supervision and Evaluation Board, Inspector

ABSTRACT
The aim of this research is to examine the structure of the Cuban education system and to make a comparative analysis of the Cuban education system and the education systems of Turkey and the Turkish Republic of Northern Cyprus. In the research, the Cuban education system has been examined within the scope of purpose, structure and process dimensions. Cuba, located in Latin America, stands out with its success in education despite insufficient financial resources. The most important step taken after the 1959 revolution in Cuba was in the field of education. While the number of educated people was low in Cuba before the revolution, important steps were taken in education after the revolution. While education in Cuba is carried out under two ministries, namely the Ministry of National Education and the Ministry of Higher Education, there is a centralized structure in Turkey and the TRNC and is carried out under a single ministry. Another important difference that stands out in the research is that there are no private schools in Cuba and every stage of education is free.

Keywords: Cuba, education system, comparative education

INTRODUCTION
Cuba is a country located in South America and consists of 3715 islands and islets. Cuba, whose geographical location and natural riches are the scene of power struggles over the foreign country; Although it is a country that gained its independence with the support of the USA, it is a closed country due to the embargo imposed by the USA. Cuba; It is similar to the TRNC in terms of the socio-economic problems it has experienced due to the embargoes and the embargoes that the TRNC has experienced as an unrecognized country in the world, except for Turkey. Cuba is a country that has achieved success in the field of education despite the economic difficulties as a state that gained its independence as a result of the struggle against the USA and the Spaniards. Cuba; Thanks to the policies and reforms it implemented after the revolution, it has gained a special place in education and health worldwide. In the education system; It is clear that it can bring different approaches and perspectives to countries experiencing economic difficulties in education, with the principles it implements, its ability to offer lifelong education to all citizens free of charge despite economic difficulties, and its implementation of the socialist understanding at all levels (mined.gob.cu). It is important to examine from this point of view.

The aim of this study; Cuban Education System; The aim is to examine it in terms of process and structure and compare it with the TRNC and Turkey education systems. In the research, data obtained from written and electronic sources related to the Cuban education system were used. In addition to the literature review on the Cuban education system, the official websites of the Cuban education ministries were examined and up-to-date information was provided. The accuracy of the data obtained from different sources was checked and general results were obtained by comparing the education systems of TRNC and Turkey.

SOCIAL POLITICAL ECONOMIC AND CULTURAL STRUCTURE
Cuba, which was colonized with the Spanish explorer Christopher Columbus' landing on the island in 1492; It became Spanish territory until 1898. The population structure of Cuba, which became independent in 1902 with the support of the USA, is also complex (wikipedia.org.wiki.Cuba).

Ethnic cohesion was achieved by the mixing of the immigrants who came to Spain after the Spanish invasion and the slaves brought from Africa to work in sugar factories and the local people (Aksoy, 1992). Cuba, which gained its independence with the support of the USA, continues to depend on the USA militarily and economically; The USA continued its influence on the country with the groups it supported in Cuba. Fulgenco Batista, who overthrew Gerardo Machado in 1933 with the support of the USA, remained in the Cuban administration for many years.

While the Batista Administration made tourism and casino management a source of income, it caused the people to become impoverished and the unemployment rate to increase. The foreign policies of the Batista
administration led to the realization of the Cuban revolution as a result of an effective opposition. At the end of the struggle with the participation of Fidel Castro and later Ernesto Guevara, the Cuban revolution took place and the Batista administration was ended. In 1958, after Batista fled to the Dominican Republic, a new government was formed and Fidel Castro was appointed prime minister. The new government followed a socialist policy and declared the laws of revolution. By making land reform, the lands in the hands of the companies were nationalized. As a socialist state, the reforms of the Cuban government caused the U.S. to impose an embargo on Cuba and strained relations. Cuba, which got closer to Soviet Russia, followed an independent socialist policy. In 1961, the US-supported opposition Cubans' Pranging Purges failed and the new regime became more solid.

Although relations became tense again with the Soviet Union placing missiles in Cuba in 1962, a compromise was reached and the tension was resolved. Multidimensional and comprehensive policies are implemented by speeding up the reforms within the country. It was ensured that literacy mobilization was announced, national income and health resources were made available to the public, and unemployment was reduced. Cuba, which has become a closed country due to the US embargo, continued to develop by developing its economic relations with the USSR. The policies that became evident with the Cuban revolution continue today and Cuba continues to exist as a closed country (Balcı, 2007., wikipedia.org/wiki.Fidel Castro).

Cuba declared the Republic Administration based on socialism in 1976 and accepted the new constitution. According to this constitution, in the country;

- There is only one party.
- Elections are held every 5 years.
- The name is voted directly.
- Members of Parliament and delegates do not receive a salary.
- Legislative power is shared by trade unions, women's organizations and other community organizations.
- No interference in the selection process. Voters propose candidates.

Cuba has 14 provinces and two special municipalities. The economy in Cuba is based on socialist principles and is state-controlled. Fishing and animal husbandry are also important in Cuba, where 21 percent of the workforce works in the agricultural sector. Tourism is the driving force of the Cuban economy. After the aid cut by the disintegration of the USSR in 1991, Cuba started new searches in the economic field. The alliances with China and Venezuela brought relief in the economy (Aksoy, 2008, Wikipedia.org.Cuba).

**PHILOSOPHY FOUNDATIONS OF THE CUBAN EDUCATION SYSTEM**

Castro described himself as a "Socialist, Marxist and Leninist". As a Marxist, he aimed to transform Cuba from a capitalist state under the influence of foreign imperialism to a Socialist society and eventually a Communist society. Influenced by Guevara, he said that most of Cuba could bypass the processes of socialism and move directly to communism. However, the Cuban Revolution did not fit Marx's prediction that socialism could be achieved by proletarian uprising. Because the pioneers of the revolution were from the middle class. According to Castro, a state was considered socialist if it owned the means of production. In this context, his understanding of socialism was more concerned with the method of distribution than who had power. Education in Post-Revolution Cuba was shaped by the perspectives of Fidel Castro and Che Guevara on education. While Fidel Castro foregrounded the integration and fusion of production and education in the Socialist system, Che Guevara; “The goal of Cuban revolutionaries is to build a communist society. This goal advocates the complete change of the individual and the birth of the new man. He wants the new person to change with him on the economic basis and to have new values” also reveals the basic philosophy of the Cuban education system.

The influence of the communist regime in Cuba shows its effect in the field of education as well as in political, social and economic life. As a requirement of the communist regime, housing, nutrition, health and education are accepted as the most basic rights of individuals and are paid by the state free of charge. This understanding is fully seen in the Cuban educational structure. Education has been shaped according to this understanding.
In 2004, Castro said, “The happiest country in the world is a country with educated individuals in thought and emotion. The spirit of education is the teacher. No one is more dedicated than the Cuban teacher. Who among us has not learned to read and write in small public schools, now is the time to stop paying so little wages to the young men and women to whom we entrust the sacred duty of educating our children.”

**Basic Principles of the Cuban Education System**
- Education is a right
- Integrity of learning and work
- Democratic participation of society
- Different but equal education
- Sensitivity to different interests and integrity of education

Education in Cuba is free at all stages. There is equality of opportunity and the development of children in rural and central areas differs little. Values education has been prioritized at all levels.

**STRUCTURE OF THE CUBA EDUCATION SYSTEM**

**ADMINISTRATIVE STRUCTURE**
There are two ministries in the Cuban education system. The Ministry of Higher Education, which is responsible for higher education, and the Ministry of National Education, which is responsible for education under the Higher Education level, provide education services with subordinate departments and units. Under the minister of higher education, there are 3 deputy ministers, as well as the license manager, research and graduate general manager, Information, Communication and Computer manager, materials and financial security directorate (mined.gob.cu). In addition, provincial and regional units responsible for education were established.

The Ministry of National Education is responsible for pre-school, primary and secondary education. Planning regarding education is made by the ministry. Unions have an important place in education. The Cuban education system works as a set of interconnected systems at all levels and types.

**Structure of the School System**

**PRE-SCHOOL EDUCATION**

**Early Childhood Period**

**Institutional**
Children's institutions established in the country for the care of Early Childhood children are called children's circles and pre-school classes in primary schools. In these institutions, the child receives an educational program developed by education specialists. Children from 1 to 6 years old of mothers working in Children's Circles are taken as priority. These centers operate from 6:00 in the morning to 7:00 in the evening and organize their staff in working shifts that cover all day as well as Saturdays.

In day care centers, children's basic needs (food, cleaning and sleep) are taken into account as well as their pedagogical needs. These centers also have medical care services (nurses) and other specialists (speech therapists, art educators) and programs tailored to the nutritional needs of these ages.

There are also centers that provide the education of the children of families who cannot undertake the education of their children or follow their normal development due to their physical or mental disabilities. These children are cared for and educated at the hospital or at home. Private kindergartens and Early Childhood centers where children with special educational needs are taken care of are affiliated to the Ministry of National Education Special Education and Pre-School Directorates (mined.gob.cu.primera-infancia.institucional).
Non-Institutional

Before the revolution, Cuba only had crèches and asylums for socially disadvantaged children. Casa de Beneficencia, where single mothers, orphans and abandoned children were admitted, did not have adequate conditions for healthy physical and mental health, although it had a caring approach. It was the only school with a kindergarten and preschool education program for the development of children.

These institutions, for which the state is responsible, were reorganized. Fidel Castro's idea to create a new kind of children's institution for the care of children of working mothers was implemented. Efforts were made to fulfill Jose Marti's principle of "education begins with life". These children's institutions have an educational approach that aims to provide harmonious development in babies, to prevent diseases, to transfer educational hygiene habits to family life, to help parents get to know and educate their children. The priority given by the state to the development of these care methods meets the educational needs of all children in the country from birth to 6 years old.

The non-institutional method for the educational care of early childhood children is the Educate Your Child Programme. This is a program in which families educate their children with the participation of representatives of different government institutions and social organizations (Health, Culture, Sports, Cuban Women's Federation, National Small Farmers Union, Committees for the Defense of the Revolution, among others). In its practical application, professionals and volunteer staff for family orientation do this work without any pay.

Education; It begins with the care of pregnant women using spaces designed by the country's health system, providing clinical care as well as preparation and educational guidance to promote the development of the child during pregnancy and birth. In the Educate Your Child Programme, nine brochures (Teach Your Child) are produced, containing family-oriented guidelines about the characteristics and needs of boys and girls of this age, and activities to promote their development. The educational care coverage offered by the "Educate Your Child" Social Care Program is 67.5% of the Cuban population aged 0 to 5 years. There are schools that take children from 45 days to 5 years old. There are three types of preschool institutions.

a. Schools that need only special education
   b. Schools where those who need special education and those who do not provide education together
   c. Schools attended by children who do not need special education

According to 2005 data, the schooling rate for 3-5 years is one hundred percent. Great importance is attached to early childhood education. Education is given in institutions that are institution-centered or not. In addition, there is a "train your own child program" that is not affiliated with any building or institution. It is a program based on the education of children (between 0-6 years old) in a way that their families will be their children's teachers. It is aimed at providing a high level development of the child in all aspects, starting with the prenatal period and covering certain age ranges. When it was successful in Cuba, it was applied in countries such as Ecuador, Chile and Brazil. (https://www.mined.gob.cu/primera-infancia/, Tinajero, 2010. cited by Erden & Yalçın, 2017).

PRIMARY EDUCATION

Primary education is compulsory. Equal and comprehensive education and training of all boys and girls aged 6 and 11 is guaranteed.Küba'daki İlkokulun temel özellikleri;

- The positive development levels of girls and boys enter the 1st grade, starting with the preparation they receive in the pre-school period.
- Schools have two-session education.
- There are classes in which a maximum of 25 students are registered.
- Transition of teachers is provided according to development, cycle or level moments.
- 1st and 3rd year students do not repeat a grade.
- It is included in the system from the pre-school level of the computer.
- The Education Channel is used to deliver curriculum and supplementary areas.
- Art Instructors are effective.
- The institution works in the community network.

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Mission of Education
It is to scientifically lead the integrative - communist education of current and new generations and teaching staff, together with the institutions, organizations and institutions of the society.

At the end of the Education
In accordance with the value system of the Socialist Revolution; internalize the knowledge and skills that gradually reflect on their feelings, ways of thinking and behaviors starting from the first grade, and contribute to the holistic formation of the child's personality; It is aimed and expected to grow up as reflective, critical and independent individuals with basic qualities such as responsibility, patriotism, hard work, honesty and solidarity.

Structure
Primary school consists of 6 grades from grade 1 to grade 6, and most centers include a pre-school grade. It is organized in two loops:

First cycle from grade 1st to grade 4th
1st to 2nd developmental stage
Second stage of development from grade 3 to grade 4

Second cycle from 5th to 6th grade
The third stage of development from grade 5 to grade 6

Pedagogical Follow-up Process
As students progress to the next grade, they collaborate pedagogically and methodologically by teachers and experts in order to follow up and evaluate students. Necessary measures are taken to ensure that students reach the goals of each grade level. The process of following takes place from one degree to another, but the most important steps are as given below.

- At the end of kindergarten, between teachers who deliver in first grade and teachers who take students.
- Among the teachers who completed the cycle with their students at the end of the 4th grade and promoted them to the 5th grade (mined.gob.cu.primaria).

SECONDARY EDUCATION (Basic Secondary Education)
Basic Secondary School
Basic secondary schools; urban basic secondary schools (ESBU) and rural primary secondary schools (ESBEC). There are also arts vocational schools (EVA) and sports initiation schools (EIDE).

Before 1959, basic secondary education practically did not exist in Cuba. Before the revolution, the number of sixth grade graduates was less than 400,000. With the development of the Literacy Campaign from the 60's, it was aimed to increase schooling en masse. In 1975, the process of implementing new work plans and programs that determined important changes for the Improvement of the National Education System began, and a scientific research and decision-making study was carried out beforehand. In the 1980s, public awareness was raised to educate the entire population up to Grade 9. Currently, Basic Secondary Education in Cuba covers students between the ages of 12 and 14 and forms part of compulsory basic education together with primary education.

The aim is to lay the foundations for the holistic development of the personality of the adolescent, to provide and contribute to the acquisition of basic knowledge and the development of native language, mathematics, natural and social sciences, English skills. Emphasis is placed on the aesthetic education of students, the formation of a physical culture, and the teaching of technical principles closely linked to productive activity.

At the end of Basic High School;
Young people who are raised with scientific research thought in the education process; In the welfare and sustainable development of Cuban socialist society, besides patriotic and humanist ideals, he reaches the skills of
thinking and acting freely in accordance with his own characteristics, individual wishes, aspirations and social needs. High school consists of three grades from grade 7 to grade 9 (mined.gob.cu.secundaria.basica).

PRE-UNIVERSITY SCHOOLS
The main mission of Pre-University Education is to guide the development of the educational process scientifically, to reinforce the general and comprehensive education of high school graduates, and to enable them to continue their higher education in their careers.

Pre-university institutes (for the formation of high school graduates): They serve as grades 10-12 and aim to contribute from school-family-community integration to the development and holistic formation of the adolescent's personality with a higher level of education. Education is provided in a way that allows students to build their future and guarantee their pioneering and unconditional participation in the building and defense of Cuban socialism. In addition, the interests, desires, longings, thoughts and behaviors of young people are reinforced, and the knowledge and skills acquired in previous levels and degrees are strongly deepened. Accordingly, students are prepared for the next level.

There are 410 centers of education, 251 pure and 159 mixed, in addition to 318 urban Pre-University Institutes and 77 rural centers and 15 Pre-University Exact Sciences Institutes. Currently, 10th grade 50 725, 11. 45 639 and 12. 44 577 students are enrolled in IPVCE 10 917, IPU 113 349, rural 16 475 and a total of 140 941 students, 200 of whom are from Universities.

It is equipped with modern laboratories for educational, experimental and research work. Quizzes are held in various specialties that allow students to prepare for participation in the Olympics and international events, as well as associations.

Organization Structuring
Board of Directors. It is the governing body of the work of the school, has a monthly character.

Technical advice. It constitutes the governing body of educational activity, which guarantees compliance with the guidelines established to ensure the successful development of the pedagogical process in general and the teaching-learning process in particular.

Collective department. It is the organizational-functional level that directly reports to the technical council on the development of TM; It is the place where the most diverse forms of methodological activities are carried out, forming the basic structure of methodological work and bringing together the relevant heads and teachers.

Claustrello brings together all the teachers in the same class who meet at least every two weeks. Actions are coordinated on the basis of the general education of students and the quality of learning based on the analysis of:

- the results of the level of knowledge, habits and skills that students acquire in order to take measures to improve themselves on time.
- The projection of the strategy designed for the assessment system in various types and forms of implementation in each discipline.
- results of comprehensive diagnosis and communication with the social and family environment.
- It is a space for carrying out various methodological activities aimed at achieving the professional competence of members of the teaching community.

Parent-Teacher Association, Its main objectives are to actively involve the family in the life of the institution and increase the responsibilities of children in the organization of different educational, non-educational and extracurricular activities in order to ensure the unity of educational effects on girls, adolescents and young people equally and on the whole.
The monastery brings together all the teaching staff of the School institution. They are usually carried out twice in the school year: one at the beginning and the other at the end, in order to analyze the problems based on the results of the PE-A, in order to take timely measures to solve the main problems, in the order of teaching and methodological presented in the school institution, and to disseminate the most advanced experiences of the school (or others).

Expectations from School Administration
School management is expected to prepare and plan for the functioning of the school and the fulfillment of educational objectives. Knowing the characteristics of the students, including the family situation of the school, categorizing the school, the lessons to be given, technology and local history; intellectual development, using them as ways for the formation of national identity and culture in parallel with the development of patriotic feelings, encouraging political and patriotic activities, ensuring the correct use of mother tongue, knowing how to use the necessary methods and techniques for the development of educational activities, exploration, excursions, museum visits, organizing sports and cultural competitions is among the administrative duties of the school.

It also provides a collective and individual orientation to coordinate and encourage the development of school hygiene habits and health education, to carry out FVOP studies on needs and demands, to use of school and public libraries, to encourage participation in school-run activities (strengthening the ties of permanence and coexistence between them), carrying out the work (school for parents, talks, exchanges, debates and exhibitions), doing preventive work, making school evaluation, using the F, Q, B and C laboratories, preparing for the entrance to education are the expected works of the school administration.

Operation of School
School organization: evaluation of school staff and teachers, curriculum and organization, preparation and control, planning of educational activities to guarantee entry to higher education (what should be done in 10th, 11th and 12th grades), planning, execution and monitoring of the pedagogy process, educational work of the teacher's guide, economic and financial control, recommendations and execution processes of activities and tasks developed from the teaching secretary.

Methodological work: It includes the organization and conduct of improvement and methodological work, the quality of the classroom, the conduct of educational research in school.

Teaching-education process: Planning and development of school evaluation, evaluation of teaching-education process, activities to be developed with monitors, actions to be developed with mother tongue education program, security and control of the work of Physics, Chemistry and Biology laboratories, work of the school library are included in the process.

Formation of values: Actions to be developed at school to provide adequate vocational education and professional guidance for students, professional pedagogical guidance work, development of student societies, preparation of teachers, FEEM leaders and students, tasks to be done in the defense preparation system, work to be developed in school health, at school Studies to be developed to include preventive studies, FEEM's pre-university studies, educational activities with student families, the school's artistic cultural activities, pre-university FEU studies, business activity at school, student and union activities at school, actions to meet staff needs, artistic cultural activities of the school Value creation trainings are given to students through activities.

Pre-University Scientific Vocational Institutes (IPVCE): These are pre-university institutes specialized in exact sciences, which are based on a solid political-ideological preparation and aim to train high school graduates with deep motivations for the study of science in the fields, including pre-university education. Therefore, they are the main source of income for these careers in different universities. application of the polytechnic principle; researching science and technology, which is a combination of study and study. There are Cabinet decisions that expand the Work Plan for Vocational High Schools in line with the institutional purpose for which they were created.
There are 16 educational institutions of this type in the country, in each state. IPVCE is classified as small, medium and large according to their size at the country level, and their structures are not the same in all provinces of the country. Students who enter IPVCE are students who aspire to careers in science and the condition of permanence for these students is to have an academic index above 85 points and also to be successful at the desired level in Mathematics, Physics, Mathematics, Chemistry and Biology. In this subsystem, there are schools with special objectives and features, which are the result of a selection process in accordance with the status and abilities of the students. These; Pre-University Scientific Institutes (IPVCE), Pre-University Pedagogical Sciences Vocational Institutes (IPVCP), Pre-University Military Institutes (IPUM), Arts Teachers' Schools (EIA), Military Schools, Schools of Admission to Sports (EIDE), and Schools of Athletics (ESPA) (Balcı, 2007, mined.gob.cu.preuniversitaria).

TECHNICAL AND PROFESSIONAL
The history of Vocational Technical Education has largely developed with its production history. However, technical needs, human desire to know, demands due to scientific and technological advances, increasing transformations of productive forces, rapid development of science, increasing complexity of social phenomena and processes, and also the role played by great personalities have been influential. Cuba has a rich tradition in this type of education. Practices, ideas and understandings of workers' education have occupied an important place. The most important breakthroughs in the development of Technical and Vocational Education are practical and theoretical applications that started at different stages depending on the needs and socio-economic reality of the country and were reinforced by the First Cuban Education from 1959.

Many principles accepted today are important. On the basis of the connection or integration between the professional preparation that is fully valid today and the reality and needs of the country, the determination of the national character of vocational education, the relationship between teaching and research, the connection or integrity between theory and practice, the professionalization of the teaching content, the understanding of the teacher based on teaching different subjects, the content of the content. Scientific and technical updating, the need for special preparation for teachers in such schools, the continuing nature of education, the need for the student to learn to work, the need to apply productive methods in teaching, the integration of teacher education into the polytechnic school for the training of a teacher of the secondary vocational level is implemented in Cuban education.

Mission and Purpose of Technical and Vocational Education
The mission of Technical and Vocational Education: Scientifically orienting the education of the population through the primary and continuing education of a qualified middle-level workforce, as well as the integration of the polytechnic and trade school as an element of the labor force dynamically, is to ensure the economic and social development of the country.

A total of 103 specialization areas of Technical and Vocational Education have been developed; Of these, 54 correspond to medium technical level and 49 are skilled workers. These specializations have been developed according to regional needs.

The aim of Technical and Vocational Education is the profession's profession, which has a general culture and comprehensive professional technical knowledge, exhibits a consistent attitude towards life, is characterized by unconditional commitment to the revolution, has values such as patriotism, human solidarity, collectivism, industriousness, discipline, independence and creativity. To raise individuals who have the opportunity to enter the socio-economic life of the country with the knowledge and skills required It is continuous development and change as a model of professional education that enables professions to face duty and professional competence.

HIGHER EDUCATION
Higher education is provided by universities, higher institutes, higher pedagogical institutes, higher education institutes, higher education centres, higher arts/science institutes. Students who take the Bachillerato in Cuba are entitled to higher education. Entrance to universities depends on the success of the student and the entrance exams. Guidance is provided for students to enter universities and it is facilitated for students to enter
universities. In higher education, education is provided as daytime, for employees as secondary education, open education and continuous education (www.rimed.cu/sis, cited in Balcı, 2007). The vision in higher education is “to maintain a modern, humanistic, universal scientific, technological, innovative, socially integrated and sustainable university model that is deeply committed to socialism” (MES 2017) undergraduate programs vary between 4-6 years, there are master and doctorate programs. There is a separate ministry responsible for higher education in the foreground (www.mined.gob.cu/tecnica.y.profesional).

YOUTH AND ADULT EDUCATION

Youth and Adult Education, like other education, in this case has Social Functions that respond to the characteristics of youth and adults. From the very beginning in the country, youth and adult education as a subsystem is based on principles that respond to Cuban education policy.

History of Adult Education

Before 1959, the exclusion of adults in the society, social change, poverty, political change, economic change, low literacy rate, and the occurrence of corruption have continued to this day with programs, curricula and implementations for adults as well as literacy campaigns depending on the new policies before and after the revolution. continued to evolve.

Mission

In general, it is to help the young and adult population achieve a comprehensive culture that prepares them for life in accordance with the updating of the economic and social model of the country, in coordination with organizations, mass organizations and community institutions.

At the end of Young and Adult Education

In general, the young and adult population from different sectors of the society should acquire and develop the necessary knowledge, habits and skills that allow their education and professional development under the scope of formal, non-formal and non-formal education that meets their cognitive interests, meet their moral and material needs and actively participate in the political, economic and social development of the country. are provided.

• EDJA is structured as follows:
  • Educación Obrera Campesina (EOC), constitutes primary education for adults and provides its graduates with a school level basically equivalent to sixth grade. It is a preparation for the continuation of studies at Obrera y Campesina Secondary School RM203 / 12 APPENDIX 1y2
  • Secondary Obrera y Campesina (SOC), basic secondary education for adults. It provides its graduates with a school level essentially equivalent to the ninth grade. It lays the foundations for the continuation of studies at the Workers' and Peasants' Faculty, polytechnic centers and training courses of organizations. RM203 / 12 APPENDIX 3 and 4
  • Facultad Obrera y Campesina (FOC), high school level for adults. It provides its graduates with a school level essentially equivalent to the twelfth grade. It offers the most comprehensive preparation for an adult's life and technical competence and a basis for entry into higher education according to established requirements. RM203 / 12 APPENDIX 5, 6, 7 and 8
  • Language Schools (EI) provide the necessary information and develop skills for the practical use of a foreign language by reading the bibliography published in that language to communicate and gain knowledge orally. RM75 / 14 Unique APPENDIX (mined.gob.cu.jovenes.y.adultos. history).

PEDAGOGICAL FORMATION AND TEACHER TRAINING

Historical Development

With the victory of the Revolution on January 1, 1959, a new phase in the history of Cuban education began. The establishment of social ownership of the means of production, equal rights between the people and the rule of the people, required a different system of education that would, for the first time in history, realize a popular education for all.
On December 23, 1959, Decree No. 680 was approved for comprehensive education reform and allowed the creation of 10,000 classrooms, especially in rural areas, so the number of teachers had to be doubled. In 1959, a call was made for basic secondary and pre-university students to travel to distant places to teach; Thus, volunteer masters were born. In 1960, a literacy campaign was organized, then most of the literacy teachers remained teachers at the end of the campaign.

Later, with the closure of Normal Schools in 1962, Schools for Primary Teachers were created in what became known as Minas-Topes-Tarará, the work plan was five years (one in Minas del Frío, two in Tope de Collantes and two in Makarenko Pedagogical Institute Tarará ), teachers were prestigious teachers, often graduated from Normal Schools.

The Pedagogical Institutes were founded in 1964, the first was Frank País added to the Universidad de Oriente, Félix Varela added to the Central University of Las Villas and Enrique José Varona added to the University of Havana. Later those of Camagüey and Matanzas were created.

At the beginning of the 70s, education schools for primary school teachers and Children's Circle schools for educators were established in the provinces. While it was necessary to enter from the ninth grade until 1976 in the provinces where they entered with the sixth grade, the plan was reduced to four years and their name was changed to pedagogy schools. These centers operated until the beginning of the 90s when it was decided that the entry level to teacher training would be made only after the completion of the twelfth grade, after starting the primary education undergraduate education in the day program of universities since 1988.

As a result of the economic crisis that worsened in the last decade of the 20th century and the first decade of the 21st century, the teaching profession was also affected and various changes and regulations were made in order to meet the needs of this generation schools. From the 2000-2001 academic year, it had entry and training models at different levels. Classroom Teachers and then Basic Secondary School teachers were receiving vocational preparation training. Teachers started to receive intensive preparation for one year and internship training from the next year. Starting from the second year, teachers spend fifty percent of the time in the internship school and make practices and observations. A close education-teaching cooperation is ensured between the internship schools and the university where the learner is educated. With the closing of the work plan for the urgent training of primary school teachers in 2009, pedagogy schools were reopened in the 2010-2011 academic year to train primary school teachers, pre-school educators and Special Education teachers. In 2014, primary school teachers were also included in the application (mined.gob.cu.formacion.pedagogica).

**Teacher Training in Cuba**

Teacher education in Cuba is at the university level and lasts for 5 years. Within the framework of teacher education programs, Marxist-Leninist philosophy, field knowledge, teaching profession knowledge and practices are included. In the first year, Marxist-Leninist philosophy is dominant. Teachers start to observe from the second year, and in the fifth year, they teach four days a week and continue to teacher education institutions for two days. Teachers have to do 660 hours of teaching practice. In Cuba, it is aimed to prepare teacher candidates for real life by bringing them face to face with the problems they may encounter in their professional lives.

Teachers are trained in:
1. Comprehensive psycho-pedagogical identification of students
2. Emphasis on multiculturalism
3. Designing, implementing and designing strategies to be used in achieving educational goals, taking into account individual needs
4. Using learning-teaching methods and technologies suitable for students
5. Evaluating their professional performance and needs

Higher education staff training teachers must have taught at least 6-7 years. The understanding that theory and practice should be carried out together is dominant (Gasperini, 2000, cited in Baldan, 2017).
SERVICE TRAINING OF TEACHERS IN CUBA

In-service training is compulsory for teachers in Cuba for the first 6 years (Gasperini, 2000, cited in Baldan, 2017). Teachers receive postgraduate education, although it is not compulsory (Buchberger, 2013, Sospedra, 2015, cited in Baldan, 2017). Teachers with postgraduate education can then become “methodists” and “training chiefs” and take part in the evaluation of teachers (Gasperini, 2000, Akt, Baldan, 2017).

AUDIT OF EDUCATION


In addition to conducting the audit of the Economic Financial Administrative Control and verifying the implementation of State Policies, the duties and authorities of the Directorate that methodologically directs and supervises the work of the Internal Audit Unit and the main internal auditors within the scope of the organism's system are as follows;

- Methodologically meeting the policies, strategies and working procedures of the Central Body, its subordinates and sub-units and OSDE, as well as organizing and supervising the control of its functioning.
- To supervise and audit the work of the audit units at least once every two years and the internal auditors once a year. (In the case of internal auditors, audits whose results are found to be lack of administrative control, criminal acts or administrative corruption should be audited)
- To solve the problems that hinder the functioning of the internal audit activity and to take precautions.
- Audit of the audit at all stages of the audit.
- Control and follow-up of alleged criminal acts or administrative corruption detected in audits and other control actions, as well as those performed by external auditors.
- Evaluating the audits performed by the system in accordance with the legislation and responding to non-compliances.
- To provide the training strategy based on the identification of learning needs and to establish policies and maintain systematic controls on the technical and methodological preparation of the Central Body, subordinates and sub-units and the internal auditors of OSDE.
- Conducts internal audit of the central level, subordinate and sub-units and the entire structure of OSDE and any unit or organization of the system, in accordance with the directives and control purposes and the requirements of auditing standards (www.mined.gob.cu.ucai).

THE MANAGEMENT PROCESS OF THE CUBA EDUCATION SYSTEM

The academic year in Cuba is between September and July. The holidays last three weeks. An academic year consists of 40 weeks in primary education and 42 weeks in secondary education. Eight lesson hours are taught in schools daily. Compulsory education is nine years.

In Cuba, the decision, planning and coordination powers related to education are gathered in the center. Apart from higher education institutions, the Ministry of Education is responsible for the determination and implementation of education policies. While the authorities are gathered at the center, opinions are taken from non-governmental organizations, trade unions and advisory boards. Officials in the administrative unit and ministry inspectors are responsible for education supervision in provinces and districts. Education from pre-school to university level is free. Students' book needs and meals are provided free of charge. The health of students is guaranteed by the state. The literacy rate is one hundred percent in primary schools.

In primary school, the same teacher teaches from first grade to fourth grade. In the fifth and sixth grades, children complete their education with the same teacher. Due to the lack of classrooms, morning and evening hours are applied. Public education programs are available to all, such as the university, the round table and the podium. Special education programs for children and adults are implemented through traveling teachers. Exams are held four times a year and at the end of the year, an exam is also held by the Ministry of Education.
In secondary education, school and working life are intertwined. Students go to boarding schools and both receive education and work in the field of agriculture. Provincial secondary school institutions are intertwined with the agricultural field.

In Cuba, there are associations such as the "Federation of Secondary-High School Students" (FEEM), which all students at all levels can join, and the "Young Communist League", which participates as of the ninth grade. Associations working independently in the Ministry of Education can convey their studies related to education to the National Assembly and the Ministry of Education (Balcı, 2007).

**CUBA AND EDUCATION IN THE COVID 19 PERIOD**

Guiding brochures for families were published and parents were informed. These brochures and their topics are given below.
1. Methodological recommendations for diagnosis and activities from school and family.
2. Suggestions for activities to be done at school and by the family.
3. Suggestion of recreational and educational activities to be developed at school or home.
4. Methodological recommendations for monitoring, evaluation and sustainability of planned maintenance strategy.

Trainings have been provided at all levels through publications. Lesson presentations were also presented in sign language for the disabled. (https://www.youtube.com/watch?v=aoJoNGprWXs). Education grids were created and broadcasts were made in different channels in all provinces and municipalities (mined.gob.cu.parrilla-televisiva-curso.2020-2021).

In 2020, there was a serious regression in bilateral relations between Cuba and the USA. Cuban Deputy Minister of Education Dania López gave information to the public by explaining the strategies she implemented to preserve the island's education system and continue the school year. López stated that Cuba's well-structured, free, inclusive, equitable and quality education system is guaranteed to continue, and that the effects are minimized by adopting alternatives based on the education process for the comprehensive education of students, from the use of television in the country, from the support of families to the development of the education-training process, from the use of technologies to optimal In addition to the use and irreplaceable statements by teachers that they are serving education during the covid period, the Deputy Minister said that when the pandemic forced schools to close, Cuba fulfilled more than 70 percent of its work plan and thanks to the adjustments and coordination between institutions to prepare teaching, computer and audio-visual materials. He stated that he did not stop. Cuba has also struggled in line with its principles in education during the covid period.

On May 22, 2021, the Cuban Foreign Minister said from his twitter profile that the interventionist policy in question, which was officially imposed on Cuba almost sixty years ago, has caused 17 billion dollars of damage to the country's economy in the last five years alone (mined.gob.cu).

**COMPARISON OF CUBA EDUCATION SYSTEM AND TRNC AND REPUBLIC OF TURKEY EDUCATION SYSTEMS**

<table>
<thead>
<tr>
<th>Purpose and Policies</th>
<th>Cuban Education System</th>
<th>TRNC Education System</th>
<th>Republic of Turkey Education System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>It is to raise individuals who have a socialist thought and aim to spread lifelong and free education in every field. The mission and aims of education at all levels in Cuba have been determined holistically and according to the socialist ideology. As the Cuban education system moves to the next level, the achievement of the Goals is evaluated in detail. Values education is important at all levels.</td>
<td>To raise responsible individuals who know the truths of the Turkish Cypriot community's struggle for existence, who protect and develop their spiritual and cultural values, who love their country and society.</td>
<td>To raise citizens and good citizens who are loyal to Atatürk's principles, have national, moral and cultural values, and know their own responsibilities.</td>
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<td>Structure</td>
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<tr>
<td>There are two ministries in Cuba, the Ministry of Education responsible</td>
<td>There is a central structure in the TRNC. The Ministry of</td>
<td>It has a centralized structure.</td>
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<td>for education and the Ministry of Higher Education.</td>
<td>National Education and Culture is responsible for education.</td>
<td>In Turkey, there is the Ministry of National Education</td>
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<td></td>
<td>The departments within the Ministry provide services in</td>
<td>responsible for education.</td>
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<td></td>
<td>different areas. The Higher Education Department is responsible</td>
<td>YÖK is responsible for higher education. There are provincial</td>
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<td></td>
<td>for higher education.</td>
<td>national education directors affiliated to the Ministry of National Education.</td>
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<tr>
<td>Compulsory education in Cuba is 9 years. It is structured as 6+3+3.</td>
<td>Compulsory education in the TRNC is 8 years and is structured as</td>
<td>Compulsory education is 12 years as 4+4+4.</td>
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<tr>
<td>Compulsory education age is 15.</td>
<td>5+3+4.</td>
<td>Compulsory education age is 18.</td>
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<td>Local governments are legally involved in education.</td>
<td>Local governments have an impact on the education process on the</td>
<td>Local governments have little influence.</td>
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<td></td>
<td>basis of municipalities.</td>
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<td>Supervision is carried out regionally, locally and centrally.</td>
<td>The center of control has been legalized to be on the basis of</td>
<td>It is done on the basis of control centers and provinces.</td>
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<td></td>
<td>districts and schools. However, it is centrally executed.</td>
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<tr>
<td>Pre-school education is under the guarantee of the state from the age of</td>
<td>Pre-school education is given as kindergartens and kindergartens.</td>
<td>Pre-school education is not compulsory. Pre-school education is</td>
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<td>zero.</td>
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<td>given as kindergartens and kindergartens.</td>
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<td>Education at all levels is free.</td>
<td>Education up to the age of 18 it is free. There are private</td>
<td>Education is free up to the age of 18. There are private schools</td>
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<tr>
<td>There are no private schools.</td>
<td>schools at every level and they are paid. Adult education is</td>
<td>at all levels and they are paid.</td>
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<td>provided by foundations or associations as well as external</td>
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<td>completion.</td>
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<tr>
<td>Vocational high schools are of great importance. There are many different</td>
<td>After secondary school, there are Vocational, Science High</td>
<td>Vocational high schools, Science and High Schools, Trade High</td>
<td></td>
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<tr>
<td>programs in vocational education. Post-secondary schools are divided</td>
<td>School, Art Schools, and Commercial High School. There is no</td>
<td>Schools, etc.</td>
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</tr>
<tr>
<td>into plain high schools and Vocational Technical high schools. There are</td>
<td>pre-university high school in the TRNC.</td>
<td>There is no pre-university high school in Turkey.</td>
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<tr>
<td>vocational technical schools for professionalization. There is</td>
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<td>pre-university education.</td>
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</tbody>
</table>
**Conclusion**

The Cuban education system is structured according to principles based on socialism in terms of structure, process and functioning. Education is free at all levels and there are no private schools. In this respect, it differs from the TRNC and Turkey education systems. The ideal and dedication to realizing the educational understandings of community leaders such as Fidel Castro and Guavera; It shows similarities and parallels with the revolutions made by Mustafa Kemal in the Republic of Turkey. The Turkish public said in an interview with...
Jale Öşgentürk in Yeni Yüzyıl newspaper after Fidel Castro came to Istanbul at the HABITAT meeting held in Istanbul in 1997, briefly referring to Atatürk, “I couldn't have accomplished what he did. The real revolutionary is Atatürk: "I made such a great revolution, but I could not achieve what Atatürk did.” he said (www.milliyet.com.tr/galeri/fidel-castro).

The Cuban education system attaches great importance to vocational training. Education and health are intertwined in Cuba, a country under embargoes. As at all levels of education; children are under the guarantee of the state.

Teacher education is at the university level. Teachers are required to have 6 years of in-service training. Teachers do postgraduate education, although it is not compulsory.

Every precaution is taken to ensure equal opportunity in education. All kinds of opportunities are provided for the education of students with special education needs. It is very important to guide and guide students at every stage of education in Cuba. Despite the continuing embargoes, Cuba is one of the world's leading countries in early childhood education. There is a close cooperation between the central government and the administrators working in the provinces and districts in order to achieve the educational goals determined at all levels.

Public participation in school management processes is of great importance. Students are encouraged to join and operate in associations for their socialist upbringing, and students are encouraged to do so. Adult education is provided and encouraged at all levels.

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EDUCATIONAL SUPERVISORS CONTROLS OF DIRECTORS AND TEACHERS IN HIGH SCHOOLS SERVING IN TRNC DURING COVID-19

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ABSTRACT
This study aims to analyze the responsibilities of principals and teachers in education due to the extraordinary health situation experienced in the 2019-2020 education period. The control of teachers and principals in high schools affiliated to the Ministry of National Education serving the TRNC and the education curriculum are handled by the supervisors. The main purpose of this study is to contribute to the development of education and the next generation under better conditions and to the progress of education without any hindrance. During the online training, principals' approaches to teachers and their problems are analyzed.

Keywords: Covid-19, education, school principal, teacher supervision, online education

Introduction
Supervision is the process of monitoring and correcting the functioning of the organization in order to prevent deviations from the planned organizational goals (Başaran, 2000) or controlling behavior in the name of public interest (Bursaşoğlu, 1991). From the perspective of educational organizations, supervision; assistance to the teacher to improve the learning-teaching process (Wiles, 1967); focusing on teacher teaching in order to improve teaching and increase student success (Sullivan & Glanz, 2005); monitoring and correcting the functioning of schools in order to prevent them from deviating from their goals (Lunenburg & Ornstein, 2013) and generally evaluating the entire education program (Cogan, 1973). Özden (1992) defines supervision as a “continuous education”. Harris (1998) considered supervision mostly as the evaluation of the teacher and in this sense divided the importance of supervision into five: providing teaching and learning, providing support, help and feedback to teachers, ensuring that the teacher acts as a catalyst in maintaining and encouraging learning at school, and external factors that negatively affect education. to counter rationale and to encourage newly developed pioneering practices.

Contemporary supervision is the process of monitoring the activities in terms of their suitability for the purposes and taking the necessary precautions by considering all the factors affecting learning and teaching together. (MEB, 2014). Başar (1995), on the other hand, defines auditing as the work of determining the situation to be audited in every aspect and as it is, evaluating it by comparing it with the criteria that should be and what can be, completing the deficiencies found, replacing the wrongs with the correct ones, getting rid of unnecessary redundancies, and improving them as better situations. It can be said that the purpose of supervision of schools is to determine at what level the necessary conditions are provided for students to achieve the determined gains. There is a general acceptance in the literature that what teachers responsible for educational life at school do while teaching classes in order to achieve these goals plays a critical role in student success. Accordingly, the teacher in the classroom is very influential in a student's day-to-day life (California Education Policy Seminar, 1998); It is seen that the quality of education is largely accepted as directly proportional to the quality of the teacher (Celep, 2009) and that teacher qualifications and teacher competencies constitute the key point in improving students' learning (Levin, 2003). It is therefore important to see, evaluate and develop teachers, who have such an important function in the realization of educational goals, while playing these roles.

The need for supervision in the education system emerged with the countries starting to open official schools. At first, the inspection was for the purpose of checking and the education supervisors acted with the aim of revealing everything that the teacher did wrong. The classical audit model, which cares about controls, left its place to the scientific audit model in the 1930s, where standardization was important. The scientific supervision model has made great contributions to the professionalization of teaching, determining the standards of the teaching profession and seeking compliance with them. After the Second World War, the understanding of democratic control emerged and not only the technical aspect of the teacher but also the emotional aspect of the teacher began to be considered. The clinical supervision model, which centered on classroom experiences in the 1960s and later years, gave importance to teacher-supervisor interaction and teacher's professional development.

Developmental and differentiated audit models are among the current audit approaches. Developmental supervision aims to determine the real needs of the teacher and to be able to evaluate in accordance with his development period. Differentiated supervision is a model that offers the teacher choices about the types of supervision and evaluation services they will receive. Auditors must be well-trained to perform developmental and differentiated auditing (Aydin, 2014; Henson, 2007; Sullivan & Glanz, 2009).
Supervision is one of the main functions of management. Therefore, auditing is one of the indispensable activities for the healthy functioning of the management (Doğan, 2015). In the Dictionary of Educational Management and Supervision prepared by Demirtaş and Güneş (2002), supervision is defined as “observing the way the personnel working in the institution perform their duties, revealing the errors and deficiencies, taking the necessary measures to correct them, solving the problems, introducing the innovations and enabling them to develop methods” such as many definitions in the literature. While Memduhoğlu (2012), Aydın (1993) and Bursalıoğlu (2002) define auditing as the process of determining the compliance of organizational actions with the determined goals, Robbins, Decenzo and Coulter (2013) and Başaran (2000) add to this definition the correction of deviations from the determined goals. Gökcè (1994), on the other hand, examines auditing in terms of system properties and adds the development of organizational goals based on the correction results in addition to the above definition. Aydın (2016) states that in different definitions of auditing in the literature, a managerial perspective that emphasizes the program development effectiveness, human relations process, and leadership function dimensions of auditing comes to the fore (Aydın, 2016).

It is a managerial responsibility to lead a well-thought-out continuous evaluation activity in order to ensure the effective fulfillment of the goal to be achieved (Aydın, 2000). Auditing is important for managers in knowing whether organizational goals are achieved or not, and if not, why not. The value of the supervisory function can be seen in three specific areas—planning, empowering employees, and protecting the workplace (Robins, Decenzo, Coulter, 2013). Bursalıoğlu (2002), who states that the purpose of the evaluation is to determine the degree of success of the application objectively, states that generally research is done before the evaluation action and then rearrangement. Karakuş (2010) draws attention to the fact that the classical control approach, which prioritizes structural elements, has begun to give way to contemporary control approaches based on trust, self-control and democratic values, and this is due to the increasing influence of management approaches based on human relations. According to Aydın (1993), the contemporary approach, which is an audit practice based on participatory research and evaluation, aims to create the most appropriate conditions and behaviors in order to achieve the desired result.

The belief in the necessity and importance of supervision in education and school system is constantly emphasized in the literature. While Glickman, Gordon, and Ross-Gordon (2014) define the function of supervision in schools as bringing together different elements of instructional effectiveness in the entire functioning of the school, Özmen and Batmaz (2006) include rules and laws that will ensure change and development, such as cooperation, sharing, support and facilitation. matters gain importance; defines it as a process that should respond to the needs and expectations of teachers. Altun, Şahin, and Tan (2015) conducted a study to inform administrators and teachers of all levels, who work in the field of management and education, rather than the perspective and understanding that evaluates the extent to which the services provided comply with the laws and determined rules, and the disciplinary status of the employees in this direction. They stated that it is perceived as providing them with an effective resource service and fulfilling the contemporary guidance function. Supervision of teaching has been one of the top topics focused on by academics and practitioners working on school effectiveness and leadership since the 1990s.

**Teacher Supervision**

Teacher supervision is the observation, examination and evaluation of teachers' work in teaching and training activities (Taymaz, 2015). Teacher supervision is divided into two as the evaluation of the teacher's activities inside and outside the classroom. Evaluation of teacher effectiveness can be expressed as teacher rating, grading or classification using some standard measurement tools (Sergiovanni & Starratt, 1979). Supervisions should respond to teachers' individual needs and improve their attitudes and relationships (Marks, Stoops & King-Stoops, 1985). The best method used to evaluate teacher effectiveness is course inspections.

Although there are criticisms that the natural environment of the classroom may deteriorate, the teacher may hide his deficiencies and mistakes, and objective data cannot be provided, a better method has not yet been found to determine the situation of the teacher in the classroom environment. Course inspections are mainly done through observation. It should not be forgotten that observation is a planned and systematic action different from looking. The school principal should plan in advance what he will observe and evaluate in the lesson. It is important that the situations that are considered to be observed are observable and meaningful. In addition, only the teacher's activities in the lesson are evaluated and no supervision is made. The second stage in the evaluation of the teacher is the teacher's extracurricular activities. The teacher's preparation for the lesson, evaluation of student work, shift work, social club and guidance work, attendance, general attitudes and behaviors are the main issues that can be addressed within the scope of this evaluation. Interviewing with the teacher, student and parent
evaluation, and evaluation methods through student achievement are among the other approaches used in evaluating teacher effectiveness (Başar, 2000; Haefele, 1981; Taymaz, 2015).

Informing the teacher about his current performance, ensuring his adaptation to the profession and the environment, warning about his development, encouraging him to gain new skills, and identifying his strong and open areas for improvement can be counted as the aims of teacher supervision. In order to ensure a high level of quality and objectivity, standards should be developed and used regularly when evaluating teachers in inspections. If the evaluations made in teacher inspections are to be credible and fair, teacher evaluation standards that will help reveal and correct the existing deficiencies in the current teacher evaluation system should be supported. At all stages, teacher evaluation practices should be acceptable and reliable. Professionally developed standards will help achieve this goal. One of the greatest ways to increase the effectiveness of the teacher in the classroom is through the objective supervision of the teacher. Some of the issues that hinder objectivity in audits are: making a single factor evaluation; to evaluate the person, not the act; the evaluator's lack of training; the absence or inadequacy of the criteria to be used in the evaluation, and the supervisor's taking one or two lessons and making a long-term evaluation about the teacher (Aydin, 2014; Başar, 2000; Shinkfield & Stufflebeam, 1995; Taymaz, 2015).

Okul Müdürlerinin Denetimi
The person who is primarily responsible for keeping the school alive according to its aims is the school principal. The school principal can provide this by giving due importance to the supervision function in the management processes consisting of planning, organizing, training, development and control stages. Sergiovanni & Starratt (1979) state that a good audit requires being professional. Supervision is also one of the leadership roles of the school principal (Knoll, 1987). The school principal should be able to increase the proficiency of the teacher with his supervision studies as a requirement of the instructional leadership and should be able to provide vocational guidance to the teacher when needed (Mohanty, 2005). The school principal should contribute to the development of teachers through inspections. Employee development is not a new responsibility given to managers. This responsibility is already expected from every manager (Aydın, 2014). Inspection in the Turkish Education System started with the appointment of muins (inspectors) who worked in the 1840s in order to eliminate the teaching problems in sibyan and middle school and to ensure the professional skills of teachers. In the republican period, two types of education inspectors were established in the central organization of the Ministry of National Education, ministry education inspectors and in the provincial organization, primary education inspectors.

In the Ministry of National Education, inspections of institutions and courses were carried out mainly by inspectors until 2014 (Taymaz, 2015). However, with an amendment made in the "Regulation of the Ministry of National Education Guidance and Supervision Department and Educational Supervisors" published in 2014, inspectors have been given course supervision authority. From this date on, the supervision of the institutions continued to be carried out by the inspectors, but the course supervisions began to be carried out only by school principals. Currently, school principals are at the center of the teacher supervision system in our country. (Regulation of Ministry of National Education Guidance and Inspection Presidency and Education Inspectors Directorate, dated 24/5/2014 and numbered 29009). Therefore, it can be stated that the level of competence of school principals in teacher supervision and whether their teacher supervision is functional or not becomes even more important.

In the literature, there is a limited number of studies on teacher supervision, which has been carried out entirely by school principals since 2014 (Ergen & Eşiyok, 2017; Tonbul & Baysülen, 2017; Yeşil & Winter, 2015). In these studies, it is seen that teachers' opinions are mostly included. There is a need for studies investigating whether teacher inspections are functional, the level of competence of school principals and how inspections are made according to the opinions of school principals.

In this study, it is aimed to reveal the opinions of school principals on educational inspections in high schools. It has been tried to reveal how the principals and teachers of the high school see their level of competence in educational supervision, whether they find the teacher supervisions made by school principals functional, how they conduct course supervision, and what they think about the effects of inspectors not participating in teacher course supervisions.

Methodology
Information on the research design, study group, data collection tool and data analysis are presented under this title.
Research Model

Qualitative research design was used in this research, which aims to reveal the opinions of the participants about the educational inspections with teachers made by school principals. Qualitative research aims to enable the reader to develop an understanding and sensitivity to human experiences (Knafl & Howard, 1984). Thanks to qualitative research, it can be revealed how people make sense of and interpret a phenomenon (Denzin & Lincoln, 2005). The phenomenological research method was used in this study when it was aimed to describe the experiences of the participants regarding teacher supervision. Phenomenology design focuses on phenomena such as events, experiences, perceptions and situations that we are aware of but do not have an in-depth and detailed understanding of (Yıldırım & Şimşek, 2011).

Phenomenology allows us to analyze how an event develops in daily life and to gain basic perspectives that can evaluate events as a result of these analyzes (Ashworth & Lucas, 1998). In other words, it is reducing personal experiences to phenomena in order to describe the nature of universal reality, events or beings (Creswell, 2007). In this research, it is aimed to reveal first-hand how school principals' perceptions and experiences regarding teacher supervision are by using the phenomenology design. The phenomenological research method was preferred, as it was thought to be effective in reflecting the experiences and interpretations fairly and as far away from the prejudices of the researcher as possible (Tufford & Newman, 2012). In addition, this method has been preferred because it is aimed to understand the common experiences of a large number of individuals about a phenomenon.

The research and interpretation process was carried out by putting the personal experiences of the participants in parentheses as much as possible. The study group was formed from participants who experienced the phenomenon, and data were obtained through multiple interviews with them.

In order to obtain the data, open-ended questions were prepared to reveal the experiences and perceptions of the participants about the phenomenon.

Research Group

The study group was made about the supervision of education with principals and teachers in high schools serving in MEB affiliated institutions in TRNC in the years 2020-2021. Data saturation leads to duplication of data in categories. Repetitions show the comprehensiveness and completeness of the research (Morse, 1991). Maximum variation sampling strategy, one of the purposive sampling types, was used in the research. For this reason, principals with differences in gender, seniority of management and the number of teachers working in the school were included in the research group. In this way, the condition of data diversity, which is one of the criteria of credibility in qualitative research, was obtained (Arastaman, Öztürk Fidan, & Fidan, 2018).

Data Collection Tools

The data of the study were obtained with 3 semi-structured open-ended questions developed by the researchers. The prepared interview form was examined by 4 faculty members who are experts in their fields, and necessary corrections were made in line with the opinions of the experts. Afterwards, this form was read to 5 teachers and it was determined whether there were questions that they did not understand or that caused confusion. After the necessary corrections, the form has reached the application stage.

Validity in qualitative research means that the researcher observes the researched phenomenon as it is and as impartially as possible (Kirk & Milller, 1986, cited in Yıldırım & Şimşek, 2006). From this point of view, the validity of the form has been ensured. The research data were written by taking notes during the interview. The written data were also checked after the individual interviews were completed. Interviews with the participants varied between 10 and 25 minutes. The interview method gives the participants the opportunity to respond according to their own perspectives, and since there are no pre-prepared questions like in the questionnaires, the participants freely explained their thoughts on the subject.

During the data collection through interviews, the participants were allowed to present different and rich ideas, and the opinions of the participants were not limited in any way. In order to ensure the reliability of the research, the findings were presented by coding with direct quotations from the participant's views and by specifying the participant numbers (such as P1, P2).

Data Analysis

In the analysis of the data, the records were first examined and the data was written down by sticking to the original. The interview data were coded and organized according to the themes that emerged later (Bogdan & Biklen, 1998). The opinions expressed by each participant were reviewed two or three times and the accuracy of
the statements was confirmed by two researchers. The extracted codes were then reanalyzed and associated with themes (Bogdan & Biklen, 1998; Creswell, 2002). In this study, participant views were presented with the help of a realistic mode (Creswell, 2002; Van Maanen, 1988). In this way, the participants were allowed to freely share their views on the subject, without the researchers playing the role of arbitrator in matters such as what the participants said right or wrong.

In order not to spoil the integrity of the opinions of the participants and for the readers to make their own comments, the opinions of the participants were presented by the researchers without abbreviation. The data obtained in the research were examined with qualitative research methods and evaluated with the help of content analysis. While analyzing qualitative data in the research, content analysis based on coding was used. As Yıldırım and Şimşek (2006) stated, during the content analysis of the data within the scope of the research, similar data were brought together within the framework of certain concepts and themes, and these were arranged and interpreted in a way that the reader could understand.

FINDINGS
Almost all of the participants (n=29) think that supervision in education requires expertise. According to the opinions of teachers, supervision requires expertise in order to ensure quality in education, to be reliable in supervision, to ensure merit, to implement effective supervision and to make criticism and recommendations of supervisors. In addition, supervision activity requires expertise in order to ensure development, solve problems, achieve success, meet expectations, ensure the development of teachers, dominate the field of supervisors, efficient and transparent supervision, and inspectors' knowledge. Opinions of some participants regarding this:

“In order for educational institutions to be properly supervised, the people who will do this job must be well-trained, experienced and specialized in their field. If this happens, we can get support from inspectors in solving many of the problems we encounter in schools. We benefit from the knowledge and experience of the inspectors. If the inspectors become experts, their criticism and suggestions for the elimination of the deficiencies they see in the school are taken more into consideration by the teachers and administrators. Because teachers and administrators can act according to the opinions of supervisors whom they consider to be experts”. (P21).

“I think the audit activity requires expertise. Because if the inspector is not an expert, how will he audit? When a good inspection is not done, we cannot solve the problems we experience in our schools, and it may cause new problems. To be reliable in supervising teachers, supervisors must be experts. Thus, it will contribute to the provision of quality in education. For this reason, supervisors must be chosen from among experts or this expertise should be given through training.” (P7).

“The audit activity to be carried out at all educational levels must be based on expertise. For this, inspectors must be experts. It may be beneficial in terms of expertise to take people who have at least a master's degree in their field and have worked as a manager and teacher for a certain period of time. For the success of our schools, I think it would be beneficial for the inspectors to be experts in their fields. The fact that the inspectors are experts will help their supervision in schools to be more efficient and transparent.” (P11).

“Inspection is not a task that everyone can do. In my professional life, I encountered many incompetent supervisors and they did not benefit me much. They only audited on paper and did not contribute much to the school. However, I can say that I learned a lot from the inspectors who have trained themselves in their fields and have a certain expertise. Therefore, inspectors must be experts, but sufficient training must be given for this. The person who passes every exam or the person who has a torpedo should not be made an examiner. If the inspector becomes an expert, he can make important contributions to the development of teachers, guide and train administrators. Administrators and teachers may have some expectations and requests from the inspectors who come to the school. If the inspectors are experts and experienced, they can also respond to our expectations and needs.” (P12).

“The audit activity of auditors requires expertise. When supervisors become experts, they will make a better audit of their field. In this way, the audit activity will be more planned and programmed.” (P3).

“Inspection activities in schools are definitely a specialist job. If the inspector is not an expert, he cannot do a good inspection. However, unfortunately, I encountered many supervisors who I thought were not experts in education. Frankly, I did not believe much in these supervisors, whom I thought were not experts, and I did not trust their supervision. I did not want to respect these supervisors, whom I thought were not experts” (P20).
As a teacher, if I know that a supervisor who comes to supervise me or make an investigation is not an expert, I would never trust him, I would think that the investigation or supervision he would conduct would not be correct. Question marks form in my mind. I don't trust your opinions and suggestions. I think most teachers think like that. I think it should be essential that supervisors be experts in education, as in every field.” (P4).

“If the inspectors are not experts, they will not contribute to the schools. School principals and teachers do not trust and respect the supervisor in this situation. Then there is no point in having a non-expert supervisor inspect the school.” (P3).

“I get very worried when I see that a supervisor who supervises me is not an expert. I wonder if he does a wrong inspection or investigation? Will it harm me as a result? It is just like traveling in a vehicle driven by a driver without a license, which I think no one wants to be in.” (P15).

“If the inspectors who come to inspect educational institutions are not experts, this situation causes the central system to be criticised, questioned and a loss of trust in education administrators. However, unfortunately, we sometimes witness situations where there is no expertise in auditing.” (P28).

“The arrival of a supervisor I know to be an expert at my school increases my motivation. I have the opportunity to consult him in areas where I feel inadequate. An expert inspector can communicate better with school administrators, teachers, students, and even parents. People with expertise can carry out a better supervisory activity in schools.” (P10).

“If the inspector who will come to our school is an expert, we will benefit more from his knowledge, experience and guidance. Quality education in our schools cannot be provided by teachers alone. Supervision by an expert inspector can also make significant contributions to the quality of education in schools. Our parents can also benefit from the experience of expert supervisors.” (P3).

“Dozens of inspectors have come to schools for inspection purposes, held meetings, asked our opinions and left. In other words, I can say that they did not contribute much to the development of the existing structure. In this case, we think that something will not change when every supervisor comes to the school. Doubts arise about the expertise of those who have come so far. If the incoming supervisors were experts and had been effective in their fields, our opinions and thoughts that we conveyed at the meetings would have been taken into account and feedback could have been provided to us. In this case, trust and respect towards the inspecting person decreases. I have experienced that without expertise there is no effective audit activity.” (K26).

CONCLUSION AND DISCUSSION
According to the teachers, supervision requires expertise in order to ensure quality in education, to be reliable in supervision, to ensure merit, to criticize the supervisors with effective supervision, to ensure the development of teachers, to benefit from the knowledge of the supervisors with efficient and transparent supervision, and to realize their recommendations. Expertise in the work or works we will do in the complexity of our age is inevitable.

Teachers also rightly want those who will supervise them to be experts in their field. According to Özdemir (2014), it would be beneficial to supervise the education by experts in the field in order to achieve the expected benefit from the audit. In addition, the knowledge and experience of experts in auditing can contribute positively to the performance of the employee. Again, according to Özdemir (2001), auditing, which serves for the development of institutions to a better level, is seen as an area of expertise in terms of inspector qualifications. According to Gündüz and Balyer (2012, 91), supervision should be carried out according to scientific principles and methods, and education inspectors should be trained as experts in their fields before and during the service in order to achieve the purpose of supervision activities in education. According to the findings of Akbaba and Memeşoğlu (2010), education inspectors want specialization/branching in supervision. Şahin, Çek and Zeytin (2011, 1193-1194) stated that specialization should be ensured in inspectors and for this purpose, the assignment of education inspectors;
1) central and provincial organizations of the ministry,
2) secondary education,
3) primary education,
4) in the form of inspecting private education institutions,

It emphasizes the importance of doing it in 4 different areas of expertise.
Inspectors should be trained and specialized in the field of supervision due to the education they receive. The diversity of audit fields is an important obstacle to the specialization of auditors. This situation brings about the inability of the inspectors to specialize in every field, the decrease in the efficiency of the audit and naturally the decrease in the effectiveness of the audit (Özkan & Özdemir, 2010). According to Şahin, Çek, and Zeytin (2011, 235), the fact that education inspectors conduct inspections outside of their area of expertise causes them to experience dissatisfaction with their work in different institutions. In this regard, the training processes of inspectors are important.

Equipped training of inspectors in the field not only increases the value of the profession, but also provides specialization and merit. In this context, the selection of inspectors is also important. According to Şahin, Çek, and Zeytin (2011, 1191), inspectors must undergo a serious training at the graduate level. According to Kaya (1979, 281), the fact that education, experience and individual characteristics are not made according to objective criteria in the selection of inspectors can lead to a trust problem that may reduce the inspector's prestige and status and negatively affect his effectiveness in the task. In the selection of the inspector to be made with objective methods, the tasks can be fulfilled at the planned level by ensuring good harmony with the task. If this happens, both the selection process and the reactions to the practices of the inspectors will decrease. It is emphasized that the execution of the inspector selection process according to certain criteria will leave the place of political favor and preferences to professional competence.

As a result, providing quality in education, reliability of supervision, ensuring merit, criticism of supervisors with effective supervision, ensuring the development of teachers, benefiting from the knowledge of supervisors with efficient and transparent supervision, realizing their recommendations, respect and trust in supervisors, increasing motivation and interest in the supervised, In order to benefit from the knowledge and experience of the inspectors, to create an increase in the quality of education, to believe that healthy supervision and communication will be established, and to think that the views and expectations of the teachers are taken into account, the inspectors must be experts in their field. In order to ensure quality and success in education, legal and pedagogical arrangements for the supervision of education by experts may be beneficial. There is a need for practices based on expertise in the selection and training of education inspectors.

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EXAMINATION OF TEACHERS' OPINIONS ON THE IMPORTANCE OF MNEMONIC STRATEGIES

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ABSTRACT
The aim of this study is to determine the teachers' views on "Mnemonic". For this purpose, subjects such as retention, easy recall, methods used in the lesson, memory supporters were examined in the study. The findings obtained as a result of the analysis of teachers' views were blended and the common results obtained from the study were emphasized. The research is a qualitative study that has been handled descriptively. The research is a descriptive qualitative study. The study group of the research consists of 100 teachers, 64 female and 36 male, who teach in different school types and different branches in the TRNC. The data of the study were obtained by semi-structured interview technique.

Keywords: Memory, Mnemonic, Learning.

Introduction
Studies on education, which is defined as bringing about the expected changes in the behavior of the individual, have led to the emergence of different learning strategies (Ertürk, 1975). By using the learning strategies that constitute the essence of effective learning, it is aimed that the student accelerates the self-learning process, processes the information and learns permanently. These strategies; conscious learning, learning with fun, efficiency in learning can be mentioned (Özer, 2002). Learning strategies are cognitive behavior and thinking processes used to place information in memory and retrieve it when desired (Senemoğlu, 2013). Numanoğlu and Şen (2007) mention that learning strategies cover the process of transmitting information to short-long term memory and processing the messages in long-term memory.

TDK defines the concept of memory as 'the power to store information in the mind'. Persistence of knowledge is related to memory, and learning and memory are complementary factors. The processes of saving, protecting and recalling information are within the scope of memory. Recording, also referred to as coding, is learning information; protection, withholding information; calling means finding and bringing information when needed (Açıkgöz, 2003). Kant stated that it is possible to reveal the hidden potentials in human nature through education. Memory is one of these potentials in man. Since remembering is a learned skill, improving memory is like improving any other skill. Memory training helps to find, retrieve and store information whenever required (Higbee, 1977; Erden & Akman, 1998).

'Memory Boosters', called 'mnemonic', inspired by the Greek goddess of memory 'Mnemosyne', are methods used in memory training for many years. Memory supporters facilitate learning and remembering what has been learned (Ün, 1984). It has been seen that memory boosters, also known as "memory strengthening techniques", are methods that allow the mind to remember something easily and quickly, and then to remember certain things even after a long time has passed (Buzan, 1974). The main task of memory supporters is to connect newly learned information with information that is available in the person's long-term memories. The stronger the connection between newly learned information and existing information, the more permanent the information will be in the memory (Mastropieri, 1998). Korkmaz and Mahiroğlu (2007), memory promoters; emphasizes that it can be beneficial in activating all brain skills for effective learning and remembering what has been learned, especially in learning information that is difficult to remember. Mastropieri (1998) emphasizes that mnemonic strategies are also comprehension strategies and states that students get good results from comprehension tests in learning using mnemonic supporters.
According to Povio (1971):
1. Concrete objects are better remembered than abstract concepts.
2. Establishing a relationship between the concepts desired to be remembered and concrete objects is effective in remembering the concepts.
3. Visual images make it easier to remember.

Based on these three items, the following memory development principles are used, which ensure that the information stays in the memory more. (Er, 1996; Kıroğlu, 2010).

Meaningfulness: Any meaningful information is easily memorized. Meaningless information is difficult to retain in memory. If a piece of information is meaningless, techniques of making that information meaningful using rhymes, patterns or associations are applied. (Buzan, 1974; Hunt and Love, 1987; Mitchell and Hunt, 1989).

Organization: Information recorded in a certain order will be easier to retrieve when requested (Higbee, 1977).

Association: Establishing meaningful relationships between previous information and newly recorded information will strengthen recall (Higbee, 1977).

Animation: Visualizing objects as images in the mind has an important role in remembering (Mitchell & Hunt, 1989).

Attention and Interest: Interesting associations, images, associations will help to remember and keep the information in the memory longer (Higbee, 1977).

Memory supporters, which are also included in the literature as ‘reminders’, are methods that enable the learned information to be remembered quickly when desired (Buzan, 1974). The following techniques are shown as examples of memory support strategies used as a teaching strategy in line with the above principles:

1. Tying/Chaining Technique:
It consists of two stages. First, the images of the listed items are visualized. These visual images are then expressed by linking them in succession with the next visual image in a story. The more different, funny, moving, colorful and extraordinary this story is, the stronger the recall will be (Korkmaz and Mahiroğlu 2007; Er, 1996; Senemoğlu, 1997; Aydın, 2010; Baran, 2014; Kıroğlu et al, 2010).

The use of environmental pollution types in a way that reminds one another in the story can be given as an example of the tying technique:

*Increasing air pollution has resulted in water pollution. One cause of water pollution is soil pollution. There was silence as the soil pollution consumed the beauty around us. It should not be surprising that the citizens of the city, who do not speak out against environmental problems, do not raise their voices against noise pollution (Tay, 2004).*

2. Space Reminder/Loci Technique:
It is the recall of objects/concepts that are desired to be remembered by establishing a connection with well-known fixed spaces. It consists of two stages: First of all, well-known places are kept in mind in a certain logical order. Then, each item image that is wanted to be remembered is associated with any part of the previously determined space, and an imaginary walk is taken in this space (Açıkgöz, 1996; Korkmaz and Mahiroğlu 2007; Er, 1996; Senemoğlu, 1997; Aydın, 2010; Baran, et al., 2014).

Such as; *If the artists of the Tanzimat period (Şinasi, Namık Kemal, Ziya Paşa, Ahmet Teyfik Efendi, Recai Zade Mahmut Ekrem, Muallim Naci etc.) are to be remembered, the images of the names in front of the television in the living room, on the refrigerator in the kitchen, inside the washing machine, on the toilet mirror in the bedroom, by walking around the house. is placed. When this information is wanted to be called, a mental tour is made in the house.*

3. Suspension Technique:
It is a technique that can be used to remember items given in order. There is a preparation process. Beforehand, numbers and objects are meaningfully matched. While matching, common points such as shape similarities and sound harmony are taken into account. For example, 1-candle (shape similarity), 2-Mickey -mouse- (sound harmony). These associations can be likened to a suspension. The hangers are fixed. The hanger does not change, the hangers can change. Items to be remembered are visualized in the mind in interaction with objects corresponding to numbers (Yıldız, 2004; Yetkin, 2006; Kıroğlu, 2010; Er, 1996).
For example; The following imaginary sentences can be formed with the words 1. mast, 2. Swan, 3. Stool, 4. Sailboat, 5. Hand hanger to learn the three big cities of Turkey in order:

A pole erected on the highest point of Istanbul can be seen from everywhere. There is no lake in Ankara, two swans are looking for a place to swim. Izmir is a city built on a stool. The best trip to Bursa is made by sailboat. A man as big as the fingers of a hand lives in Adana (Senemoğlu, 2007).

4. **Keyword Technique:**
   It has been determined that this technique is especially effective in foreign language learning (Demirel, 1993; Tay, 2004; Senemoğlu, 2011). It is a technique in which new information is associated with a familiar word. A new word can be learned more easily by associating it with another word that is similar in sound or with an image (Yıldız, 2013).

   For example; By using the English word “top”, which is “ball” in Turkish, in the same sentence with its Turkish meaning, or by cariculating it, the meaning of the word is evoked. “A fly landed top of the ball.” (Senemoglu, 2011).

5. **Phonetic Alphabet Technique:**
   This technique is based on the principle of representing all numbers from 0 to 9 with consonants in a certain logic and forming meaningful words by adding vowels in between. Thus, higher numbers are used to express certain words. The numbers to be remembered are turned into meaningful words (Er, 1996).

   e.g. Assuming 1:T, 2:N, 3:M, 4:R, 5:L, it can be stated that the number 432 can be used for the word "RoMaN". This technique can also be used as the "suspension technique".

6. **Acronym Technique:**
   They are abbreviations made by combining the initials of the words to be remembered in a meaningful or sound harmony (Kırıoğlu, 2010). E.g; Islands conquered by Fatih:

   When the initials of these islands are brought together in Thasos, Egriboz, Limni, Semadirek, Imroz and Bozcaada, the TELSIM-B acronym is formed. (Baran, 2014).

7. **Acrostic Technique:**
   It is the formation of meaningful sentences with the initials of the words to be remembered. For example; the acrostic technique can be used to remember to colour of the rainbow (Red, Orange, Yellow, Green, Blue, Indigo, Violet). “Richard of York Gave Battle in Vain” (Uça ve Öksüz, 2016).

8. **Rhyme Formation Technique:**
   It is a technique based on sound harmony at the end of words. Words ending in the same sounds create a certain rhythm when they come one after the other. This makes information easier to remember. E.g; The following rhyming expression in which the Turkish rhyming group of countries in the North is said together and the capital of Turkey is Ankara can be given as an example; Sweden, Norway, Denmark; Ankara, the capital of Turkey (Aydın, Kırıoğlu, 2010).

In the studies examined in the literature, it is thought that it will be effective to consider memory promoters from the teaching programs in a constructivist view. Since the 1990s, research has been conducted on memory enhancement methods and memory-supporting strategies. Research on the effect of memory-supporting strategies on students’ learning has shown that students’ success increases and students' desire to learn occurs; shows that it contributes to the meaningful and permanent learning of students (Kaya and Çevik 2020). In recent years, it has been observed that the effect of memory supports on student success has been the subject of research in Turkey. It has been observed that these studies conducted to date mostly examine the effects of memory supports in Science, Social Studies, Mathematics, and English classes (Kırıoğlu, 2010; Aydın, 2010; Yıldız, 2013; Kayacan & Özülüeci & Arslan 2019; Korkmaz & Mahiroğlu 2007 et al).

In Kaya and Çevik's (2020) study, which investigated the effect of teaching science lesson with memory-supporting strategies on academic success and permanence, it is seen that acronium, acrostic, baglama, story, squabble and game are used as memory-supporting techniques. The following conclusion was reached in the study: “Teaching with memory-supporting strategies is effective in terms of both academic success and
permanence of what has been learned.” In this study, it is recommended that program developers frequently include activities prepared according to memory-supporting strategies in their curriculum. Efficiency of the education-teaching process can be increased by giving acronyms and acrostics to teachers and teacher candidates during their education periods. (Kayacan & Özülüce & Arslan, 2019).

Star (2013); Aydın (2010), Kıroğlu (2010) emphasize that in the conclusion part of the thesis study, students in the experimental group who used memory supports learned the information better and remembered the information better than the students in the control group. In the light of the findings obtained in the study, it is stated that if memory supplements are used correctly, they will make a significant contribution to both learning and the permanence levels of what has been learned. Also in this study:

1. Giving teachers in-service training on these techniques,
2. These techniques should be chosen according to the target behaviors and readiness of the student,
3. Conducting studies on the affective and psychomotor effects of techniques,
4. To investigate the effect of students' designing their own memory supports on permanence,
5. Investigation of how much teachers use these techniques,
6. To investigate the effect of permanence by using other methods,
7. To be able to apply to the entire Science and Technology course,
8. It is used in different courses and students with learning difficulties,
9. Researching whether boys or girls are successful in using the techniques,
10. It is recommended to investigate the possibilities of usability at all stages of education.

Korkmaz and Mahiroğlu (2007) also emphasize that students who study with memory supports are more successful at the end of the teaching process than students who study with traditional teaching approach. It is also stated that the success of the students is higher especially at the level of knowledge and comprehension. Şahin and Kil (2018), as a result of their research, say that using the keyword method, which is a memory support technique, is more effective than traditional methods in foreign language learning.

As a result of the researches, it is seen that the memory support hint developed on the order of operations, which is a complex rule in mathematics, is easily understood by the students. From this point of view, it is thought that it is important to use memory-supporting clues when teaching the complex rules and topics of the mathematics course and that the studies carried out with these strategies can have a positive effect on student achievement (Uça, 2010). Tay's (2007) study, in which he examined the effect of learning strategies on academic achievement in life studies and social studies teaching course, obtained a similar result and it was emphasized that learning learning strategies would increase success levels.

According to Weinstein and Mayer, good teaching includes teaching students how to learn, how to remember, how to motivate themselves, and how to control and direct their own learning effectively (cited by Senemoğlu 1997). In this context, memory-supporting strategies enable students to learn easily and easily remember what they have learned; It is thought that it will affect their academic success and interest in the course. Therefore, memory aids used by teachers and students are a matter of curiosity. Assuming that teachers are the main users of these strategies, it is worthwhile to investigate "Teachers' views on the importance of memory support strategies”.

The general purpose of this study, which is thought to contribute to the literature, is to examine the views of teachers who teach students at different levels in the TRNC about the strategies of memory supporters. In line with this aim of the research, answers to the following questions were sought:

1. Are teachers aware of memory-supporting strategies?
2. Which branch/class teachers mostly use memory supports?
3. Which memory support strategies do teachers use?
4. Do teachers believe that memory-supporting strategies are effective in teaching lessons?
5. What are the teachers' views on the positive or negative effects of memory-supporting strategies?
6. What are the teachers' views on the applicability of memory supporters in the classroom environment?

In the study, it is desired to obtain information about teachers' awareness of mnemonic aids, how much the teachers think that mnemonic aids they use in their lessons contribute to the learning of the student, and which techniques are preferred according to the branch and level. It is thought that this study will contribute to teachers' teaching strategies and create awareness in teachers about memory promoters. Thus, it is assumed that effective and permanent learning will be developed for students.
Methodology
Research Methods and Model
The most basic feature of a qualitative case study is that it allows one or more cases to be investigated in depth. (Yıldırım and Şimşek, 2018) Case studies involve the analysis of a particular event from different perspectives. (Buyukozturk et al., 2018). In line with this context, since an in-depth study was conducted to determine teachers' views on "Memory Supporters", it was deemed appropriate to conduct a case study, one of the qualitative research designs, in this study. Purposeful sampling provides an opportunity to conduct in-depth research by selecting information-efficient situations related to the target of the study. It is preferred when it is desired to work in one or more special cases that meet certain criteria or have certain qualifications (Büyüköztürk et al., 2018).

Research Group
In order to provide an opportunity to conduct an in-depth study and to apply this study to people with certain qualifications selected by the researchers, convenient sampling method, which is one of the purposeful sampling methods, was used to determine the study group. The study group of this research consists of teachers working in different branches in different schools in the TRNC. According to the 2019-2020 data of the Ministry of National Education, the total number of teachers working in public schools is 4001. This research was carried out with the participation of a total of 100 (64 female, 36 male) teachers working in different districts.

Data Collection Tools
The data in the research were obtained by semi-structured interview technique. This method neither keeps the freedom of movement of the participants in the structured interviews at the lowest level, nor does it provide a wide range of movement to the participants like the unstructured interviews (Karasar, 2000). While creating the data collection tool, it was aimed to reveal teachers' opinions, awareness and usage rates about "memory supporters".

The data of the study were collected by the teachers filling in the interview forms created by the researcher in writing. The interview form developed by the researchers was rearranged in line with expert opinions. In the interview form, besides the demographic information of the teachers, their opinions about "Memory Supporters" were taken.

Data Analysis
In the research, the data were analyzed by content analysis method. With the content analysis method, it is aimed to reach the concepts and relations that serve to explain the data. The data, which are summarized and interpreted with descriptive analysis, are processed deeper with content analysis and new concepts are revealed. The process with content analysis is to gather similar data around certain themes and interpret them in a format that the reader can understand (Yıldırım & Şimşek, 2018). In this study, the data were organized according to the themes created according to the questions used in the interview form. For the first question “How the information will be remembered”, for the second question “The techniques used by the teacher for memorization” for the third question “Opinions on memory supporters”, for the fourth question “The techniques used by the teacher in the lesson for easy recall” for the fifth question “reminder remembered from the student” category was created and sub-themes related to “Memory Supporters” were obtained under these categories.

Findings
In this section, the data obtained in the research has been tried to be interpreted by subjecting it to content analysis. Obtained data are presented in tabular form, first as demographic information and then as themes under the categories given above.

<table>
<thead>
<tr>
<th>Table 1. Demographic characteristics of teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Educational Status</td>
</tr>
<tr>
<td>Undergraduate</td>
</tr>
<tr>
<td>Master Degree</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>School Type</td>
</tr>
<tr>
<td>Primary school</td>
</tr>
<tr>
<td>Secondary School</td>
</tr>
<tr>
<td>High school</td>
</tr>
</tbody>
</table>
As seen in Table 1, 100 teachers, 64 female and 36 male, participated in the study. Educational status of these teachers is 72 at undergraduate level and 28 at graduate level. Eight of the teachers work in primary school, 57 in secondary school and 35 in high school. 17 of the participants work as Turkish/literary, 15 Science, 13 Physical Education, 12 Foreign Language, 10 Mathematics teachers. The majority of the teachers participating in the research are those with 20 or more years of service.

Table 2. Teachers' views on how to keep the information in mind.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetition</td>
<td></td>
<td>46</td>
<td>27.22</td>
</tr>
<tr>
<td>Audio/visual</td>
<td></td>
<td>26</td>
<td>15.38</td>
</tr>
<tr>
<td>Application</td>
<td></td>
<td>22</td>
<td>13.02</td>
</tr>
<tr>
<td>Coding</td>
<td></td>
<td>15</td>
<td>8.88</td>
</tr>
<tr>
<td>Associating with</td>
<td></td>
<td>14</td>
<td>8.28</td>
</tr>
<tr>
<td>Examples</td>
<td></td>
<td>11</td>
<td>6.51</td>
</tr>
<tr>
<td>Exercises</td>
<td></td>
<td>7</td>
<td>4.14</td>
</tr>
<tr>
<td>Attribution</td>
<td></td>
<td>6</td>
<td>3.55</td>
</tr>
<tr>
<td>Animation</td>
<td></td>
<td>6</td>
<td>3.55</td>
</tr>
<tr>
<td>Interest</td>
<td></td>
<td>5</td>
<td>2.96</td>
</tr>
<tr>
<td>Storytelling</td>
<td></td>
<td>4</td>
<td>2.37</td>
</tr>
<tr>
<td>Similes</td>
<td></td>
<td>4</td>
<td>2.37</td>
</tr>
<tr>
<td>Memory techniques</td>
<td></td>
<td>3</td>
<td>1.78</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>169</td>
<td>100</td>
</tr>
</tbody>
</table>

When Table 2 is examined, it is seen that teachers' views on how the information will be remembered mostly focused on the theme of "repetition" (27.22% / f=46). Orkun and Bayrınlı (2019) stated that because repetition strategies are based on memorization, information cannot be remembered for a long time and is forgotten; states that researchers also emphasize that meaning-making strategies should be used for repetition to be effective. On the other hand, opinions such as "the use of audio-visual elements, application, coding, associating with life" have also emerged. It is also thought to be remarkable that the least expressed opinion (1.78% / f=3) is the theme of "memory techniques". Because all the themes mentioned are included in these techniques.
Table 3. Teachers' views on the techniques used for memorability.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Images</td>
<td>28</td>
<td>14.74</td>
</tr>
<tr>
<td></td>
<td>Game/entertainment</td>
<td>24</td>
<td>12.63</td>
</tr>
<tr>
<td></td>
<td>Application</td>
<td>21</td>
<td>11.05</td>
</tr>
<tr>
<td></td>
<td>Associating with life</td>
<td>16</td>
<td>8.42</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>14</td>
<td>7.37</td>
</tr>
<tr>
<td></td>
<td>Repetition</td>
<td>13</td>
<td>6.84</td>
</tr>
<tr>
<td></td>
<td>Question and answer</td>
<td>10</td>
<td>5.26</td>
</tr>
<tr>
<td></td>
<td>Animation/drama</td>
<td>7</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td>Storytelling</td>
<td>7</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td>Auditory</td>
<td>7</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td>Coding</td>
<td>7</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td>Using educational materials</td>
<td>5</td>
<td>2.63</td>
</tr>
<tr>
<td></td>
<td>Observation</td>
<td>5</td>
<td>2.63</td>
</tr>
<tr>
<td></td>
<td>Research</td>
<td>4</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td>Experiment</td>
<td>4</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td>Attribution</td>
<td>4</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td>Presentation</td>
<td>4</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td>Project</td>
<td>3</td>
<td>1.58</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>3</td>
<td>1.58</td>
</tr>
<tr>
<td></td>
<td>Simile</td>
<td>2</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>2</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>190</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

In Table 3, it is seen that teachers mostly use visuals (14.74% f=28) and games/entertainment (12.63% f=24) for memorability. Compared to the views in Table 2, it can be concluded that the "repetition" theme is underemphasized here, and it can be concluded that teachers believe in the importance of repetition for memorability, but they mostly use visuals for memorability. However, it is seen that the theme of “visuals” is repeated at close rates in both tables. According to Dursunoğlu (2010), what is taught in the teaching environment appeals to the eye, in other words, the use of visual elements makes teaching and learning more effective and permanent.

Table 4. Teachers' views on the methods used in the lesson for easy recall.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Associating with life</td>
<td>22</td>
<td>11.89</td>
</tr>
<tr>
<td></td>
<td>Images</td>
<td>21</td>
<td>11.35</td>
</tr>
<tr>
<td></td>
<td>Again</td>
<td>19</td>
<td>10.27</td>
</tr>
<tr>
<td></td>
<td>Question and answer</td>
<td>16</td>
<td>8.65</td>
</tr>
<tr>
<td></td>
<td>Coding</td>
<td>12</td>
<td>6.49</td>
</tr>
<tr>
<td></td>
<td>Stories</td>
<td>10</td>
<td>5.41</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>10</td>
<td>5.41</td>
</tr>
<tr>
<td></td>
<td>Similes</td>
<td>9</td>
<td>4.86</td>
</tr>
<tr>
<td></td>
<td>Attribution</td>
<td>9</td>
<td>4.86</td>
</tr>
<tr>
<td></td>
<td>Animation</td>
<td>8</td>
<td>4.32</td>
</tr>
<tr>
<td></td>
<td>Humor</td>
<td>7</td>
<td>3.78</td>
</tr>
<tr>
<td></td>
<td>Application</td>
<td>7</td>
<td>3.78</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>6</td>
<td>3.24</td>
</tr>
<tr>
<td></td>
<td>Homework</td>
<td>5</td>
<td>2.70</td>
</tr>
<tr>
<td></td>
<td>Key words</td>
<td>3</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>Auditory</td>
<td>3</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>The game</td>
<td>3</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>Problem solving</td>
<td>3</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>Acrostics</td>
<td>2</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Brainstorming</td>
<td>2</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Connotation</td>
<td>2</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Formulas</td>
<td>2</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Observation</td>
<td>2</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Abbreviations</td>
<td>2</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>185</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Table 4 lists the teacher's views on the support student's easy recall of the given information. Accordingly, it is observed that teachers mostly (11.89%/ f=22) emphasize on associating the subjects they tell with life so that the information can be remembered easily. Yadigaroğlu, Demircioğlu, and Demircioğlu (2017) state in the findings section of their study that students cannot fully associate concepts with events in daily life, and the reason for this is that students are bombarded with information during their education and that the learning method based on rote is adopted. On the other hand, it can be said that it has similar characteristics with the data in Table 2 and Table 3, based on the emphasis on the themes of "Visuals (11.35%/ f=21) and repetition (10.27%/ f=19)."

Table 5. Opinions of teachers about mnemonics.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinions about mnemorics</td>
<td>Useful</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Makes it easy to remember</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Effective for retention</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Education should be given</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Must be personal</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>No idea</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

As can be seen in Table 5, the theme of “useful” (f=28) stands out in teachers' views on memory supporters. It is seen that the opinions of "positive (f=20), facilitates remembering (f=18), is effective in memorization (f=17)" which support this theme, are also emphasized. Kayacan, Münevver and Arslan (2019) states that in the conclusion part of their study, pre-service teachers emphasized that they are memorable and provide permanent learning in their views on memory supporters. Based on this result, it can be said that both data have similar characteristics. On the other hand, it was determined that some teachers stated negative statements about memory supporters such as that it would not provide permanent learning, cause memorization, have negative consequences, cause confusion. In addition, teachers who say "the training should be given" and "I have no idea" are also considered remarkable.

Table 6. Reminders that teachers remembered from their studentship.

<table>
<thead>
<tr>
<th>Category</th>
<th>Reminder</th>
<th>Course</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>ogłoselikten hatırlanan hatırlatıcılar</td>
<td>Pistachio Sahap (hard consonants)</td>
<td>Turkish</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>His mother was going to plant a grave</td>
<td>Turkish</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>explaining momentum on a bicycle wheel</td>
<td>Physical</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Hasan two idiots Osman four (formula of sulfuric acid)</td>
<td>Chemical</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Throws the Body of Ungrateful Rabia in Haydarpaşa Port</td>
<td>Chemical</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What's the hurry? Nacl</td>
<td>Chemical</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Thumbs up (fusing consonants)</td>
<td>Turkish</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Double Haseki Pasha (for hard consonants)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Napkin cage with hash (hard consonants)</td>
<td>Turkish</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Professor Mete Phoned His Mother (cell division)</td>
<td>Biology</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>KADI (edge mid-angle mid-perpendicular-twin border)</td>
<td>Math</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Jump like a kangaroo</td>
<td>Physical education</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>All laundry is cleaned when it enters the machine (absolute value)</td>
<td>Math</td>
<td>1</td>
</tr>
</tbody>
</table>

In Table 6, the reminders that teachers remember during their student years and the lessons they are related to are given. According to the table, it is seen that the mnemonic “Pistachio Sahap”, which is mostly used to remind hard consonants in Turkish lessons, is repeated. On the other hand, it can be said that mnemonics used in science are remembered. It is seen that Kayacan, Özlüleci, and Arslan (2019) in their studies with the participation of
teacher candidates mostly remembered the acrostic "Haydarpaşa High School's Notorious Chemist Throws Rabian's Body", which is mostly about chemistry. This situation is directly proportional to the fact that a reminder belonging to a chemistry course is remembered the most after Turkish in the above table. While the teachers expressed their opinions about the mnemonics of their student years, they also stated that they remembered the lessons, experiments, acrostics and storytelling made with songs.

| Table 7. Distribution of the most repeated themes according to branches |
|------------------------|-----------|---------|
| Theme                  | Branch    | N       | f       | %         |
| Repetition             |           |         |         |           |
| Turkish/literature     | 17        | 17      | 21.79   |
| Science                | 15        | 10      | 12.82   |
| Physical education     | 13        | 12      | 15.38   |
| Foreign language       | 12        | 16      | 20.51   |
| Math                   | 10        | 7       | 8.97    |
| Classroom teacher      | 7         | 4       | 5.13    |
| Psychological counseling and guidance | 6 | 2 | 2.56 |
| Social sciences        | 6         | 5       | 6.41    |
| Audio visual art lessons | 6       | 3       | 3.85    |
| Computer               | 6         | 0       | 0.00    |
| Other                  | 2         | 2       | 2.56    |
| Total                  | 100       | 78      | 100     |

| Images                 |           |         |         |           |
| Turkish/literature     | 17        | 12      | 18.18   |
| Science                | 15        | 7       | 10.61   |
| Physical education     | 13        | 12      | 18.18   |
| Foreign language       | 12        | 10      | 15.15   |
| Math                   | 10        | 4       | 6.06    |
| Classroom teacher      | 7         | 1       | 1.52    |
| Psychological counseling and guidance | 6 | 7 | 10.61 |
| Social sciences        | 6         | 4       | 6.06    |
| Audio visual art lessons | 6       | 6       | 9.09    |
| Computer               | 6         | 0       | 0.00    |
| Other                  | 2         | 3       | 4.55    |
| Total                  | 100       | 66      | 100     |

| Associating with life   |           |         |         |           |
| Turkish/literature     | 17        | 5       | 9.62    |
| Science                | 15        | 8       | 15.38   |
| Physical education     | 13        | 6       | 11.54   |
| Foreign language       | 12        | 6       | 11.54   |
| Math                   | 10        | 9       | 17.31   |
| Classroom teacher      | 7         | 2       | 3.85    |
| Psychological counseling and guidance | 6 | 1 | 1.92 |
| Social sciences        | 6         | 3       | 5.77    |
| Audio visual art lessons | 6       | 7       | 13.46   |
| Computer               | 6         | 2       | 3.85    |
| Other                  | 2         | 3       | 5.77    |
| Total                  | 100       | 52      | 100     |

Table 7 shows the distribution of the three most repeated themes according to branches. Considering the number of teachers by branch, it is seen that English teachers emphasize the theme of "repetition" more. It is seen that physical education and Turkish teachers emphasize the theme of "images", while Mathematics and Science teachers emphasize the theme of "associating with life".
Table 8. Opinions of teachers about memory supporters according to their years of service

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>1-5 years</th>
<th>6-10 years</th>
<th>11-20 years</th>
<th>20 years and above</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinions on memory supporters</td>
<td>Useful</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Makes it easy to remember</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Effective for retention</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Education should be given</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Must be personal</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>No idea</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>20</td>
<td>12</td>
<td>27</td>
<td>41</td>
<td>100</td>
</tr>
</tbody>
</table>

When Table 8 is examined, teachers who have worked for 1-5 years express their "positive" opinion, teachers who have worked for 6-10 years say "useful", teachers who work between 11-20 years say "It is effective on retention" On the other hand, it is seen that the teachers who do this emphasize the themes of "useful and positive".

Conclusion and Discussion

In this study, it was tried to examine the opinions of teachers about "memory supporters". For this purpose, concepts such as memorability, easy recall, methods used in the lesson, and memory aids were used in the research. The findings that emerged as a result of the analysis of teachers' opinions on these concepts were combined and the common results obtained from the study are presented below. According to this;

In order for an information to be remembered and easily remembered, it is necessary to use audio-visual materials, to associate the subjects with life, and to benefit from repetition and application activities. In support of this result, Aydin (2010) states in the conclusion part of his study that the multiplicity of in-class activities that enable students to participate in the lesson with activities will motivate the students to the lesson, and the in-class arrangements made for this purpose will contribute to the affective development of the students. On the other hand, themes such as "the use of audio/visual elements, coding, association, animation, analogy, storytelling, humor, association, acrostic", which teachers especially emphasize, are the characteristics of memory supporters. (Korkmaz & Mahiroğlu, 2007; Kaya & Çevik, 2020, et al.) Based on this, it can be said that teachers generally benefit from and use memory-supporting strategies. As a result of the observations made while filling out the interview forms, it can be said that the use of memory-supporting strategies in the lesson is not conscious and teachers are generally unaware of these strategies. Erginer (1994) emphasizes that the teacher has to be aware of what to teach and how to teach. It can be said that teachers generally welcome the use of these strategies and find these techniques useful. On the other hand, it can be said that there is an expectation about teaching teachers about memory techniques. It is thought that teachers who express negative opinions are not aware of these strategies. It is thought that the examples given by the teachers to these strategies that they remember from their student years indicate that the teaching made with these techniques is permanent.

Recommendations

1. In this study, only the opinions of the teachers were taken, and it is thought that it will be useful to determine the effects of memory-supporting strategies on learning, permanence of knowledge and remembering.

2. In addition to the information taught to the students, it is thought that providing training on how learning takes place will contribute to conscious learning.

3. Teachers should be given training on what memory-supporting strategies are, how they can be used, their effects on learning, and information about the results of scientific studies conducted in different branches so far.

4. It is thought that our Ministry of National Education and Culture should lead such trainings for teachers and students.
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MOTIVATIONAL INTERVIEWING TECHNIQUE

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ABSTRACT
Motivational interview studies were started by Miller (1983) with his research on treating alcohol and substance addiction problems with a different approach, emerged through addictive behaviors and was designed to analyze the ambivalence of the individual while moving towards the desired goal, to accelerate and facilitate the change process. It has become a therapy approach that has become increasingly popular today and is widely applied in areas where behavior change is important. The starting point of motivational interviewing is that it is an effective method in the treatment of alcohol and substance addiction, and the model has been developed in the process, and today, together with addiction, obesity, chronic pain, diabetes, diet, HIV/AIDS prevention, accident prevention, anxiety disorder, depression, post-traumatic stress disorder It has enabled it to be applied effectively in different areas such as sexual behavior change. The motivational interview technique, which is an individual-centered and short, evidence-based method, can be applied clinically alone or as a supportive treatment together with other treatment approaches, and its prevalence is increasing day by day, and it was aimed to evaluate the motivational interview technique in this study.

INTRODUCTION
Motivational interview studies were initiated by Miller (1983) with his research on treating alcohol and substance addiction problems with a different approach, and the changes that emerged over addictive behaviors and the Motivational interview model, which deals with the phenomenon of the Motivational Interview, is designed to analyze the ambivalence of the individual while moving towards the desired goal, to accelerate and facilitate the change process. Miller, his motivation; defined it not as a feature but as an internal state affected by external factors (Miller, Rollnick, 2002). Miller and Rollnick (1995) defined motivational interviewing as a guiding and client-centered approach used to induce behavioral change by helping clients discover and analyze ambivalence (Ögel, 2009). The basis of the motivational interview depends on the change in behavior and accordingly the change of the client. In the individual-centered approach, the client is in a central position in defining the undesirable behavior that is seen as a problem, in making a decision to change this behavior and in taking action towards it (Kirlioğlu, 2019). It is a special way of helping. This method is especially useful for people who are reluctant or ambivalent to change. Motivational Interviewing was developed by Miller and Rollnick through addiction therapy studies.

The inefficiency of the confrontational and confrontational style of addiction counseling in clinical trials has driven Miller's work towards a different approach. In defining Motivational interviewing, Miller focused on the connections between this conceptual model and previous psychological theories in his work on the treatment of alcohol problems. (Miller, Rose, 2009). Miller's work was linked to Festinger's (1957) "cognitive dissonance", Milton Rokeach's "human values", Bem's (1967, 1972) "self-perception theory". At the same time, Rogers promoted change. It is also closely related to his theory of "necessary and sufficient" interpersonal conditions to do so (Miller, Rose 2002). “Motivational interviewing is consistent with the postmodernist paradigm that emphasizes collaboration and empowerment of the client” (Gerber & Basham, 1999, cited in Örücü, 2020). Despite the lack of experimental data, Miller's first paper was published in 1983 and was met with great interest. The new approach model on substance addiction, which is the starting point of motivational interviewing, has aroused hope that it is possible to work with people who are defined as unmotivated or resistant by other approaches, who cannot be treated for these reasons or who are difficult to treat (Örücü, 2020). Miller, investigating the effectiveness of the motivational interview, introduced the first model with Rollnick in 1991 (Ögel, 2009). Motivational interviewing came to the fore especially when it was associated with the Transtheoretical change model of James Prochaska and Carlo DiClemente in their addictive behavior (Örücü, 2020). The stages of change in the transtheoretical exchange model have played an important role in the
The development of motivational and short interviewing (Miller, Rollnick, 2002). Understanding the dynamics of indecision provides an alternative to thinking of people as "unmotivated". People are always motivated for something. Revealing the intrinsic motivation and resolving the uncertainty about a problem and involving the client in finding solutions to overcome the obstacles in front of him form the basis of Motivational interviewing (Miller, Rollnick, 2002).

Miller and Rollnick (2009) define motivational interviewing as a guiding and client-centered approach used to create behavioral change by helping clients discover and analyze ambivalence (Miller & Rollnick, 2009, cited in Dicle, 2017). Collaboration, association, and respect for the client's autonomy form the behavioral patterns of motivational interviewing. Motivational interviewing also allows working with other approaches, mostly the cognitive behavioral therapy approach. (Soderlund, 2010). Cognitive the importance of cooperation between the client and the counselor in the behavioral approach is also very important in the motivational interviewing approach. Motivational interviewing proposes different techniques that put the client's ambivalence into action at the point of resolution. When resistance to these techniques arises, applying supportive motivational interviewing techniques to Cognitive Behavioral Therapy increases the possibility of the client to benefit from functional methods and makes it possible for change to occur. “The principles of motivational interviewing are to express empathy, develop conflict, act with resistance instead of responding with resistance, and develop self-efficacy” (Aviram and Westra 2011. As cited in Alpaydın et al., 2016).

FEATURES OF MOTIVATIONAL INTERVIEW

How the individual perceives and understands the interview process is extremely important in shaping the motivational interview (Miller, Rollnick, 2002). “In motivational interviewing, it is tried to create a positive change potential of the client and this positive change to be created based on the client's perceptions, goals and values” (Sarı, 2016). Motivational interviewing is a goal-oriented, client-centered and guiding approach to counseling. The main purpose of revealing behavior change by helping clients discover and resolve their ambiguity, and the counselor is deliberately guiding. (Ogel, 2009). Motivational interviewing uses a guiding style of communication to interact with clients, fostering decision-making autonomy by awakening individuals' strengths and motivation for change. The general spirit of motivational interviewing can be defined as the client-counselor relationship and the therapeutic skill of empathic understanding. At the same time, there is active cooperation between the Client and the counselor (Söderlund, 2010).

BASIC PRINCIPLES

Motivational interviewing enables clients to resolve their ambiguity, increase their awareness, self-confidence, and discover the reasons for change in a safe environment while revealing their indecision with an empathetic understanding. There are some general principles of motivational interviewing technique. These principles are; showing empathy, revealing contradictions, not confronting resistance, supporting self-efficacy (supporting self-efficacy) (Miller, Rollnick, 2002).

Demonstrating Empathy: Empathy, one of the most important contributions of Rogers' person-centered therapy approach, is the basic component of successful therapy in counseling practices. (Corey, 2008). Empathic understanding is to understand and comprehend the client's world, and to project this world back to the client. “Reflective listening” is important in empathic understanding and is an important rule that must be followed throughout the entire counseling process, from the very beginning of the interview. Reflective listening, investigating feelings and perspectives without judging, criticizing or blaming, and giving understandable, reasonable and valid answers to perspectives are essential in showing empathy (Sarı, 2016). The empathic approach helps the client to evaluate their past experiences from a new perspective by showing interest in their lives, and to increase their confidence in making decisions and taking action to change their own perspectives (Corey, 2008).

Revealing The Contradiction: Motivational interviewing is a powerful source of motivation that helps clients "shift the balance" on the path to change by revealing inconsistencies between their current behavior and their future goals and values (Miller, Rollnick, 2002). Discovering the pros and cons of change can help the client develop conflict. These 'decision balance' exercises are used effectively in motivational interviewing counseling to help clients resolve their indecision and express behavioral concerns. (Hall, Gibbie and Lubman, 2012)

Working With Resilience: Working with resilience involves actively involving the client in the problem solving process. “Client behaviors defined as 'resistance' in motivational interviewing represent a signal for the counselor to change their approach” (Miller, Rollnick, 2002). The client, who is actively involved in problem solving, is also the first source of finding solutions and answers. Resistance can manifest in many ways. The most common ones can be defined as interrupting or arguing with the counsellor, ignoring the counselor's expertise,
Therefore, it ensures the continuity of the help clients to take action and change behaviors. helps them feel confident in arranging their resources.

experiences and feelings. Affirmative statements such as “I appreciate how difficult it was for you to decide to acknowledge of the client's difficulties, giving the message “I hear, I understand”, and affirming the client's strengths, and reflecting on the times when they have successfully changed in their lives contribute to the development of the client's self-efficacy. (Hall, Gibbie and Lubman, 2012). Supported by the client's own resources and past achievements, confidence and belief must be developed in the capacity to overcome. It is the client who is responsible for choosing and making the change happen. For this reason, the message that should be given to the client is not “I will change you”, but “I can help you change if you want” (Dicle, 2015).

MOTIVATIONAL INTERVIEW STAGES

Motivational interviewing is not just a set of techniques for counseling, but a way of being with the client. Motivational interviewing requires four basic communication skills, represented by the acronym QARS (Question, Affirmation, Reflective, Summary) that support and strengthen the process of generating change speech. (Miller, Rollnick, 2002).

Q-Open-ended questions: In the motivational interview, open-ended questions allow the client to tell their stories and talk, as well as provide information about the client's perspective and ideas (Sobel & Sobel, 2011). For example, “What brought you here today? are you?”, “I understand that you have some concerns about …………………….., tell me about them”. Open-ended questions are also useful in the process of awakening the client's motivation for change.

A-Confirmation: Confirmation supports and encourages clients' self-efficacy. It is the therapist's acknowledgment of the client's difficulties, giving the message “I hear, I understand”, and affirming the client's experiences and feelings. Affirmative statements such as “I appreciate how difficult it was for you to decide to come here”, “This is a big step”, “I must say, if I were in your position, I would find this situation difficult too” help clients to take action and change behaviors. helps them feel confident in arranging their resources. Therefore, it ensures the continuity of the consultation process (Samsha, 1999).

R-Reflective listening: Reflective listening is the most basic tool to empathize with the client. In reflective listening, the therapist helps the client by synthesizing content and process by simply reflecting what the client is saying without adding more meaning. Statements addressed to the client during reflective listening: “I hear you; I do not judge you; This is important; please tell me more.” For example, the client: “My boyfriend gets really angry when he get high and faint.” Reflective listening: “So, he goes crazy when he gets high.” Phrases such as “I mean, he goes crazy when he gets high.” Phrases that encourage the client to keep talking, convey respect, therapeutic. It strengthens the alliance, clarifies what exactly the client means and strengthens motivation, encourages the client to tell more and reduces resistance (Samsha, 1999).

S-Summarizing: Summarizing is distilling the essence of what a client is expressing and reflecting back. "Summaries reinforce what has been said, show that you are listening carefully, and prepare the client to continue" (Miller, Rollnick, 2002). Summarizing is also a good way to start/end each counseling session and to provide a natural bridge as the client transitions between the stages of change (Sari, 2016).

The four communication skills mentioned above are essential for motivational interviewing. In addition to these communication skills, it is important to have a guiding strategy to resolve ambivalence and strengthen commitment to change. Target-oriented “revealing change talk” is defined as the fifth communication skill (Miller, Rollnick, 2002).
Revealing the Speech of Change

Revealing motivating statements is a critical skill for clients who are not committed to change. In motivational interviewing, change talk during the interview falls into four general categories. These:

Presenting the disadvantages of the current situation: "How has your drug use been a problem for you?" and "How do you think you are harmed by your drug use?" or "I think there's a bigger problem here than I realize", reflecting an acceptance of undesirable aspects of the current situation or behavior.

Realizing the advantages of change: "If you continue in this way without making any changes in your life, what kind of life awaits you and your loved ones?", "Afraid of what might happen if you continue to drink alcohol?" questions evoke the disadvantages of the current situation (Sarı, 2016). It provides awareness of the potential advantages of change by highlighting the good things that can be achieved through a change.

Developing optimism through change: "What difficult goals have you achieved in the past?" Clients can also rate their confidence in their ability to change. The answers will help reveal the strengths they can bring to their behavior change initiative. Developing optimism with change expresses confidence and hope about one's ability to change, and the common ground here is that change is possible (Miller, Rollnick, 2002).

Intention of the exchange: One of the ways to start the exchange conversation is to use rating questions. "Using a scale from 1 to 10, with 10 being the highest, is "How important is it for you to stop drinking alcohol?" If the client answers "6", he is asked why he did not say "7" or "5". This can help uncover reasons why the client would want to change.

CHANGE SPEECH REVEALING METHODS

There are many strategies for eliciting “change talk.” These are through evocative questions, using a scale of importance, investigating decision balance, elaborating, questioning endpoints, looking to the past and future, exploring goals and values (Hall, Gibbie, and Lubman, 2012).

Provoking questions: can be used to explore the client's own perceptions and concerns. "What are the pros and cons of the current situation? questions such as can evoke change speech (Sarı, 2016).

Using the importance scale: “It is useful to know how an individual perceives importance and trust in understanding his indecision” (Miller, Rollnick, 2002). Importance and trust are components of intrinsic motivation for change and need to be addressed at every stage (Miller). For each, the scaled scale method from 0 to 10 is used. “O represents the negative and 10 represents the positive extreme. on a scale from 0 to 10 Would you say how important it is for you to ………………….?” “Why are you at….and not at zero?” “What do you need to reach a higher value than …..?” Discussing importance and trust will kick start the talk of change.

Investigation of the balance of decision: Discussing the pros and cons of the current situation by emphasizing how determined the client is in the change is a method of starting the change talk (Sarı, 2016). Elaboration: A detailed examination of what might happen when a reason for change is identified, for example; In what ways? How much? When? What else can be? Questions such as these are among the methods of initiating the exchange conversation and strengthening motivation (Miller, Rollnick, 2002).

Questioning the Endpoints: Asking the individual for explanations of their (or others') best miraculous situation and anxiety-provoking worst situations for change talk when the individual is observed to have little willingness to change. Worries, the extreme consequences that may arise, “Let's say you continue as is, unchanged, imagining what is the worst thing that could happen to you? ” and best results “ What would be the best result you can achieve if you make changes?” consult with questions such as imagination can be helpful for bringing about change (Miller, Rollnick, 2002).

Don’t look back and forth: "Do you remember a time when things were going well for you? What changed?" While revealing the change speech, it helps the client to remember the times before the problem arises, exceptional situations, and compare it with the current situation, making the difference clear and helping to discover the possibility of a better life (Miller, Rollnick, 2002).

Looking to the future: Talking about how clients’ life will be when there is a change or not is another approach to bring about change talk (Sarı, 2016). “If you decide to make a change, what do you hope could be different in the future?” Similarly, the client may be invited to look ahead in time and anticipate what would happen if no
changes were made. “Given what has happened so far, what do you expect to happen 5 years from now if you don't make any changes?” (Miller, Rollnick, 2002).

Exploring Goals and Values: Another approach is to identify the client's life goals and values. The purpose of researching goals and values with the perspective of motivational interviewing is to determine who adopts the approach and when it is least effective or when it is very effective, extensive evaluation studies continue to be carried out (Miller and Rollnick, 2002). Motivational interviewing is a collaborative approach in which the client is an expert in resolving ambivalence by using the client's own resources for "change" and it is aimed to strengthen internal motivation. This approach can be challenging for experts who are used to making suggestions and taking on the role of "expert" (Miller, Rollnick, 2002).

Motivational Interviewing can be applied to clients who are able to make connections between their current life goals and values. It has less chance of success with individuals who do not think there is a problem and who are reluctant or compulsorily involved in the interview. The effectiveness of the motivational interview depends on the quality of the communication between the client and the counselor and the proficiency of the counselor in the interview technique (Özdemir & Taşçı, 2013). In the Motivational interview approach, which focuses on acting for change by revealing the strengths of the client, it gives priority to creating the client's motivation, which is the first step for change. In this context, even though a long treatment process is not planned with the clients, the Motivational Interview can provide a counseling service that will help reveal the intrinsic motivation for change in a few sessions. The motivational interview was designed from the outset to be a brief intervention. It can be said that even a single session leads to a change in behavior (Miller, Rollnick, 2002). There is strong evidence for the effectiveness of motivational interviewing on the formation of change in negative lifestyle behaviors such as addiction.

Motivational interviewing is versatile and can be used in conjunction with many other approach techniques that focus on behavior change, especially Cognitive Behavioral Therapy (Söderlund, 2010). Motivational interviewing does not assume a long-term consultant-client relationship, and this aspect of the approach has also allowed it to be offered as supportive treatment to other healthcare treatment systems. Its effectiveness in health fields, especially substance abuse, rehabilitation after acute stroke, diabetes, lifestyle change, continuation of asthma treatment, antiretroviral treatment of HIV patients, alcohol addiction treatment, cardiac care, child protection, chronic pain, diabetes mellitus, diet It has been shown in studies that it increases compliance in many clinical settings such as management of AIDS, prevention of AIDS, prevention of accidents, anxiety disorder, depression, post-traumatic stress disorder, sexual behavior change, tobacco addiction and weight loss, which in turn improves treatment outcomes (Taşçı and Özdemir, 2008, 2013). Finally, the fact that the motivational interview is individual-centered, guiding, change/goal-oriented, evidence-based, short-term and low-cost has increased its use in areas where behavior change is required day by day.

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PLANNING AND PRACTICES IN EDUCATIONAL INSTITUTIONS FOR CRISIS MANAGEMENT IN PANDEMIC; NORTHERN CYPRUS CASE

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ABSTRACT

The coronavirus epidemic has affected the whole world and many sectors have been affected by this crisis. Due to the pandemic in education, there has been a crisis, education has stopped around the world and education has to be moved to online environments. These changes, which can be defined as utopian, also caused changes in the policies and planning of education administrators and required effective management of the crisis situation. Covid-19 necessitated a re-evaluation of education along with all fields of study and revealing different perspectives. In this study, it is aimed to reveal the planning and practices put forward in educational institutions for crisis management in the pandemic and the practices and plans put forward in Northern Cyprus. The research was carried out with a compilation study, which is one of the qualitative research methods. Academic publications found in line with the keywords determined in line with the purpose of the research were examined and the findings were brought together. As a result of the research, it was determined that the education of Northern Cyprus was adversely affected by the pandemic and that this negative effect would last for three years, and that the various practices put forward by the Ministry of National Education to immediately switch to in-service training, television programs and distance education were not sufficient.

Keywords: Pandemic, crisis management, Northern Cyprus

Introduction

School is the place that has an important place in the life of students and where they spend most of their daily lives. The main task of the school is to prepare students for the society they live in and for today's world, in short for life, in addition to educating them academically (Buluç, 2009). We should consider that the world, and therefore our country, is going through a constant change, and we should question how prepared our institutions are for this change. Situations such as economic ups and downs, political events, terrorism, natural disasters and epidemics that we experience now and in certain periods can cause crises in schools. Again, negative situations to be realized by administrators, teachers, students, other employees of the school and parents can also cause a crisis. The manager does not have sufficient experience; not knowing enough about the school, its stakeholders, goals and qualifications; failing to show what is expected in the management and decision-making stages of the team; Situations such as not taking the necessary security measures can also cause a crisis (Aksu ve Deveci, 2009).

An institution called a school is a dynamic organic structure. The environmental manager of this dynamic and organic structure should observe the current situation with an open and innovative eye and dynamically transform the projects that affect the school (Yahşi, 2018). It is thought that the expected crisis management skill level and leadership style of the school principal is one of the key figures of the institution and is important in terms of establishing a qualified educational institution. In conclusion, this research examines the relationship between crisis management skills and school principals' leadership styles. Everyone will struggle with the crisis in the chaotic environment where the school is in crisis. The place where the planning and cooperation organization works and the success of these studies are related to the leadership quality of the manager (Ulutaş, 2010).

The coronavirus (Covid-19) outbreak, which emerged at the end of 2019, has become a global storm. In addition to the consequences of the current chaos and storms, the social, cultural, economic, political and many aspects of this situation will be unpredictable. There is no doubt that this storm was caused by education and the Covid-19 outbreak changed the views and understanding of education (Bozkurt and Sharma, 2020). Due to the global impact of the pandemic, basically this can be considered a disaster. This is interpreted as the end of something and a sign of a new beginning (El Maarouf et al., 2020). As an axis, with these perspectives, it can be said that everything that happened in the world after Covid-19 created a normal new paradigm that will create a new world order.

Crisis Management in Education

The concept of crisis entered the scientific literature 30-40 years ago (Soysal, Paksoy, & Özçalıcı, 2011; Tutar, 2004). While crisis was first used to mean "the turning point of a disease" in medical sources, it has become a concept used instead of the words "depression and depression" in social sciences over time (Nelson, 2018). There have been many scientific studies on the concept of crisis, especially in the last ten years (Ayyürek, 2014).
In the crisis process, the organization sees its deficiencies and competencies and creates a new strategy accordingly. Crisis; Completion of deficiencies creates an opportunity to regulate overlooked or neglected areas. It is ensured that the applications that work or not during the crisis are seen (Aydemir and Demirel, 2005). The crisis will create the opportunity to recognize the members of the organization who stand out as support and performance in managing the process and to evaluate these people at the right levels in the next process; It will also be an opportunity to cut off the relationship of members, work and areas that trigger the crisis to grow and harm the organization (Slater, 2017). Leaders view crises positively; They stated that crises provide an opportunity for businesses to identify their weak parts and understand their blind spots and in which parts more precautions should be taken (Fernandez and Shaw, 2020). They pointed out that if they had not faced so many crises, they would not have grown so much. The crisis may cause ruptures within the members of the organization as well as; It can also allow bonding and strengthening of bonds between members. What has been learned in this process will enable lessons to be learned; It will help in preventing and managing subsequent crises.

Crises in schools are situations that occur as a result of events that will disrupt the education process or completely prevent the functioning. Children constitute the future of the society, and therefore educational institutions are the organizations that constitute the most valuable building blocks of the society (Ocak, 2006: 69). The management and security of these institutions, which ensure the training of individuals at the desired level and suitable for the purposes of the society, should be our priority as a country (Aksoy and Aksoy, 2003; Maya, 2014). At this point, it is vital that everyone, from the Ministry of National Education, to which the country's most crowded organization network is affiliated, to the administrative staff at the school, perform their duties and responsibilities correctly and on time.

Pandemic and Education

It is possible to say that the concept of distance education in the education sector has gained more importance compared to the past, with the COVID-19 pandemic, which is effective worldwide. Many sectors were adversely affected by this difficult process, and an economic recession was encountered in every conceivable field, and social and economic life was interrupted. In this difficult process, where almost all areas stop, people cannot do their daily work and the wheels do not turn, individuals who are engaged in education and have a say in the management of education, by using the distance education system, ensure that the process is carried out successfully, thanks to television, internet and various information technologies, and that the students continue their education life completely. and ensured that they could survive this period with the least damage (Almazova et. al., 2020).

The COVID-19 pandemic, which affected the whole world and caused a great change and alteration in our daily lives, affected many different types of business sectors and social areas as well as the field of education. Thanks to the measures and decisions taken for education, students, parents, teachers and education administrators have been able to integrate successfully into the distance education system. The correct communication and interaction of parents with their children and teachers with their students has been very important in this challenging process. During the pandemic process at the global level, the distance education system was switched to and face-to-face education was suspended. Thus, the education life of the students continued without interruption. Teachers have experienced great improvements in their knowledge, skills and experience in pedagogical, psychological and technological fields (Gelles et. al., 2020).

With the development of this epidemic, the pace and flow of life on earth has changed (Zhao, 2020). In order to reduce the impact of epidemics and slow the spread of epidemics due to high pollution levels, practices such as flexible, home-based work, and rotating work arrangements have been implemented. In addition, every country in the world has adopted measures such as partial or full curfews, personal isolation, quarantine procedures and social isolation (Gupta & Goplani, 2020). Within the scope of these measures, it was decided to close the places where human-to-human contact could occur and all educational institutions were included in this scope (Doghonadze et al., 2020; Bozkurt and Sharma, 2020). With the closure of schools and the interruption of face-to-face education, the educational life of 1.6 billion students was disrupted and constituted approximately half of the number of students at all education levels (Bozkurt et al., 2020; UNICEF, 2020).

According to the principle that education is the most basic human right (United Nations, 1984), many educational institutions in the world have quickly reflected on the emergency distance education application to compensate for the education interruption caused by the pandemic. The continuity of the current education system of Covid-19 in the world is not yet ready for an epidemic to ensure that students learn under all conditions; It has been observed that they study with schools, teachers and others. People are physically separated (Bozkurt and Sharma, 2020). Also, during the crisis (emergency) misinformation about distance
education spreads at the same speed as the virus; It is seen that crisis management is tried to be applied with the decisions taken with the introduction of these concepts.

**Northern Cyprus Education Practices and Planning in the Pandemic**

After the World Health Organization declared Covid-19 a global epidemic, national schools were closed in 107 countries around the world (UNESCO, 2020; WHO, 2020). The closure of schools due to Covid 19 has led to the transfer of education to online environments (Daniel, 2020).

In the Turkish Republic of Northern Cyprus, all educational activities were suspended on March 10, 2020. Afterwards, as of March 30, 2020, education in primary and secondary education started on the website of the Ministry of National Education and on the screen of BRT 2 television as of April 13, 2020. Universities that already have distance education units have easily transferred their education to the internet environment.

The epidemic has turned into a global crisis. In addition to the current consequences of this crisis; We should not ignore that it is still in front of us as a scenario that can affect the whole world in social, cultural, political, financial and many areas that we cannot predict. The level of education is undoubtedly in the middle of this hurricane and the pandemic has caused a change in our perception of education and the way we interpret education at this point. (Bozkurt and Sharma, 2020).

In order to ensure the organization and coordination of schools in the fight against the pandemic and to intervene with stakeholders when necessary, a "Pandemic Monitoring and Evaluation Committee" will be established under the chairmanship of the Minister of National Education and Culture under the Ministry of National Education. In the Ministry of National Education, the Department of Education has formed an "epidemic support board" consisting of experts from the Ministry of National Education, the National Education Supervisory Board, the Department of Education and Discipline, and joint education services. Department, teachers union representatives. It was decided to establish an "epidemic committee" within the school, under the chairmanship of the school principal, consisting of school teachers and school-parent union representatives. Under the auspices of school administrators, the responsibility of the board of directors is to prepare the school's pandemic action plan within the framework of this guide; teachers, service personnel and school-parent alliances.

Another planning made in this process is the in-service programs organized for educators during the transition period to distance education. In this direction, an in-service training program "Protection from Infectious Diseases and Hygiene" was planned for school administrators by the Education Joint Services Department Directorate between 25-28 August 2020 (TRNC MEB, 2020).

According to the results of the “Effects of the Covid-19 Pandemic on the Northern Cyprus Education System” report prepared by the Cyprus Educational Research Association (KEAB) (2020); It is stated that the pandemic has adversely affected TRNC education seriously and the three education levels that are most negatively affected are higher education, vocational technical education and primary education. In line with the findings in the report, there is a high probability that serious learning losses may occur in at least two academic years in TRNC education due to the pandemic, and the Ministry of National Education and Culture does not have a planned process or procedure for crisis management, so the crisis created by the coronavirus pandemic in education is also good. It is stated that he cannot manage. It is emphasized that the elements that do not have distance education opportunities and that require applied education are adversely affected, and that the technological infrastructure of the schools and the central organization of the Ministry, the learning-teaching methods, the competencies of the educators, the educational supervision and teaching programs should be changed and transformed (KEAB, 2020).

**Conclusion and Recommendations**

The Covid 19 pandemic process is a challenging process that affects all societies and all age groups in the world. It has been observed that schools are inadequate in managing this crisis, especially in our country. In this direction, the research aims to determine the opinions of school administrators on the crisis management policies implemented by schools during the Covid 19 process.

The pandemic process is not a process that the Ministry of National Education can overcome alone, because it is a social process that requires everyone to do their part seriously. Providing uninterrupted continuing education has always been the primary goal of all affected countries. Although there were interruptions and shortcomings in the scope of distance education during the pandemic period, the Ministry of National Education and YODAK quickly implemented the existing open and distance education opportunities so that education would not be interrupted during this period when schools were closed. At this point, it can be said that by taking the necessary
precautions and acting together with the stakeholders, it is getting through this process with the least damage and there is no harm in it. Borup, Jensen, Archambault, Short, & Graham, (2020) stated in their research that students need support during the pandemic process and the most important community that will provide this is families. When the problems are examined, it is pointed out that all of the participants lack infrastructure. Another problem is that students do not have equal conditions. In the studies conducted in this direction, it is emphasized that the closure of schools due to the Covid-19 epidemic causes many problems and mostly leads to inequality (Williamson, Eynon, & Potter, 2020; Van Lancker & Parolin, 2020).

National authorities should take measures to take into account the psychological, social and economic changes at the beginning of the pandemic process and in the period after. It is especially important to consider the activities and practices that will help students adapt to the school environment, as well as the psychological, economic and social development of students, in planning the post-pandemic period and arranging the education system. (Kara, 2020).

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SECONDARY EDUCATION TEACHERS’ OPINIONS ON POST-PANDEMIC TECHNOLOGY MANAGEMENT

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ABSTRACT
After the Covid-19 pandemic, the educational perspective should be reconsidered. Technology management has an important place in the rapidly developing world. In this study, it was aimed to obtain the opinions of teachers working in secondary education institutions about technology management in secondary education after the Pandemic. The research was conducted with 15 teachers working at Namik Kemal High School in Famagusta region, data were collected and analyzed with a qualitative method. As regards data analysis, the data obtained from the interviews were synthesized and described, then summarized and interpreted. Recommendations were made in line with the results. Keywords: Covid-19, technology management, teacher, post pandemic, distance education.

INTRODUCTION
Today, technology is an important factor affecting education. Schools are expected to use technology in education to improve the education of their students. (Johnson et al. 2016). Due to the global Covid 19 epidemic, education, as in many sectors, has remained in this crisis environment. Due to the pandemic, the perspective and way of education has changed (Bozkurt and Sharma, 2020). Although this crisis environment has brought about difficulties and problems, it has brought new beginnings to education (El Maarouf, Belghazi & El Maarouf, 2020). Therefore, it is predicted that these changes will create a new paradigm and new normals. One of these changes is the technology use levels of teachers. After the Covid-19 pandemic, the point of view in the field of education has changed as in every field in the world. It has been witnessed through common experience that the education and technologies used in education have created different needs after the pandemic. It is important for teachers to know how and when to use technology as an important tool in the classroom (Hollebrands 2020). Technological skill levels of teachers are essential for the success of the quality and quantity of education. We can say that Technology Management is the combination of basic sciences, engineering and management disciplines in order to plan, develop / provide and acquire the technological capabilities required to reach strategic goals in general (DEMİREL, A. S. TECHNOLOGY MANAGEMENT). Considering the situation in schools after the pandemic, all the burden of education and training was left to the school administrations by the Ministry of National Education; as a result, some schools completed this process successfully while some other
failed. Teachers at schools who successfully completed this process started to lecture online in a very short time. By completing very quickly the transition period, which could take 1-2 years, trainings began to be provided online. Naturally, there were many problems and barriers in this process, but the teachers successfully completed this process by going the extra mile.

PURPOSE OF THE STUDY:
In this study, it is aimed to obtain the opinions of teachers in secondary education after the pandemic about technology management in secondary education institutions.

Sub-purposes for the purpose of the research are as follows:
1- What kind of problems did you encounter during the distance education process? (Insufficiency of MoNE education portal, lack of e-content, outdated ministry laws and regulations on distance education, student attendance / absenteeism problems, disciplinary problems, low student motivation)
2- What are the technical problems you encounter in distance education? (Internet problems, lack of technical equipment, lack of technology…) What has been done to overcome these problems?
3- Have you had any educational problems in distance education? If so, what kind of problems? What has been done to overcome these problems?
4- How did your school administrators support you during the distance education process?
5- What are your opinions on achieving the desired goals in the annual plan in distance education?
6- What are your opinions on the materials and training methods you use in distance education?
7- How has distance education affected your professional development?
8- Have you received in-service training on distance education? If so, what are your opinions on these trainings?
9- What did you do to motivate your students during the distance education period?
10- How did you communicate with your students during the distance education period?
11- What can you say about the role of your managers in the management of this process?
12- What kind of decisions were made in this process? What are your views on the participation of stakeholders (teachers, students, administrators, parents, etc.) in these decisions?

METHOD
It is planned to examine the opinions of teachers in secondary education on technology management using qualitative methods with 15 teachers working in Namik Kemal High School, a secondary education institution. Interview is a data collection technique that is frequently preferred in qualitative research and is used for in-depth research to reveal social reality. Collecting data face-to-face with the interviewees is a factor that increases the depth of the research. (Yüksel, 2020).

STUDY GROUP
It was planned to interview teachers who worked at Namik Kemal High School in Famagusta district of TRNC and wanted to participate in this study voluntarily and to obtain data.

DATA COLLECTION TOOL
The interview form developed by the researcher was used as the data collection tool. Expert opinion was consulted for the reliability of the form.

DATA ANALYSIS
In the analysis of the data, the data obtained from the interviews were synthesized and described, then summarized and interpreted. The codes used according to the answers given to the questions in the qualitative data analysis are presented in Table 1.
<table>
<thead>
<tr>
<th>Question no.</th>
<th>Questions:</th>
<th>Answer sample:</th>
<th>Classification:</th>
<th>Codes:</th>
<th>Code belonging to answer sample:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What kind of problems did you encounter during the distance education process?</td>
<td>“The inability of students with economic disabilities to participate in online trainings lowered my motivation; in general it led to inequality of opportunity.” (Teacher 1)</td>
<td>Problems</td>
<td>Low motivation, Disciplinary problems, no sanction, absenteeism, Internet connection problem, portal insufficiency, lack of content.</td>
<td>Equality of opportunity, tablet, mobile internet, sanctions, motivation, portal.</td>
</tr>
<tr>
<td>2</td>
<td>What are the technical problems you encounter in distance education? (Internet problems, lack of technical equipment, lack of technology…) What has been done to overcome these problems?</td>
<td>“Lack of internet, lack of technical equipment (few computers in the house). I took care of all of them myself.” (Teacher 12)</td>
<td>Problems</td>
<td>Lack of internet, lack of devices.</td>
<td>School administration, technological equipment, MoNE tablet.</td>
</tr>
<tr>
<td>3</td>
<td>Have you had any educational problems in distance education? If so, what kind of problems? What has been done to overcome these problems?</td>
<td>“It was the first time the children and us experienced distance education, and communication problems occured.” (Teacher 12)</td>
<td>Problems</td>
<td>Lack of content, lack of planning, student course follow-up.</td>
<td>Technological competence Joint plan Follow-up</td>
</tr>
<tr>
<td>4</td>
<td>How did your school administrators support you during the distance education process?</td>
<td>“They supported in all matters.” (Teacher 15)</td>
<td>Solution recommendations</td>
<td>Support was given</td>
<td>In-service training, technological assistance.</td>
</tr>
<tr>
<td>5</td>
<td>What are your opinions on achieving the desired targets in the annual plan in distance education?</td>
<td>“I think they can be reached.” (Teacher 15)</td>
<td>Solution recommendations</td>
<td>Target can be reached</td>
<td>Target is achievable, Efficiency is low</td>
</tr>
<tr>
<td>6</td>
<td>What are your opinions on the materials and training methods you use in distance education?</td>
<td>“There are not enough resources in terms of content, I think it will be more useful when students have resources.” (Teacher 3)</td>
<td>Solution recommendations</td>
<td>Development of e-content</td>
<td>e-content</td>
</tr>
<tr>
<td>7</td>
<td>How has distance education affected your professional development?</td>
<td>“We see that technology is everywhere. This period has improved me in terms of lecturing on computer and smartphone.” (Teacher 3)</td>
<td>Solution recommendations</td>
<td>Positive, development</td>
<td>Positive, development</td>
</tr>
<tr>
<td>8</td>
<td>Have you received in-service training on distance education? If so, what are your opinions on these trainings?</td>
<td>“I received help and training from the computer teachers working at our school. I can say it is enough for me.” (Teacher 1)</td>
<td>Solution recommendations</td>
<td>I received, school administration</td>
<td>I received, school administration</td>
</tr>
</tbody>
</table>
What did you do to motivate your students during the distance education period?

“I had conversation with them from time to time and talked about daily matters. We talked about what we would do together in the face-to-face training.” (Teacher 1)

Solution recommendations

Conversation, face-to-face education, engaging visuals and contents.

How did you communicate with your students during the distance education period?

“I communicated with the students through the Whatsapp groups opened by the counseling teachers” (Teacher 6)

Solution recommendations

Whatsapp, guide

What can you say about the role of your managers in the management of this process?

“I can say that school administrators are devoted to their work, but the ministry reduces motivation with daily decisions.” (Teacher 7)

Solution recommendations

School administration, MoNE, motivation

What kind of decisions were made in this process? What are your views on the participation of stakeholders (teachers, students, administrators, parents, etc.) in these decisions?

“First, it was said that this process was left to the school administrations, then it was undertaken by MoNE again. Distance education for the first time led teachers and students to suffer from confusion. The vast majority of our parents think that distance education is inefficient.” (Teacher 9)

Problems

School administration, MoNE, Teacher, Student, parent

FINDINGS

15 teachers from Namık Kemal High School participated in the study.

According to the first sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What kind of problems did you encounter during the distance education process?” are presented below. The opinions of the 15 teachers in the study group are as follows:

- 2 teachers → student absenteeism
- 4 teachers → low motivation
- 6 teachers → absenteeism
- 2 teachers → disciplinary problems
- 3 teachers → The Ministry of National Education being unprepared

All of the answers given by the teachers mentioned that the lack of internet and devices is a problem. Apart from this problem, 26% mentioned the low motivation of the students, 40% mentioned student absenteeism, 13.3% mentioned discipline problems during the course, and 20% mentioned the unpreparedness of the Ministry of Education.

According to the second sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What are the technical problems you encounter in distance education? (Internet problems, lack of technical equipment, lack of technology…) What has been done to overcome these problems?” are presented below. The opinions of the 15 teachers in the study group are as follows:

All of the 15 teachers in the study group stated that there is a lack of internet connection and equipment. The school administration made certain classes available to teachers for teachers who had a lack of equipment, and they mentioned that they provided devices for students. All of the teachers agreed that the Ministry of National
Education should distribute tablets and provide internet connection to all students in order to enable them to participate in distance education.

According to the third sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “Have you had any educational problems in distance education? If so, what kind of problems? What has been done to overcome these problems?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 7 teachers → Inability to find online course materials
• 4 teachers → Joint plan
• 4 teachers → They talked about the low motivation of the students.

According to the fourth sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “How did your school administrators support you during the distance education process?” are presented below. The opinions of the 15 teachers in the study group are as follows:

All of the teachers who participated in the interview mentioned that school administrators supported them during this period.

According to the fifth sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What are your opinions on achieving the desired goals in the annual plan in distance education?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 11 teachers → They replied, "The targets desired in the annual plan can be easily achieved".
• 4 teachers → They stated that the targets in the annual plan could not be achieved due to the division into grade levels.

According to the sixth sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What are your opinions on the materials and training methods you use in distance education?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 11 teachers → I taught the lessons with pdf and interesting slides. They stated that e-content should be developed by the Ministry.
• 4 teachers → They stated that they taught the lessons with e-contents and it was more efficient.

According to the seventh sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “How has distance education affected your professional development?” are presented below. All of the teachers who participated in the interview stated that distance education has a positive effect on their development. In addition to these, two teachers emphasized the necessity of organizing in-service trainings in regular periods.

According to the eighth sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “Have you received in-service training on distance education? If so, what are your opinions on these trainings?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 10 teachers → They mentioned that these trainings are sufficient for distance education.
• 5 teachers → They talked about providing more effective training with smaller groups.

According to the ninth sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What did you do to motivate your students during the distance education period?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 10 teachers → We had conversation on Whatsapp groups.
• 4 teachers → I shared interesting visuals and content.
• 1 teachers → I recited motivating poetry to them before starting the class.

According to the tenth sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “How did you communicate with your students during the distance education period?” are presented below. The opinions of the 15 teachers in the study group are as follows:
All of the teachers participating in the interview stated that they communicated via the WhatsApp groups formed by the advisors.

According to the eleventh sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What can you say about the role of your managers in the management of this process?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 14 teachers → They were very helpful.
• 1 teacher → They need to be more tolerant in the face of setbacks experienced.

According to the last sub-purpose of this study, the findings as regards the opinions of the teachers in response to the question “What kind of decisions were made in this process? What are your views on the participation of stakeholders (teachers, students, administrators, parents, etc.) in these decisions?” are presented below. The opinions of the 15 teachers in the study group are as follows:

• 8 teachers → All burden was left to school administrations.
• 3 teachers → The Ministry of National Education made inconsistent decisions in the process.
• 2 teachers → The students complied with the decisions made by the school administration.
• 2 teachers → Parents should be more supportive of school administrations in distance education.

CONCLUSION

Trilling & Fadel, (2009) grouped 21st century skills under three main headings in their research. Accordingly, the learners of this century; learning and innovation, digital literacy, and life and career skills. Many studies during the pandemic period reveal the importance of teachers' technological knowledge and skills (Alipio, 2020; Ali, 2020; Deshmukh, 2020). As a result, when we examine the opinions of teachers working in secondary education institutions on technology management in secondary education after the pandemic, it can be seen that they stated that the transition to distance education has a positive effect on the development of teachers and that they have developed themselves technologically. The main problems faced by teachers in distance education are the content of distance education not having been developed by the Ministry of National Education, the absence of joint plans, the deficiencies in the internet infrastructure, the lack of devices among students, and the lack of active use of education portals. It is understood that teachers have adapted to technology management, but the planning, which is one of the requirements of technology management, is not performed by the Ministry of National Education, as all the burden is left to the school administrations. In order to use technology more effectively and efficiently, the above-mentioned shortcomings should be resolved by the Ministry of National Education. It would not be realistic to argue that the distance education process will be successful if these problems are not fully solved. I think that this study will be an effective source for future studies.

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TECHNOLOGY LITERACY IN THE SCOPE OF LIFELONG LEARNING

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Abstract
Developments in information and technology have led to a constant change in information. In order to adapt to these changes, individuals need to develop and renew themselves throughout life. Individuals can increase their knowledge by adapting to the changes. Lifelong learning requires active and continuous use of knowledge. Persistent learners are those who can access the information they need to solve problems, adapt their knowledge, and add new information. For this reason, technology literacy, which is a requirement for the ability to access and use information through technology, has become a necessity for lifelong learning. In this context, technology usage skills and technology literacy levels of individuals are important. In order for lifelong learning to be sustainable, individuals need to use technology effectively and know how to access the right information. The aim of this research is to examine the necessity and importance of technology literacy within the scope of lifelong learning. The findings obtained by examining the literature in line with the keywords determined in the research carried out with the document analysis technique are presented. As a result of the research, technology literacy is important in order to reach the information transferred to digital platforms, especially due to the pandemic.

Keywords: Lifelong learning, technology literacy, technology, education

INTRODUCTION
Today, education and training needs of people have increased due to rapid transformations and changes in economic, political, technological, cultural and social fields. Individuals need certain qualifications in order to maintain their competitiveness in changing market conditions and maintain their material position as they exist, and they need renewal and development in order to maintain these qualities. These changes that continue...
throughout the life of individuals and the needs that become more important over time cause the phenomenon of lifelong learning to occur and become important.

Lifelong learning can be defined as an attitude and discipline that extends beyond both vocational and job-oriented education and encompasses social skills such as interpersonal communication, teamwork, emotional intelligence and problem solving. Thus, lifelong learning focuses mainly on maintaining self-controlled longevity in a person's professional life. In this respect, lifelong learning means that learners are in constant contact with new knowledge, skills and competencies, and that they provide new structures by establishing a relationship between existing knowledge and skills and newly learned ones (Şişman, 2012). In other words, lifelong learning is a kind of habit and behavior (Koç, 2011).

Technology literacy gains importance in this context. Although education is a process, technology literacy is a long process, not a one-time achievement. Increasing the capacity of individuals about technology literacy and all the information obtained constitute a broad educational process (Davies, 2011).

In 2020, with the Covid-19 virus epidemic, known as the corona virus worldwide, there have been changes in many areas both in our country and all over the world. Especially in our country, extensive distance education applications, online trainings and seminars, teleconferences made using different technological communication tools have actually been one of the most striking manifestations of the mentioned change and transformation. Changing and developing world conditions in today's world lead to many changes and transformations in the dimensions of education and training. These changes and transformations can be educational, technological or intellectual.

Some skills are needed in order for individuals to adapt to changes and transformations and to respond appropriately, to follow the developing technologies, to access the information needed and to use this information in daily life, and to transform the information into a product (Anagün, Atalay, Kılıç ve Yaşar, 2016). In this research, it is aimed to examine the necessity and importance of technology literacy within the scope of lifelong learning.

Lifelong Learning
Since lifelong learning is the renewal of knowledge, skills and competencies in the process of living, it covers the process that includes many non-formal education processes as well as the formal education process that continues from the basic education period to the end of higher education.

In lifelong learning, it is assumed that it cannot be limited in terms of place and time, and that learning will occur when there is a desire to learn (Coşkun & Demirel, 2012). In this context, it is emphasized that lifelong learning is based on three basic principles.

- The first of these elements is continuity: education starts from the prenatal period and continues until the end of life, and during this period it is acquiring qualifications according to individual interests and needs.
- The second one is creativity: individuals realize their own potential and develop their new product creation skills.
- Third learning: one of the important points of lifelong learning is that the individual learns spontaneously and with the help of questions (Teyfur, 2009; Karakuş, 2013; Koç, 2011).

With the developments in information and technology, information is in a constant change. In order to adapt to these changes, individuals need to develop and renew themselves throughout life. Adapting to the changes experienced allows the individual to increase his knowledge. Learning is a process that is needed in human nature from the very beginning to the very end. The existence of the need for learning throughout life has revealed the concept of lifelong learning (Coşkun & Demirel, 2012).

Technology Literacy
Based on the diversity of knowledge and ways of learning, different literacy concepts have emerged. Some of those; information literacy, computer literacy, digital literacy and technology literacy. Technology literacy encompasses the ability to use the internet not only for information seeking, but also for all actions of individuals, from shopping to voting (Apak, 2008). Digital literacy has created a full awareness of finding what the individual is looking for on the internet. In addition, the concept of technology literacy includes the concepts of information literacy, digital literacy and computer literacy (Pekman, 2006). Hansen (2003) elaborated a little more on the characteristics of a technology literate individual. According to this:

1. Technology can learn to perceive themselves as capable, to achieve certain goals and to expand their influence in the world, even when faced with unknown and uncertain situations,
2. Willing to spend time and effort managing decisions, finding solutions, and taking the risks necessary to consider different options.
3. To research, evaluate and implement technology solutions and to have the knowledge and skills to find the right solution and to identify the gap between what is known and what needs to be known.
4. Gain the knowledge and skills to use technology to achieve personal success and create positive change in the world and in shared goals.
5. It has been stated that how and why technology is used, how technology is associated with its environment, and the technological strategies used to achieve the goal can be considered.

There are three levels recommended for understanding technological literacy: (1) awareness, (2) praxis (i.e. education), and (3) phronesis (i.e. practical competence and practical wisdom). These levels are most accurately represented as a continuum that includes a continuous cycle of retraining.

If an individual is technology literate, he or she has technology knowledge and can make the right decisions by thinking objectively and critically about technological problems, with the ability to use this knowledge effectively. Technology literacy should be expressed as more than just knowledge of computers and computer applications (Loveland & Love, 2016).

**Conclusion and Recommendations**

The development of information and communication technologies has made information an economic and social power today. The level of development of a country is evaluated by the quantity and quality of the information it produces and shares. Such a well-informed society requires a high degree of skill in most areas. In a knowledge-based society, people need to be independent, proactive and involved in lifelong learning. Due to the speed of change, the knowledge and skills acquired in a short time are insufficient or invalid. In this way, individuals living in the information society will continue to learn throughout their lives by gaining learning skills. Nowadays, it is essential for individuals to adopt lifelong learning in order to sustain their personal and professional development. In this context, the necessity of following the developments in their fields, accessing and adapting information comes to the fore. The recommendations made for the research are as follows:

- In order for lifelong learning to become a way of life, it should be supported by the education system and awareness of its importance for career success should be increased.
- In terms of the level of technological development, it is necessary to develop technological competence standards suitable for this level of development from the pre-school period and to carry out necessary studies on this subject.

**References**


ABSTRACT
In this research, it is aimed to examine the roles and responsibilities of school principals in ensuring effective and continuous education supervision in schools. In this study, the data obtained by using the phenomenology design, which is one of the qualitative research methods. The working group consists of 17 school principals. The interview method was used as a data collection tool with the school principals. In the analysis of the data, interpretation was made using content analysis. As a result of this study, it is seen that school principals have an important role in ensuring effective and continuous supervision in schools, increase the control and motivation on teachers, and increase the efficiency and quality of the school. It has been revealed that school principals are open-minded towards this new supervision approach, and as a result, they can work more effectively and efficiently with teachers at school.

Keywords: Educational Supervision, School Principals, Effective and Continuing Education

Introduction
From the first moment of life to the present, human has been living as a constant ruler and ruled. As a social being, human beings establish economic, intellectual and emotional relations with their environment. Depending on these relations, there is a continuous interaction between individuals (Fırıncıoğulları, 2014). In order for this interaction to be healthy, the need for management processes has emerged. Drawing attention with his studies on management, Henri Fayol, management functions; planning, organization, management (order-command), coordination and supervision under five main headings (Aydın, 2007). In addition to the good management of schools, which are the most important stakeholders of education, their supervision undoubtedly increases efficiency. In order for schools to reach their goals, the process of working together between teachers and administrative staff and doing business is defined as school management. At this point, the duty of the school principal is; to ensure that the process in the school administration is managed in the best way, to strive for the effectiveness of the studies at the school, to organize activities in this direction by aiming at the development of the staff working at the school, and to create resources for the development of the school. It is seen that many different characteristics of school administrators play a decisive role in order for the activities in a school to be effective (Yıldırım, 2015). These characteristics of school principals include character structure and supervision center. The concept of supervision center has serious effects on managers (Özkalp & Kırel, 2010). In schools, principals have supervisory responsibility as well as managerial responsibility (Kurt, 2009). School principals carry out their supervision duty by supervising everything in the school (Başar, 1988). It has been determined that supervision is a serious process in educational organizations as in all organizations. In order for school principals to ensure that their programs are carried out in their schools, it is seen that it is obligatory to evaluate the work done and provide feedback by performing continuous supervision (Bergman, 1998).

Supervision is seen as one of the most important elements of good management of a school. Good education, training and development of the students in the school is achieved through good supervision. If there is a lack of control in organizations, disorder, loneliness and stagnation occur within the organization and as a result, the organization begins to weaken (Kimbrough & Burkett, 1990). It is of great importance for countries to make schools an efficient educational environment (Sergiovanni & Starratt, 1993). The most important task of school
The concept of supervision consists of four elements. These items are; determining the situation, making the evaluation, realizing the correction and development (Başar, 2004). In the case of examining the information available during the evaluation phase of the supervision, it is determined as performing the examination by evaluating the conditions and processes (Aydin, 2014). In a supervision conducted within a school, the supervisor must undertake five different tasks. These tasks are; researcher, leader, manager, guide and instructor (Taymaz, 2002). The reasons for the use of supervision in the education system have been determined as follows. These are;

- Supervision is a requirement of the education system,
- Supervision ensures that the opportunities spent on education are used correctly,
- Thanks to the supervision, the activities of achieving, monitoring and supervising the desired targets within the training are carried out.

Supervision ensures that people's behavior is controlled for the benefit of the public and the institution. As a result, it is determined to what extent the objectives have been achieved in the school together with the supervision (Bursalıoğlu, 2002). Supervision; It is defined as the process of examining whether organizational actions are in accordance with the principles and rules determined within the framework of accepted purposes (Aydin, 2014). When the definition of supervision in terms of educational institutions is examined; It aims to improve the teaching and learning processes of supervision, to improve the assistance provided to teachers and to increase the success of students studying at school (Wiles, 1967). Supervision in education programs; It is defined as providing a focus on education, monitoring and correcting the functioning in order to prevent the deviation of the school from its goals, and generally evaluating all educational programs (Cogan, 1973).

Supervision in the education system develops through changes and parallel processes in management approaches and theories. It has been determined that supervising is continuous and it has an educational aspect within this continuity process (Ozden, 1992). Supervision is seen as the last stage of management processes. Audit emerged as a managerial requirement and started to be used. Supervision has been determined as a natural result of the determination of the organizations within the enterprises to maintain their own existence. As a result of an effective supervision approach, the efficient use of resources and the correct direction of education staff, the desired goals in education are achieved (Ergün, 2018). In educational institutions, supervision is not seen as a pressure tool, but as a continuous education tool. Supervision should be done within a business as a result of establishing an interactive relationship rather than a hierarchical relationship (Glickman, Gordon, & Ross-Gordon, 2014)

The main purpose of the schools has been determined as the completion and correction of the deficiencies and the development of self-control awareness for all education stakeholders. Audit; It is called as taking the necessary measures to achieve the result by following the stages of realizing the goals of the organization within the institution (Altuntaş, 1980). The main purpose of supervision in schools; It is stated that it is to increase the efficiency of the teachers working at the school and thus the success of the students (Marshall, 2005).

When the general purpose of the supervision is examined; It is explained as determining the realization and status of the objectives of the organizations within the enterprise, and in this case, taking the necessary measures
to get better results. In the education sector, it is seen that the inspection concept is used in the past years to reduce errors. Today, the development of the education and training process is provided by the guidance process. Thanks to supervision, learning and teaching processes are developed and the outputs obtained are qualified (Burgaz, 1995). With supervision, teaching objectives are achieved within the education process.

In accordance with the objectives determined as a result of the implementation of supervision in educational institutions, it is ensured that the management of educational institutions, good communication with personnel and parents in educational institutions, and school principals fulfill their duty of supervision within the educational institution in an objective and democratic way.

The aim of this study is to examine the opinions of school principals about the role and responsibility they can take on supervision in the TRNC and to reveal the opinions based on the application of the supervision mechanism in the environment of schools in TRNC. The basis of the research is to determine the opinions of the school principals with the interview forms applied to the school principals in the 2020-2021 academic year and to make suggestions for the process. In the context of this main purpose, answers to the following questions were sought:

1. What are your views on empowering managers to carry out more frequent supervision and assume a more guide role within the framework of supervision implementation laws?
2. How would you describe the positive and negative aspects of the authorization application manager within the framework of the laws of supervision?
3. Does your school have any auditing program for a specific purpose? If yes, please give brief information about how and for what purpose it was carried out.
4. If you are asked to carry out an supervision program in your school, explain for what purpose you would like the plan to be designed by stating your suggestions.

With this research, it is important to address a problem that has never been examined in terms of ensuring a more effective supervision activity in schools by giving a new and active dimension to the duties and authorities of school administrators and inspectors affiliated to the TRNC Ministry of National Education and Culture.

Methodology

Research Model
The study was carried out in the qualitative research technique. In qualitative studies, it is seen that data collection techniques such as observation, interview and document analysis are used. In qualitative analysis, perceptions and events are presented in a realistic and holistic way in the natural environment. As a result of qualitative research, a flexible approach is offered to the researcher, thus contributing to the consistency of various stages within a certain focus frame (Yıldırım & Şimşek, 2006).

Research Universe and Sampling
The study group of the research consists of 17 principals working in schools in Nicosia, Famagusta, Iskele, Lefke, Güzelyurt and Girne in the 2020-2021 academic year under the TRNC Ministry of National Education and Culture. Here, it was determined that the purposeful sampling method was used in the determination of schools and principals, since it provides an in-depth investigation of rich sources of information.

11 male and 6 female school principals participated in the research. Examining their professional seniority, it was determined that 9 participants had 1-5 years, 5 participants 6-11 years, 2 participants 12-17 and 1 participant had more than 18 years of professional seniority. Participants' English (1 participant), Physics-Science (1 participant), History (1 participant), Mathematics (3 participant), Art History (1 participant), Chemistry-Science (2 participants), Turkish Language and Literature (1 participant), Chemistry (1 participant), Tourism (1 participant), Philosophy (1 participant), Trade Vocational Courses (1 participant), Physics (1 participant), Accounting-Business (1 participant), Geography (1 participant) branches. It is seen that the participants are directors in Lefke (1 participant), Nicosia (3 participants), Iskele (4 participants), Famagusta (5 participants), Girne (3 participants) and Güzelyurt (1 participant).

Data Collection Tool
The data of the research consists of 4 semi-structured open-ended questions developed by the researchers. The interview form, which was prepared, was examined by the experts in the field and examinations were made in line with the opinions of the experts. Afterwards, this interview form was read to 3 principals and asked if there were parts that could not be understood or had confusion in terms, and the interview forms were corrected accordingly. In order to ensure validity in a qualitative research, the researched phenomenon should be observed as it is and as impartially as possible. As a result of the examination made in this respect, it is seen that the
validity of the form is ensured. In the interviews, it was determined that the research data were written by taking notes. After the individual interviews were completed, the written data were checked. Interviews with the participants lasted 10-15 minutes. Interview questions were prepared in advance and the participants explained their thoughts on the subject (Bogdan & Biklen, 1998).

Data Analysis
Before analyzing the data obtained in this study, interview records were examined. Interview recordings are used one-to-one. The themes were formed by examining the interview data and organized in accordance with the themes. The views expressed by each participant were reviewed two or three times (Creswell, 2002). The opinions of the interviewees were written independently (Maanen, 1998). The data obtained in the research are analyzed with qualitative research methods and evaluated with content analysis. While the content analysis of the data used in the research was carried out, the obtained data, concepts and themes were examined and brought together.

Findings
As a result of the research, it is seen that there are many different opinions under the category of "Authorization by Audit" when the participant opinions about the authorization of the managers in order to conduct more frequent audits and to give more guide roles within the framework of the audit practices of the managers. While 43.33% of the participants thought that “increasing the authority given to principals and creating time for supervision and guidance” would be beneficial, 13.33% said that "the workload of principals who develop suggestions for the responsibilities of schools and the solution of existing problems is too high". Additionally they stated that "the inspection department should be more active, the inspectors should be in schools all the time, and the cooperation with the school administration on supervision and guidance should be increased". 6.67% of the participants stated that “laws are ineffective in terms of sanctions”, “strict supervision will be tiring and time-consuming for principals” and “guidance role is not fully realized due to differences in teaching methods of courses”. Table 1 shows the opinions of the managers regarding the authorization to conduct more frequent audits and to be given more guide roles within the framework of supervision practices.

Table 1. Opinions of managers regarding the authorization of managers for more frequent audits and more guidance roles within the framework of supervision practices

<table>
<thead>
<tr>
<th>Authorization by Supervision</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers have too much workload</td>
<td>4</td>
<td>13,33</td>
</tr>
<tr>
<td>Laws are mostly ineffective in terms of sanctions</td>
<td>2</td>
<td>6,67</td>
</tr>
<tr>
<td>Frequent auditing is tiring and a waste of time in performing other responsibilities</td>
<td>2</td>
<td>6,67</td>
</tr>
<tr>
<td>Inability to fully realize the guiding role due to branch differences</td>
<td>2</td>
<td>6,67</td>
</tr>
<tr>
<td>Aid should be increased, not empowerment.</td>
<td>1</td>
<td>3,33</td>
</tr>
<tr>
<td>Giving his subordinates responsibility for his supervision</td>
<td>1</td>
<td>3,33</td>
</tr>
<tr>
<td>The inspection office should go to schools more actively and cooperate with the school administration in the field of supervision and guidance.</td>
<td>4</td>
<td>13,33</td>
</tr>
<tr>
<td>Increasing the powers of the manager, creating time for supervision and guidance and making it useful</td>
<td>13</td>
<td>43,33</td>
</tr>
<tr>
<td>Increasing the authority, determining the written and verbal warning criteria and sending the teacher to the ministry after 3 warnings</td>
<td>1</td>
<td>3,33</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30</strong></td>
<td><strong>100,00</strong></td>
</tr>
</tbody>
</table>

When the opinions of the managers on the positive aspects of their own authorization within the framework of audit practices were examined, it was determined that there were different opinions. When the opinions of the participants were examined, 27.78% said that supervision and guidance can be carried out effectively and quickly, 22.22% said that the communication and guidance of the principal was fast and effective because he knew the teacher well, and 16.67% said that the lessons were more efficient with the increase in in-school supervision and they stated that it will be effective. The views of the participants on the positive aspects of empowering managers within the framework of audit practices are shown in Table 2.
Table 2. Participant views on the positive aspects of empowering managers in the framework of supervision practices

<table>
<thead>
<tr>
<th>Positive Aspects</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring that the lessons are more effective and efficient with the increase of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in-school supervision,</td>
<td>3</td>
<td>16.67</td>
</tr>
<tr>
<td>Since the school principal knows the teacher very well, his communication and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>guidance is faster and more effective,</td>
<td>4</td>
<td>22.22</td>
</tr>
<tr>
<td>Developing the school's sense of justice,</td>
<td>1</td>
<td>5.56</td>
</tr>
<tr>
<td>Supervision and guidance can be carried out effectively and quickly,</td>
<td>5</td>
<td>27.78</td>
</tr>
<tr>
<td>Teachers should pay more attention to their duties and responsibilities,</td>
<td>2</td>
<td>11.11</td>
</tr>
<tr>
<td>Insufficient number of supervisors, school principals' ability to guide and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>supervise more teachers,</td>
<td>2</td>
<td>11.11</td>
</tr>
<tr>
<td>Establishing a link between the Ministry's supervision units and the school,</td>
<td>1</td>
<td>5.56</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>18</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

When the opinions of the participants about the negative aspects of empowering principals within the framework of inspection practices were questioned, 36% said that school principals could use their powers maliciously, could not be objective, 24% said that the principal with a lot of responsibility would have a lot of time to audit and there would be a decrease in the time they would devote to their main duties. and ten of them stated that while the manager can contribute more to those in his own branch, supervision and guidance in other branches may also be insufficient. The opinions of the participants about the negative aspects of empowering managers within the framework of audit practices are shown in Table 3.

Table 3. Opinions of participants on negative aspects of authorizing managers in the framework of supervision practice

<table>
<thead>
<tr>
<th>Negative Aspects</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School principals' abuse of broad powers, and if they are not objective, they can</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lead to conflict, favoritism and unrest,</td>
<td>9</td>
<td>36.00</td>
</tr>
<tr>
<td>The manager, who is very busy with administrative affairs, has time concerns for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other duties by also auditing,</td>
<td>6</td>
<td>24.00</td>
</tr>
<tr>
<td>The manager's inability to guide, supervise and direct different branches by</td>
<td></td>
<td></td>
</tr>
<tr>
<td>contributing more to those in his own branch</td>
<td>5</td>
<td>20.00</td>
</tr>
<tr>
<td>Being a subject open to personalization,</td>
<td>4</td>
<td>16.00</td>
</tr>
<tr>
<td>With the decrease in the need for supervisors, the closure of these cadres occurs,</td>
<td>1</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>25</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

As a result of the evaluation of the opinions of the principals on whether there is any inspection program applied for a specific purpose in their schools, 21.74% of the participants were in the curriculum, evaluation, in order to evaluate the deficiencies and adequacy in the books, 17.39% of them were in classroom management, course presentation and monitoring of competencies, 13.04% use it in the supervision of fulfillment of responsibilities, 13.04% in communication among teachers, commitment to their duties, 13.04% in teacher registration forms. In Table 4, the views of the participants on whether there is any supervision program applied for specific purposes in the school are shown.

Table 4. Participant opinions on whether there is any supervision program implemented for a specific purpose in the school

<table>
<thead>
<tr>
<th>Supervision Program and Effects</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum assessment and evaluation, student-teacher problems, incomplete and adequacy evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of existing textbooks in regular group meetings,</td>
<td>5</td>
<td>21.74</td>
</tr>
<tr>
<td>Making more effective and efficient lessons by evaluating the classroom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>performances of teachers,</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td>Monitoring the teacher's classroom management, lesson presentation and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>competencies when there is time left for routine work,</td>
<td>4</td>
<td>17.39</td>
</tr>
<tr>
<td>The daily routine of the school administration to follow up on the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>communication between teachers, commitment to their duties, arrival and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>departure times to school,</td>
<td>3</td>
<td>13.04</td>
</tr>
</tbody>
</table>
Filling in teacher registration forms, 3 13.04
Inspecting the exam questions in case of any objection, 1 4.35
In terms of the reliability of the exams, common exam inspection of exam questions at both score and grade level, 1 4.35
Supervision of the responsibilities of staff and teachers, 4 17.39
TOTAL 23 100.00

If the principals are asked to carry out an inspection program in their schools, when their opinions and suggestions about the purpose of designing the plan are questioned, 13.46% of the participants say that the teachers fulfill their responsibilities, the students obey the school rules and internal audit is ensured, and 11.54% say that the inspectors are more involved with the teachers and principals. 9.62% of them stated that it is compulsory to participate in in-service trainings and that the development of teachers should be supervised. On the other hand, 7.69% expressed an opinion in line with the use of school administrative staff and teachers for the purpose of supervision on legal knowledge and technological competence. Table 5 shows the suggestions of the school principals regarding the aims of the plan to be designed in case it is desired to carry out an supervision program at school.

Table 5. Suggestions of participants regarding the purposes of the plan to be designed in the case of desire to conduct an supervision program at the school

<table>
<thead>
<tr>
<th>Suggestions about the Supervision Program Requested to be Conducted at the School</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fulfilling the duties and responsibilities of teachers, internal auditing for students to comply with school rules</td>
<td>7</td>
<td>13.46</td>
</tr>
<tr>
<td>Constant communication of supervisors with teachers and principals</td>
<td>6</td>
<td>11.54</td>
</tr>
<tr>
<td>Implementation of sanctions for negative reports written about the teacher</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Supervision of the school principal within the framework of a plan in order to maintain the efficiency of teachers whose nobility is approved</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>With the central end-of-term exam, all teachers follow the curriculum jointly and control equality between schools</td>
<td>3</td>
<td>5.77</td>
</tr>
<tr>
<td>Inter-branch harmony and equivalence audit</td>
<td>3</td>
<td>5.77</td>
</tr>
<tr>
<td>Establishment of school budgets and expenditure audit</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Legal, legal knowledge, technological competence supervision of school administrative staff and teachers</td>
<td>4</td>
<td>7.69</td>
</tr>
<tr>
<td>Supervision of teacher absenteeism</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Supervision of school physical structure and needs</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Supervision of school canteen and school buses</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Supervision of students' achievements and educational activities</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Periodic supervision of the adequacy of classroom-workshop-laboratories</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Measuring teacher productivity at regular intervals for each branch and implementing a reward-punishment system</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>Supervising the teacher to ensure that their clothes are worthy</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Making it compulsory for teachers to participate in in-service trainings and supervising their development</td>
<td>5</td>
<td>9.62</td>
</tr>
<tr>
<td>Evaluation of the teacher's adoption of the corporate culture</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>Conducting school general inspection within the framework of the plan-program to be prepared by the Ministry</td>
<td>3</td>
<td>5.77</td>
</tr>
<tr>
<td>Supervision of the evaluation of teacher classroom performances by students and parents with questionnaires</td>
<td>1</td>
<td>1.92</td>
</tr>
<tr>
<td>More effective supervision department</td>
<td>3</td>
<td>5.77</td>
</tr>
<tr>
<td>Taking control of teacher supervision by filling the positions of department chiefs that have not been opened in schools for years</td>
<td>2</td>
<td>3.85</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Discussion

The importance and place of school principals regarding the supervisory task finds its place in the studies conducted in the literature (Bursaloğlu, 1980; Sağlamter, 1985; Kowalski, 2003). Considering the principle of continuity in supervision, school principals should conduct observations and necessary examinations continuously throughout the year (Başar, 1988).

Over the years, the roles of school principals have changed. It is expected that these changes will create an increase in the importance that school principals attach to supervision. There are some factors that are thought to play a role in the increase in the importance that school principals attach to supervision. Some of these factors are the changes in thoughts about supervision, the current view of supervision as a guidance process, the necessity of performance improvement in the schools administrative and teacher staff, the inadequacy of the number of supervisors and the deficiencies in the current supervision system (Yılmaz, 2009).

If it is accepted that school principals are now seen as instructional leaders, principals can provide more accurate guidance for teachers in terms of their effective and efficient teaching performance and development of planned activities. In addition, since the school principal knows the teachers he/she works with, he can establish healthy and good communication and enable teachers to behave more attentively and selflessly towards their responsibilities and duties. It can provide a better communication, information flow and relationship between the teachers in the institution and the higher board to which it is affiliated.

The authority to supervise has the potential to affect school principals and school structure both positively and negatively. In some studies, it is stated that school principals who take responsibility for supervision have problems with time management in orientation, supervision is not correct or effective due to branch differences, and there are problems in cooperation with teachers. It has been stated that the lack of time allocated to teacher inspections is usually due to the intensity of school principals' other administrative work (Dibia, 2013; Onuma, 2015; Ergen & Eşiyoğ, 2017). Also in this study, 24% of the participants stated that the manager with more responsibilities would not have much time to supervise and the time to devote to his main duties would decrease. While 20% of the participants stated that while the manager can contribute more to those in his/her own branch, supervision and guidance in other branches may be insufficient gives a result. 36% of the participants are disturbed by the malicious use of the supervisory authority given to the managers, the lack of objectivity and the presence of human favoritism.

When the participants were asked about their "recommendations regarding the aims of the plan to be designed in the event that a school inspection program is requested", it was stated that it was necessary to make teachers' in-service training compulsory, to ensure internal control in fulfilling teacher responsibilities and complying with student rules, and by existing inspectors to communicate more with the school principal and teachers.

The effect of supervision by the school principal on both the teacher and the student can be an advantage in terms of creating a positive effect when considered in terms of space and time. The basis of this advantage lies in the fact that the supervision takes place at the appropriate time and place, as well as the school principal's recognition of the teachers. However, this authority to be given to the school principal can cause the situation to turn into a disadvantage because the principals cannot be objective, act emotionally, deficiencies in their branch knowledge and cannot spare enough time for their supervisory duties due to the intensity of administrative work.

As a result, it will be possible to carry out more functional managerial audits if the powers of the managers in auditing are increased. However, in this case, organizing in-service trainings for managers on supervising will make the functioning of the audit mechanism more efficient. In addition, awareness can be raised for the parties by giving lectures on teacher supervision in education faculties. Moreover, school principals should be encouraged to do graduate studies in the field of education administration and supervision.

References


THE EXAMINING OF THE PERSPECTIVE OF TEACHERS ABOUT THE READINESS OF STUDENTS IN PRIMARY SCHOOLS FOR DISTANCE EDUCATION

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ABSTRACT
In this study, it is aimed to examine the readiness levels of primary school students studying in primary schools for distance education from the perspective of teachers. In the research, the deficiencies and inadequacies related to the readiness of the students in the distance education process were emphasized as the main problem. In this study, interview technique was used within the qualitative research method approach. The research data were collected by the interview form, which included personal information and semi-structured research questions, which was prepared by the researcher after receiving expert opinion and approval. The sample of the study consisted of teachers (n=73) who worked in the Primary Education Department of the Ministry of National Education and Culture in the Turkish Republic of Northern Cyprus in the 2020-2021 academic year. The data obtained from the research were analyzed by content analysis. In line with the data obtained in the research, it was concluded that the teachers who participated in the research mostly (42.5%) used the synchronous (online) distance education model. In the results of the distance education model used by gender in line with the data obtained from the research, it was concluded that 52.2% of the male teachers participating in the research used the synchronous (online) distance education model, whereas 38% of the female teachers used the synchronous (online) distance education model. In the data of the research, it was concluded that the biggest deficiencies and inadequacies that teachers see in the distance education process are the equipment (device). 26.5% of the participants of the study stated that there is a lack and inadequacy of equipment (device). According to gender, when the data obtained from the research regarding the lack and inadequacy experienced by the teachers in the distance education process are analyzed, 27.9% of the female teachers participating in the research and 24% of the male teachers participating in the research stated that there is a lack or inadequacy of equipment (device). Considering the suggestions of the teachers participating in the research for the deficiencies and inadequacies observed by the teachers in the distance education process, they made a suggestion of "Rearrangement of Education Programs" with a rate of 35.1% according to the data obtained from the research. In the light of the data obtained in the research, when the suggestions made for the deficiencies and inadequacies seen by the teachers in the distance education process are examined according to gender, 36.5% of the female teachers and 32.3% of the male teachers who participated in the research came to the conclusion that the suggestion of "Rearrangement of Education Programs" is in the first place. has been reached. In the data of the study, it was concluded that the recommendation for aid or contribution for the supply of equipment regarding the lack of tools and equipment (device), which is in the first place with a rate of 26.5%, has a rate of 17.3%.

Keywords: Distance education, Readiness, Primary education

Introduction
The first case of Covid-19, which was declared a global epidemic by the World Health Organization (WHO, 2020) on March 11, 2020, was also seen in our country on the same dates. The increase in the cases that followed brought along some problems not only in health but also in education. Measures and practices taken to reduce the rate of spread of the disease caused not only restrictions in social activities, but also some limitations and interruptions in educational activities (Soylu, 2020). Depending on the measures taken, there has been a change in the education-teaching methods, and a sudden transition from traditional formal face-to-face education to distance education has been made due to compulsory reasons (Can, 2020).

The suspension of education in schools for a while due to the epidemic caused concern both for educators and for many stakeholders affected by education. However, it also caused some problems in adapting to the new process. The fact that such a process has not been experienced before and the lack of any experience can be considered the main reason for the problems (Huber and Helm, 2020).
Distance education, which has been developed with the change created by innovations and developments in science and technology in education, is used as an alternative to face-to-face education (Ateş, 2010). Distance education, which has been mentioned a lot with the epidemic, is not a new concept, but has been used in letters, newspapers, radio, etc. since ancient times. It has been carried out somehow with interaction tools (Clark, 2020), and nowadays, it has been shaped with the developments in information and technology.

Distance Learning: It is a system that supports individual teaching and requires the learner to be responsible for their own learning process. According to Yurdakul (2015), students in the distance education system need to develop their learning to learn skills, plan and control their own learning process.

İşman (2011) defined distance education as a system in which educational activities are carried out thanks to technology, without the need for students and teachers to be in the same environment. Uşun (2006) distance education; the source and the receiver, which are far from each other and in different places; researcher stated that materials, tools, technologies and methods such as written and printed materials, audio-visual technologies (television, video) and face-to-face education (academic consultancy) are used in learning-teaching processes. Thus, it defines it as a planned and systematic application of educational technology that provides "individuality", "flexibility" and "independence" to its recipients in "teaching age, goals, time, place and management". It also states that the communication and interaction between the source and the receivers is provided by computer-based interactive technologies.

Toğacar (2007) defined that distance education as an educational environment in which teachers and students from different places and distances carry out educational activities with technology (audio, video, data and written text).

On the other hand Bakioğlu and Can (2014) described that distance education as a planned form of education in which students and teachers teach in different ways, synchronously or non-synchronously, in an internet environment by making use of current communication technologies, without requiring students to be physically in a certain place.

Before the implementation process of distance education activities, the education model should be determined and developed; It is also necessary to prepare the technological infrastructure for the determined education model. Romiszowski (2004) divided the models used in distance education into two groups as synchronous and asynchronous.

Table 1. Distance Education Models and Features (Midkiff & Da Silva, 2011).

<table>
<thead>
<tr>
<th>Synchronous</th>
<th>It is live or real time. Students be online and attend the class at the same time. Example: Webinar communication, online, chat, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asynchronous</td>
<td>It is not live or real time. The students be online at the most convenient time and attends the lesson. Example: Individual online, team or whole group work.</td>
</tr>
</tbody>
</table>

In Table 1 examined that Synchronous and Asynchronous distance education models and their features. Students cannot be expected to switch from traditional face-to-face education to a distance education model that they have never experienced before, and to adapt to this new education model immediately (Sakal, 2017).

In order for the distance education process to continue without interruption and efficiently, of course, students must have some prerequisite behaviors; acquiring these prerequisite behaviors can be defined as readiness (Ülgen, 1997).

Topses (2003) defined that readiness as having the physical and psychological skills, knowledge and abilities necessary for the student to demonstrate certain skills. Readiness is defined by Kaya (2017) as the student's readiness to perform a skill as cognitive, affective, social and psychomotor. Aydın (2000) defined that readiness is "all of the personal competences and characteristics suitable for the requirements of a new learning experience".
Methodology
In this study, it is aimed to reveal the opinions of teachers about the level of readiness for distance education of primary school students who received face-to-face education but had to take distance education due to the epidemic, the deficiencies in students' readiness for distance education and suggestions for eliminating these deficiencies.

1) What is the distance education model used by primary school teachers?
2) What is the distance education model used by female teachers in primary schools?
3) What is the distance education model used by male teachers in primary schools?
4) What are the deficiencies in students' readiness for distance education from the perspective of teachers in primary schools?
5) What are the deficiencies in students' readiness for distance education from the perspective of female teachers in primary schools?
6) What are the deficiencies in students' readiness for distance education from the perspective of male teachers in primary schools?
7) What are the suggestions of teachers in primary schools for the deficiencies in students' readiness for distance education?
8) What are the suggestions of female teachers in primary schools to overcome the deficiencies of students' readiness for distance education?
9) What are the suggestions of male teachers in primary schools to overcome the deficiencies of students' readiness for distance education?

In the TRNC, due to the detection of the first Covid-19 case in March 2020 and the increase in the number of cases, the transition to distance education instead of face-to-face education in schools in the 2020-2021 academic years has become mandatory and inevitable. Although the developing technology has begun to be used effectively and efficiently in education, it has been observed that more teachers are active users, especially in classroom education and training in primary schools, so students who have to use technology actively and appropriately through distance education have faced some difficulties.

The interview form prepared for the research includes questions that reveal the problems faced by the students through the opinions of the teachers who interact and communicate with them the most, and offer solutions. With the findings and results to be obtained from the research, it is predicted that it will be helpful and beneficial both to reveal the situation in the current process and to the problems that may be experienced in the future distance education process.

It is necessary to plan, implement and evaluate very well in the distance education process in order to complete both the student, the teacher and the learning-teaching processes successfully and with less loss (Yurdakul, 2015). For this reason, it is thought that determining the problems of students, which is the most important element of education, and reducing these problems in the light of solution suggestions will contribute positively not only to the development of distance education activities, but also to increase the quality of education.

In the research conducted by Fidan (2020) with the aim of "examining the opinions of teachers regarding compulsory distance education that took place as a result of the Covid-19 epidemic", the opinions of teachers on compulsory distance education were analyzed with a total of 9 codes on the themes of individual and general negativities. In the research findings, while the problem of access or infrastructure was expressed as the general negativity theme most frequently expressed by the teachers with 20.3%, readiness was revealed as the most frequently mentioned individual negativity theme by the teachers with 13.5%.

In their research, Demir Öztürk and Eren (2021) aimed to "examine the level of readiness for online learning of students studying at vocational schools" and it was concluded that students' general readiness for online learning was high. When the sub-dimensions of the same study are examined, the students' "internet self-efficacy" dimension is very high, "online communication self-efficacy", computer self-efficacy", "self-learning" and "learner control" dimensions are high, "motivation for e-learning" is low level of readiness in the dimension. While the readiness for online learning did not differ by gender, in the dimensions of "computer self-efficacy", "internet self-efficacy" and "online communication self-efficacy"; In the "self-learning" sub-dimension, it is revealed that there is a significant difference in favor of women.

Uyar and Karakuyu (2020) to determine the readiness of vocational school students for e-learning and to reveal whether there is a significant difference according to the variables of department, class, gender, e-learning experience, presence of home internet, computer presence, and parental education level. for the purpose of
research. In the research, it is concluded that the readiness of vocational school students for e-learning is at a high level.

In the study conducted by Ünal, Şanlıer and Şengil (2020), it was concluded that students' online learning readiness levels are good. In addition, in the same study, it was determined that the online learning readiness levels of those who have uninterrupted and problem-free access to all technological devices and internet connection are higher.

As a result of the research conducted by Salar (2013) with the aim of “examining the readiness of the students and lecturers studying at universities in Turkey towards ODL (Open and Distance Learning)”, “In line with the analysis of the collected data, it can be said that the students are generally ready for ODL.” was expressed as.

According to the results obtained from another study by Kuzu (2020), it is stated that the readiness levels of the students are generally medium and high. Sarıtaş and Barutçu (2020) reveal that students have readiness for online learning.

In this study, which was conducted to examine the readiness levels of primary school students for online learning with the view of teachers, a qualitative research approach was used, in which individuals sought answers about situation assessments (Dey, 1993) and aimed to reveal their personal thoughts (Storey, 2007). The interview technique in which the research participant answered the questions previously prepared by the researcher (Kuş, 2003).

The population of the research consists of 1634 teachers working in primary schools affiliated to the TRNC Ministry of National Education and Culture in the 2020-2021 academic year. 73 teachers who participated in the study with the principle of volunteering and answered the questions constitute the sample of the research.

An interview form was created as a data tool for this research, which was conducted to examine the online learning readiness levels of primary school students with the perspective of teachers. The interview form prepared by the researcher was approved by taking expert opinion and applied.

The interview form consists of two parts. In the first part of the interview form, there are questions about the demographic profiles (gender, age, seniority and task regions) of the participants participating in the research. In the second part, there are semi-structured research questions. Research questions are;
1. Which distance education model do you use in the distance education process?
2. What are the inadequacies and deficiencies in students' readiness for distance education?
3. What are your suggestions to increase the readiness level of students in distance education?

Participants participated in the research on a voluntary basis. The data obtained from the research were analyzed by content analysis. The main goal in content analysis is to reach concepts and relationships that can explain the data obtained (Yıldırım & Şimşek, 2018). The data is analyzed in four steps: 1) coding the data 2) creating a theme 3) organizing the codes and themes, 4) defining and interpreting the findings (Yıldırım & Şimşek, 2018).

In order to reveal the opinions in the research, the data were divided into meaningful sections after the transcripts were taken. After the data of these sections were coded, themes were created. After examining and evaluating the data through codes and themes, it was interpreted. It is the method used to characterize and compare documents, interview data or records taken in interviews with content analysis, which is the most widely used in qualitative research (Altunışık, Coşkun, Bayraktaroğlu, & Yıldırım, 2005).

Findings

<table>
<thead>
<tr>
<th>Table 2. Distribution of Teachers by Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

68.5% of the participants in the study were female and 31.5% were male.
Table 3. Distribution of Teachers by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30 years</td>
<td>13</td>
<td>17.8</td>
</tr>
<tr>
<td>31-40 years</td>
<td>27</td>
<td>37</td>
</tr>
<tr>
<td>41-50 years</td>
<td>32</td>
<td>43.8</td>
</tr>
<tr>
<td>51 years and above</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100</td>
</tr>
</tbody>
</table>

17.8% of the participants in the study are in the age range of 21-30, 37% are in the age range of 31-40, 43.8% are in the age range of 41-50 and 1.4% are in the age range of 51 and over.

Table 4. Distribution of Teachers by Seniority in the Occupational

<table>
<thead>
<tr>
<th>Seniority</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>18</td>
<td>24.7</td>
</tr>
<tr>
<td>11-20</td>
<td>34</td>
<td>46.6</td>
</tr>
<tr>
<td>21 and above</td>
<td>21</td>
<td>28.7</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100</td>
</tr>
</tbody>
</table>

24.7% of the participants in the research have occupational seniority between 1-10 years, 26.6% have occupational seniority between 11-20 years and 28.7% have occupational seniority of 21 years and above.

Table 5. Distribution of Teachers by Task Regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicosia</td>
<td>26</td>
<td>35.6</td>
</tr>
<tr>
<td>Kyrenia</td>
<td>14</td>
<td>19.2</td>
</tr>
<tr>
<td>Famagusta</td>
<td>16</td>
<td>21.9</td>
</tr>
<tr>
<td>Iskele</td>
<td>3</td>
<td>4.1</td>
</tr>
<tr>
<td>Guzelyurt</td>
<td>10</td>
<td>13.7</td>
</tr>
<tr>
<td>Lefke</td>
<td>4</td>
<td>5.5</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100</td>
</tr>
</tbody>
</table>

When the task regions of the study participants are examined, 35.6% in Nicosia, 19.2% in Kyrenia, 21.9% in Famagusta, 4.1% in Iskele, 13.7% in Guzelyurt and 5.5% in Lefke.

Table 6. Distance Education Model Used by Teachers

<table>
<thead>
<tr>
<th>Distance Education Model</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronous</td>
<td>31</td>
<td>42.5</td>
</tr>
<tr>
<td>Asynchronous</td>
<td>20</td>
<td>27.4</td>
</tr>
<tr>
<td>Synchronous + Asynchronous</td>
<td>22</td>
<td>30.1</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100</td>
</tr>
</tbody>
</table>

42.5% of the research participants apply Synchronous, 27.4% Asynchronous, and 30.1% both Synchronous and Asynchronous distance education models.

Table 7. Distance Education Model Used by Teachers by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance Education Model</td>
<td>Frequency (f)</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Synchronous</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Asynchronous</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Synchronous + Asynchronous</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

38% of the female participants participating in the research apply Synchronous, 34% Asynchronous, and 28% both Synchronous and Asynchronous education models.

52.2% of the male participants participating in the research apply Synchronous, 13% Asynchronous and 34.8% both Synchronous and Asynchronous education models.
Table 8. Deficiencies and Inadequacies of Teachers in the Distance Education Process

<table>
<thead>
<tr>
<th>Deficiencies, Inadequacies</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool-equipment (Device)</td>
<td>42</td>
<td>26.5</td>
</tr>
<tr>
<td>Infrastructure (Internet)</td>
<td>33</td>
<td>20.9</td>
</tr>
<tr>
<td>Motivation, Concentration</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>Technology Literacy</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>Family</td>
<td>18</td>
<td>11.4</td>
</tr>
<tr>
<td>Contents</td>
<td>17</td>
<td>10.8</td>
</tr>
<tr>
<td>Student self-control</td>
<td>7</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>158</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to the research participants, the most important deficiencies observed in the distance education process are the equipment (devices) with 26.5%, the infrastructure experienced on the internet 20.9%, the motivation of the students 14%, the technology literacy of the students 12%, the family 11.4%, course content 10.8% and student self-control 4.4%.

Table 9. Deficiencies and Inadequacies of the Teachers in the Distance Education Process by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficiencies, Inadequacies</td>
<td>Frequency (f)</td>
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<tr>
<td>Tool-equipment (Device)</td>
<td>29</td>
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<tr>
<td>Infrastructure (Internet)</td>
<td>23</td>
<td>22.1</td>
</tr>
<tr>
<td>Motivation, Concentration</td>
<td>16</td>
<td>15.4</td>
</tr>
<tr>
<td>Technology Literacy</td>
<td>12</td>
<td>11.5</td>
</tr>
<tr>
<td>Family</td>
<td>12</td>
<td>11.5</td>
</tr>
<tr>
<td>Contents</td>
<td>9</td>
<td>8.7</td>
</tr>
<tr>
<td>Student self-control</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>104</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to the female participants of the research, the deficiencies and inadequacies observed in the distance education process are 27.9% of the device, 22.1% of the infrastructure experienced on the internet, 15.4% of the student motivation, 11.5% of the students' technology literacy, 11.5% of the family, 8.7% of the course content and 2.9% as student self-control.

According to the male participants of the research, the deficiencies and inadequacies observed in the distance education process are 24% device, 19% infrastructure experienced on the internet, 15% course content, 13% students' technology literacy, 11% student motivation and 11% family and 7% as student self-control.

Table 10. Teachers' Suggestions for Deficiencies and Inadequacies Observed in the Distance Education Process

<table>
<thead>
<tr>
<th>Deficiencies, Inadequacies</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational program</td>
<td>53</td>
<td>35.1</td>
</tr>
<tr>
<td>Device</td>
<td>26</td>
<td>17.3</td>
</tr>
<tr>
<td>Technology Literacy</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Family</td>
<td>23</td>
<td>15.2</td>
</tr>
<tr>
<td>Internet</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Number of Students</td>
<td>6</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>151</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
According to the research participants, for the deficiencies and inadequacies they see in the distance education process; The highest rate of development and reorganization of education programs at the rate of 35.1%, 17.3% for the supply of devices, 16% for the development of the literacy of students regarding the use of technology, 15.2% for the contribution and participation of the families in the process, 13% for the strengthening of the internet infrastructure and 3.4% of them made suggestions to reduce the number of students.

Table 11. Teachers' Suggestions for Deficiencies and Inadequacies Observed in the Distance Education Process by Gender

| Distance Education Model | Female | | | Male | | |
|--------------------------|--------|--------|--------|--------|--------|
| Educational program      | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) |
|                         | 35 | 36.5 | 18 | 32.3 |
| Device                   | 19 | 19.7 | 7 | 12.8 |
| Technology Literacy      | 13 | 13.6 | 11 | 20 |
| Family                   | 14 | 14.6 | 9 | 16.3 |
| Internet                 | 11 | 11.5 | 8 | 15 |
| Number of Students       | 4 | 3.9 | 2 | 3.6 |
| Total                    | 96 | 100 | 55 | 100 |

According to the female participants of the research, for the deficiencies and inadequacies observed in the distance education process; 36.5% re-development and reorganization of education programs, 19.7% device supply, 14.6% contribution and participation of families in the process, 13.6% improving students' literacy on technology use, 11.5% strengthening internet infrastructure and 3.9% reduce the number of students made suggestions.

According to the male participants of the research, for the deficiencies and inadequacies they see in the distance education process; 32.3% rearrangement of education programs, 20% development of students' literacy on technology use, 16.3% contribution and participation of families in the process, 15% strengthening internet infrastructure, 12.8% device supply and 3.6% reduce the number of students made suggestions.

The Covid-19 outbreak has affected not only the health field, but also many fields and of course education. So much so that 770 million people were affected by the pause in education during the epidemic period (Zhong et al. 2020). The transition from traditional face-to-face education to distance education due to compulsory reasons has brought students face to face with a situation that has not been experienced and experienced before. Therefore, in this process, the lack of readiness of the students and the inadequacies brought with it the difficulty of adapting to the process. According to Sakal (2017), it is natural for those who do not have knowledge and experience to adapt to the new and different online learning environment immediately.

26.5% of the participants who participated in the research emphasized the lack of readiness of the students, the inadequacy of the device, which is coded as equipment, as inadequacy. It is normal for the lack and inadequacy in this aspect to have a negative impact on the student's readiness. It is said that if quality (Uysal & Kuzu, 2011) and success (Volery & Lord, 2000) are aimed in the distance education process, it is important to develop and improve technological opportunities (Rose & Blomeyer, 2007). According to the data obtained from the research, the participants who participated in the research also offer suggestions (17.3%) in the direction of aid and contribution of equipment (device). Christopher (2014) and Johnson (2020) also point out the importance of having access to the necessary equipment.

According to the opinions of the teachers participating in the research, the inadequacy of the internet, which is coded as an infrastructure, is stated as the inadequacy that the students see in their readiness. The inadequacies in infrastructure and the inadequacy of the internet not only cause problems in distance education, but also negatively affect the readiness of students. Demir Öztürk and Eren (2021) found a significant difference for students who have more internet access as a result of their research and interpreted it as "It is expected that the online readiness levels of students with increased access to technology are expected to increase".

The fact that students have to participate in distance education through a program that requires technological knowledge and skills, which they did not use before, did not have sufficient knowledge and skills, again appeared as a deficiency in the data obtained. Christopher (2014) and Johnson (2020) point out the importance of knowing the program used by the user and having skills and experience in this regard.
Discussion and Conclusion

According to the findings obtained in the study, it is concluded that the teachers working in primary schools, which are connected to primary education, mainly use synchronous (online) distance education model in distance education applied for compulsory reasons. According to the opinions of the teachers participating in the research, the lack of equipment (device) is stated as the most important deficiency regarding the readiness of the students in the distance education process being implemented. Among the findings, the lack of equipment (device) is expressed as the deficiency seen with the highest rate by both female and male teachers when evaluated according to gender.

When the results obtained from the research are examined, it is seen that although the lack of equipment (device) is the most expressed inadequacy in terms of student readiness according to the opinions of the teachers, according to the opinions of the teachers who participated in the research, it is seen that they present a suggestion that the arrangements to be made in the education programs will increase the readiness of the students by positively affecting them.

The teachers stated that the arrangements to be made for the following issues while organizing the education programs will contribute positively to the readiness of the students in distance education. These suggestions are as follows;

- Reducing course content.
- Planning and arranging course contents in an applicable way in online education.
- Planning and arranging course content by taking into account the time spent by teachers in computer programs during the distance education process.
- Include activities where the student can practice while the course contents are planned and organized.
- Planning and arranging the course contents considering the age and attention span of the students.
- Adding a course for the use of computer programs to be used in the distance education process to the education programs.
- Including the activities and studies that will increase the motivation of the students in the course content.

Recommendations

- In this study, which was conducted to examine the readiness levels of primary school students for online learning with the view of teachers, a sample of 73 teachers was used. Conducting a research in which the number of samples is increased in order to obtain more participant views;
- In this study, the readiness levels of the students were examined with the view of the teacher. Examining the readiness level of the student according to the student's or family's view; examining the readiness levels of teachers who are effective practitioners of distance education;
- Comparison of the readiness levels of a group with a lack of equipment and another group without equipment (equipment);
- Comparing the readiness levels of a group that has knowledge about the computer program used and another group that is not aware of the computer program used;
- It is recommended to examine the student levels before and after the implementation of a education program that will be prepared by taking into account distance education.

References


THE EXAMINING SCHOOLS' FINANCIAL RESOURCE PROBLEMS IN TERMS OF INCOME AND EXPENSES

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ABSTRACT
There are problems in terms of financial resources required for schools to provide the expected education service. The income sources and opportunities of public schools are different from each other. The region where the school is located and the socio-economic status of the parents are the most important factors affecting the income of the school. School principals try various ways according to the current conditions in order to increase the income of their schools. In addition, the increasing population and increasing student numbers in the country every year puts schools in financial difficulties. For this reason, the government and schools are looking for new ways to reduce some costs and increase incomes at the same time.

Keywords: Finance, School Revenues, School Expenses, Cost reduction.

Introduction
The school administration is responsible for overcoming all the problems faced by the school. The most important of these problems is the problem of creating financial resources. As Bursaloğlu (1999) stated; The main task of the school administration is to keep the school alive in a way that achieves the stated goals, and it is possible by making the best use of the existing human and material resources at the school. Each school administration tries to find ways to overcome these problems by carrying out certain activities according to their own possibilities and possibilities. The performance, creativity and socio-economic environment of the school are important in providing this financial resource (Özer, Demirtaş & Ateş, 2015).

Public schools, where more than 40 thousand students are educated in TRNC, are not given a budget by the government. Although the rate allocated for education in the general budget is 12.62 percent, the rate allocated for increasing the quality of education and developing schools within this budget is around 2 percent. The item with the largest share in the budget is seen as 'personnel expenses'.

Schools need a school budget in order to be able to program educational activities, participate trip-observations and sports activities, provide materials that each child will benefit equally from, use technological opportunities, provide materials for art activities, meet basic expenses such as free internet, cleaning and teacher assistants for pre-school classes.

No budget has been allocated to schools for years by the government and the Ministry of Education. As a result, school administrators and parent-teacher associations were obliged to collect "donations" in order to meet the economic expenses of the schools. School administrators and teachers, who demanded materials or fees to overcome these deficiencies, faced families (Erdoğan & Demirkaşmoğlu, 2010).

Most discussed issues that come to the agenda every year when student register begins; whether parents will pay registration fees to schools or whether school administrators will receive registration fees from parents. Every authorized public, from the Minister of National Education to the administrators in the provinces; It is announced that if any manager requests money from the parent, inform the necessary (such as investigation or dismissal) will be made. While these warnings made by the authorities give strength to the public, school administrators are in a dilemma (Kurul- Tural, 2002).
The philosophy of collecting money from students' families in terms of rationality in Turkish society is not fully understood. Because in society, the state is perceived as its main duty to provide education services to its citizens, as it is responsible for everything. In fact, when school administrators and teachers are asked to provide the student's parents with tools such as books and notebooks, the parents' reactions are “the government should do the rest”. Generally, the importance of two basic factors for human life and development such as health and education has not been fully, accurately and appropriately recognized and determined (Karataş ve Çakan, 2018). The future earnings of the society or the individual are directly proportional to the investment made in education. The gains of investment in education cause not only the economic development of the society, but also the reduction of social problems such as poverty, theft, human abuse and murder (Burrup, Brimley ve Garfield, 1993). Devlet okullarının nasıl finansman edileceği konusu sadece ülkemizde değil gelişmiş ülkelerde tartışma konusudur. In particular, the relationship between the economic status of schools and the socio-economic status of the region they serve brings up the issue of equality in education. In fact, the voucher system is being tried to increase the competition between schools (Doğan, 2014; Elchanan and Geske, 1990). Each student receives the check in return for the cost to the state and receives service at the school upon request in this approach. If the price of the school is high, the rest must be paid by the parents.

Financial Resources in School
Finance literally means money. Financing is also needed for the development of the education system. Education is an irreplaceable and indispensable process that enables the development of the individual in general and the society in general, supports economic development, develops material and spiritual values and transfers them to future generations (Karaaslan, 2005; Gedikoğlu, 2005). At this point, careful management of the process is of great importance.

When evaluating education financing in the world, three different types of financing methods are generally encountered. The first of the approaches towards providing resources for education is the "direct financing method", the public financing, in other words taxation, in which education expenditures are provided from the public budget. The state pays for educational resources with taxes just as with public goods. The second understanding is the "indirect (private) financing method", the financing of monetary resources in education from the families of the students. It is the payment of educational goods with fees instead of taxes. Thirdly, the "mixed financing method" is the "partial financing" approach, which is based on the direct or indirect provision of resources from every segment that benefits from education. Educational resources are financed by the public and private sectors. While the state supplies educational goods, it also gives privileges to the private sector in this regard, and in a sense, education is privatized (Kurul Tural, 2002).

It is seen that education planning and financial management have a centralized structure and decentralization policies are implemented in practice (Karakul, 2014). The development of financial policies of education programs in line with development plans is mostly the state financing of compulsory education. In addition, it continues within the framework of a similar understanding that includes the participation of those who benefit from education at other education levels, saving as much as possible in education expenditures, increasing the resources to be allocated for education with general extra-budgetary funds, and increasing the share of private enterprise in the provision of education services (Küçüker, 2010).

Income and Expenses of Schools
The approach most used by public schools in solving financial resource problems; It is the registration fee received from the parents of the students. At registration, donations are taken against receipt. These registration fees are determined by the school administration and the Parents Association. Same as, the registration fee will be charged to each parent who enrolls their child in the school.

In addition to the economic problems of these schools, the administrators and teachers take the responsibility even in meeting some of the needs of the students. Families do not even pay attention to come to the parents' meeting, especially fathers are even more indifferent (Gündüz, 2018). Parents are insensitive in meeting their children's stationery needs. Some families criticize why the source of income is not covered by the school. The same situation was put forward by the Board-Tural (2002). Significant inequalities of opportunity were observed between schools, with primary schools' private funding sources differing greatly according to the socio-economic level of the school district. Indeed, schools in rural areas can earn more limited income than central schools. This situation restricts the mobility of rural schools.

Another source of income for schools is the “Annual School Magazine”. Selling the magazine published towards the end of the year to students for a certain fee provides an income to the school. In addition, a more important income of this magazine is the advertisements it contains. Advertisements collected from tradesmen, merchants
and banks in the region where the school is located. Schools which are located in center of city, have more advantage. The tradesmen, traders and shopping centers in the center are much more. Advertising revenues of central schools could be much better.

In addition, businesses such as tradesmen, merchants and banks of the region where the school is located may contribute financially to the school from time to time. When the location of the school is a rich region and a lively residential area, this situation will be positively affected to the schools. However, these companies may also have expectations from the school administration in return for their help. The expectations of the school environment that contributes to the school financing explained in two sub-themes. These are expectations from the school administration and students. Expectations from the school administration; Having an intrusive attitude to school; grade expectation; increasing the academic success.

Book and Library Week is another source of income for schools, which is held once a year. In this week, a certain percentage is received from the publishing house that is agreed to sell books at the school, and income is generated for the school. Rental income from canteens also provides a regular financial resources to the school.

In addition, a part of the income from school uniforms and physical education clothes goes to the school. In fact, sometimes schools make an agreement with certain stores and try to donate a certain amount to the school in the sales of school uniforms or to meet the needs of the school.

The income of kindergarten classes in schools is another source of income for the school. In our country, four years of age do not enter compulsory education.

In addition, schools sometimes receive services from the municipalities they are affiliated with. Something needed is met by purchasing it by the municipality. So much so that the income sources and financial situation of the municipalities to which the schools are affiliated affect the contributions made to the school in a parallel way. In other words, if the income of the municipality to which it is affiliated is high, the opportunities for financial aid to the school also increase. The tickets that are printed and sold towards the end of each academic year also leave a serious profit to the schools.

Students can be given courses by the school teachers within the framework of the criteria determined by the ministry according to the demand. Teachers receive a part of the income obtained from these courses and the school receives a part. Income can also be obtained from kermis that can be held once or twice during the academic year. Another income opportunity for schools is the performances held at the end of the semester.

The needs of the school are tried to be met by contacting different associations and foundations (such as Charities, Supporting Contemporary Life Associations) around the school. The money obtained at the kermess and nights organized by the parents union on behalf of the school is another source of income for the school. School principals stated that they had difficulty in maintaining the income and expenditure balance in the distribution of financial resources of their schools and their expenses did not meet their incomes.

The money spent for general cleaning of the school, the soaps, disinfectants and toilet papers put in the toilets are a serious expense to the school. Although the Ministry sends these materials, it is not enough to meet the needs of the school. Another expense of schools is the photocopies. In addition, the repair and maintenance of photocopiers, and even the purchase of new photocopiers, is an important expenses for schools.

The school buildings of the school must be in good condition. That's why the maintenance, repair and painting of the damaged and broken parts of the school building, both on the exterior surfaces and in the classroom environments, is the biggest among the school expenses.

In addition, school athletes' food needs, and transportation expenses for games and competitions are among school expenses. Another expense of schools is the internet expense. Maintenance, repair of air conditioners and even the purchase of new air conditioners are among the school expenses. The rate of meeting the needs of the appropriations sent by the Ministry is very low. The above mentioned are among the regular expenses of the schools. Apart from these, many unaccounted expenses have to be covered during the academic year.

**The Distribution of Financial Resources**

“Expenditure per Student”, which is accepted as one of the other important criteria in the financing of education, has a special importance for schools as it directly affects the quality of education. The research revealed that the average amount spent per student among OECD countries is around $10,493. Turkey ranks 33rd with an
There is a constant increase in education costs and other social needs. Due to the limited resources available from the state budget for education, strategic plans should be made to reduce education costs. These strategies should offer less costly solutions to education services. In other words, in reducing the costs in education, it is meant to be able to provide education services to students without compromising the quality of education, without deviating from its goals, with the same resources, or to reduce unit costs (Yapıcı, 2006).

The recommendations discussed below may not apply equally to all countries. However, these are the solutions that have been applied in different countries and should be evaluated within the conditions of each country. Of these, discussions about shortening school times, starting school at a later age, increasing classroom capacities, dual-triple education, full use of facilities, capital costs, and teacher costs are summarized. Among the things that can be done to reduce the cost; shortening school periods, increasing the class capacities, duration of the schools, reducing grade repetition and school dropouts, optimal school sizes and school districts (Çoban, 2009).

**Conclusion and Recommendations**

A school-centered budget approach should be put into practice by allocating a budget to schools and ensuring the participation of all stakeholders (administrators, teachers, parents, experts, students, local administrations) in the budget-making process. A new law should be enacted and schools should be allocated a budget, and the state should allocate budgetary appropriations from the general budget to schools.

Most effective and systematic approaches to the solution of this problem, financial resources can be provided to schools by giving some of the taxes collected to the educational institutions of that region with a certain regulation by the municipalities.

There are different ways to significantly reduce the unit cost per student without affecting the student's achievement level. In other words, by keeping the quality constant, education opportunities can be provided to more people with the same expenditures. Of course, these practices cannot be expected to be equally valid in every country. What is important is the development and implementation of models suitable for the country's own conditions. The main point to be emphasized here is the necessity of developing new strategies and benefiting from international experiences in order to get out of the financial bottlenecks faced in the education sector.

Recommendations made according to the findings obtained in the research are are given for future studies school principals and School Parent Association.

- It can be recommended that these relations will always be advantageous in providing financial resources.
- It can be recommended that both the teachers working at the school and the Parent Association will work more efficiently.
- School administrators are recommended to be an example to others by constantly improving themselves.
- The legal financial resources of the schools are managed by the School Parent Association. It is always recommended to cooperate with the school principals.
- Relations with the Ministry of National Education are of great importance in providing resources. It is always recommended to have good relationship between the Ministry of National Education and schools.
- It may be suggested to take the opinions of teachers on financial expenditures to be made.
- It is very important that the members of the School Parent Association act together. It is recommended that members work in harmony.

**References**


THE IMPACT OF THE DISTANCE EDUCATION ON STUDENTS DURING PANDEMIC PROCESS AND THE OPINIONS OF THE PARENTS

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ABSTRACT
In this study, the ideas of students and parents about distance education were taken. The study was conducted on 100 different students. Students and parents from different education levels (primary education, university, etc.) are included. In the study, it was asked how the students changed after the distance education process. It has been tried to find out what disadvantages and benefits it provides for students. As a result, although students have learned to use technology more beneficially, distance education has caused a serious lack of interest and concentration, especially for younger students. The lack of sufficient electronic devices or internet connection also prevented students from receiving education equally. As a result of the study, it was obvious that educators and educational institutions should organize studies and aids in order to prevent this inequality. Education life, which is the most important time in an individual's life, has been seriously affected by the COVID-19 pandemic and the quality of education has decreased. It has become clear with this study that more effective methods and systems should be found if this process is to be recovered and if it continues.

Keywords: Pandemi, distance education, students, parents

Introduction
With the start of 2020, as in the whole world, our country has suffered an unprecedented crisis with the effect of the COVID-19 pandemic. Students and educators were the most affected in this process. While the majority of the teachers had to teach in a way they had not experienced before, the students had to go through an unfamiliar process to complete their education. Due to the difficulty of planning in this unexpected moment of great crisis and the lack of time to evaluate each method, all students of the world have been forced to distance education, which is a new education model. The process has been quite difficult for educators who have to go through a training program first for this method, which even many educators have never experienced. The continuation of the pandemic has led to the development of new tools and systems, and it has been possible to provide a more effective education. However, it is necessary to carry out studies at all levels in order to find out whether this is sufficient and to understand how the whole distance education process continues (Daniel, 2020; Karip, 2020).

At the beginning of the distance education process, difficulties and problems arose due to the fact that the educators were inexperienced and did not have sufficient knowledge and skills. Guidance has been given in order to make plans for distance education to be more effective and to ensure that both educators, students and most importantly parents have sufficient information about how the process works (Shattuck, Dubins & Zilberman, 2011). The problems and deficiencies of students and parents should be understood with the studies carried out while distance education continues. Then, according to the results, this newly formed education model should be optimized. The same education model cannot be used because the problems of each field of education (primary, secondary, university, etc.) are different. For these reasons, information from parents and students is vital important.

Aim of the Research
The aim of this study is to reveal the results of the distance education model, which has been continuing since March 2020 in our country. It is made to understand and verify what the advantages and disadvantages are to students and parents. At the same time, it will be an effective questioning method to observe whether the educators can reach enough students as a result of the study. At the end of this study, it will help us to obtain information about what kind of arrangements should be made in the distance education model, what kind of systems should be developed, and how training should be given not only to students but also to trainers. The research will be useful to understand whether the distance education model, which is one of the most important issues, is sustainable and whether it is possible to turn it into a permanent method.
Methodology
9 questions prepared by the researcher were asked to 100 different parents. The results of all the answers received were statistically recorded. As a result of the study, the questions were asked to 13 parents of primary school students, 26 parents of secondary school students, 50 parents of high school students and 11 university students and/or their parents.

Table 1: Demographic Characteristics of Students

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Gender</th>
<th>Number of Siblings</th>
<th>Having previous distance education experience</th>
<th>Availability of sufficient devices and internet before</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary school: 13</td>
<td>Male: 52</td>
<td>No siblings: 62</td>
<td>Yes: 14</td>
<td>Yes: 88</td>
</tr>
<tr>
<td>Secondary School: 26</td>
<td>Female: 48</td>
<td>Two siblings: 26</td>
<td>No: 86</td>
<td>No: 12</td>
</tr>
<tr>
<td>High School 50</td>
<td>Three or more siblings: 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Education: 11</td>
<td></td>
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Questions and Findings
Question 1: Do you have an internet connection at home? What do you think about internet quality? Have you regularly had problems with the internet?
Conclusion:
Students had an internet connection during the distance education period.
- 70 people said they have good connections
- 30 people stated that they regularly have problems with the connection.

Question 2: Which digital/electronic systems and devices did you use in distance education?
Conclusion:
During the distance education period, students used Moodle or Google Meet System.
- 53 people replied that they monitor distance education via their personal computers.
- 47 people stated that they follow up on a mobile device (phone or tablet).

Question 3: Distance education, what kind of changes have you observed in your children's learning motivation? What are your thoughts on this?
Conclusion:
- 70 parents think that distance education affects children's behavior negatively. According to the parents, the motivation and desire of the children towards school decreased. They stated that young people no longer have the enthusiasm to work, do not display disciplined behavior and do not want to take any responsible action.
- 18 parents stated that they are satisfied that their children can pass their classes with less effort, and that their children are less sick and have a healthier school period since they are less likely to encounter all other diseases.
- 12 parents are not sure what kind of impact and change the distance education has on their children.

Question 4: What do you think are the different benefits of distance education compared to face-to-face education in children's education life? What are your thoughts on this?
Conclusion:
A summary of the most frequently received answers is as follows;
- With the distance education model, students learned how to use the internet and technology more effectively in an instructive way.
- Students were able to receive training regardless of place and time.
- Students learned to develop themselves individually and thanks to this development, they had to learn to create a study plan and study order independently of their parents. With this teaching, there has been an improvement in the perception and skills of responsibility.
- The student learned where and how to reach the right information they wanted and they were able to do this at the desired place and time.
- The students had the opportunity to repeat the education and all the information they received.
Question 5: What disadvantages did distance education create for your children's education life? What are your thoughts on this?

Conclusion:
A summary of the most frequently received answers is as follows;

- Sometimes it is difficult or not possible for the student to attend the lesson or training due to technical problems that occur frequently in the Internet connection.
- Failure of students to attend classes or training from time to time due to malfunctions caused by electronic devices.
- Since the distance education model is different for students, it is negatively affected and causes low attention and motivation.
- Difficulty in planning, studying and attending classes in distance education for students who cannot acquire the habit of self-study.
- Difficulties in education in applied courses such as workshops and laboratories
- Families with many children cannot attend classes at an optimum level due to insufficient number of electronic devices or insufficient internet bandwidth. In fact, this creates additional expenses for families.

Question 6: Do you think that in distance education, children can participate in classes as effectively as they do in the classroom?

Conclusion:
All of the parents responded in the same way.

- Parents stated that they think distance education is as effective as face-to-face education. Home education is not as effective and dynamic as in school and classroom environment. The fact that he cannot physically see a direction guide causes the learner to get lost much more easily and quickly. At the same time, when the student cannot establish good and close relations with the educator, he loses his love for the school. This problem is more prominent especially in primary school students. Due to the comfort in the environment, the student has difficulty in attending the lesson and does not show the necessary attention to the lesson. Losing concentration very easily and the physical absence of an educator to constantly watch and warn often lead to spending time with other activities instead of listening to the lesson carefully. This result is an issue that arises more in younger students.

Question 7: Do you think that educators prepare effective course materials in distance education? What are your thoughts on this?

Conclusion
A high percentage of parents (85%) gave the following answer in summary.

- In distance education, educators have prepared a sufficient amount of materials and presented these materials to students. Students can easily access lecture notes, lecture summaries, practice and study questions, unit slides, videos with lectures through educational software.

Question 8: Do you think distance education is an effective form of learning? What are your thoughts on this?

Conclusion

- 85 of the parents answered no. They stated that the students did not find the distance education method effective because they experienced adaptation and distraction.
- 15 of the parents answered yes. They stated that they found the distance education method effective, with the thought that the student could access the information more easily at any time.

Question 9: How do you think the education should be continued? What are your thoughts on this?

Conclusion:

- 80% of parents want face-to-face education if hygiene and preventive measures are taken.
- 15% of the parents think that both face-to-face education and distance education should be done simultaneously with diluted education.
- 5% of parents do not find it appropriate to switch to face-to-face education until the pandemic is over.

Conclusion and Discussion
Teachers, students, parents and the Ministry of National Education have accomplished great things in this process with the limited opportunities they have. With the forced change of the education system in the TRNC, each individual did their best and ensured that the students could receive adequate education. Looking at the results of the survey, parents are happy that their children are safe and healthy at home, but they think that they do not receive adequate education. The lack of sufficient infrastructure of the distance education system before the pandemic may seem to be the biggest reason for the disruption in education.
Updating the systems over time and gaining experience on both sides has been sufficient to create a more effective education system. However, at the end of this study, it seems that it is easier to receive and give face-to-face training. Especially since children in primary school age can be distracted much more easily, it is natural for them to want to see their teachers in front of them. In primary education, which is the most important step of education, it is of great importance for children to love their schools and teachers for their own future and the future of our country. For this reason, students at this age should be approached more carefully, especially for these children, who are much less social with the effect of pandemic and quarantine, the importance of distance education increases more. Educators need to have the necessary materials and use more effective effective systems so that they can get to know and love not only their school but also their friends from a distance, have a good time while looking at a device screen, and receive proper education. At the same time, with the contribution of the ministry of education or schools, it is necessary to ensure that each child has a sufficient amount of internet data quota and has electronic devices.

The biggest problem in undergraduate education, on the other hand, is that practice and workshop courses are not fully implemented, which still remains a problem today. Practical training is vital for these students who will soon enter their professional life. Therefore, these students should be prepared for face-to-face education until an optimum level of practical education model is created with the distance education model. Institutions and educators, on the other hand, need to make sure that students complete their education in a healthy way in this process. If necessary, special information programs should be made for educators.

Mostly, students and parents from all levels do not consider the distance education model sufficient. One of the biggest reasons for this is the lack of concentration. Although it is possible to reach the repetition of the education at any time, this model also reduces the perception of the student and kills the interactive education system. Although face-to-face education is more beneficial as everyone's common opinion, we have to try different systems when necessary to protect our health. Our goal should always be to ensure that better and higher quality education reaches students in these changing systems.

According to the education level, students' thoughts about the distance education system;

PRIMARY SCHOOL: Primary school students had difficulties in using the systems, connecting to the internet and following the lessons.
MIDDLE SCHOOL: Secondary school students have experienced a lack of attention and motivation in the lessons.
HIGH SCHOOL: High school students experienced a lack of attention and motivation in the lessons. In addition, some students have succeeded in getting high grades by turning online exams into opportunities.
UNIVERSITY: University students think that distance education is more inefficient than face-to-face education and that it is easier to pass the course.

Recommendations

Within the scope of this study, the following suggestions were presented to institutions, trainers and researchers providing distance education:

- It is important in terms of the “user-friendly” principle that the distance education system to be used by the institutions is simple, plain and easy to use.
- Quantitative and qualitative studies can be designed by taking the opinions of all stakeholders (instructor, student, distance education process manager) for the evaluation of emergency distance education in education centers during the pandemic period.
- Equal access to technology by each student
- Different guidelines for each age group
- Having enough information from their parents and giving their children enough support
- Receiving the necessary training in order to master all distance education systems in the training teachers
- Explaining to the public why the distance education process should be compulsory when necessary.

REFERENCES

ABSTRACT

STEM education deals with education with an interdisciplinary relationship and a holistic approach (Smith & Karr-Kidwell, 2000). While it is based on science and mathematics disciplines, it also includes the fields of technology and mathematics (Bybee, 2010). STEM education emerged in the 1990s (Bybee, 2010). STEM is a system that aims to provide students with the ability to think regularly, communicate, adopt ethical values, research, produce, creativity and solve problems in the most appropriate ways by coordinating the knowledge and skills of science, mathematics, technology and engineering with disciplines. Activities that will increase the interest and desire of students with 21st century skills towards science, mathematics, technology and engineering departments are included in the content of STEM education (Baran, Canbazoğlu Bilici, Mesutoğlu, 2015).

School administrators have a great role in the development of 21st century skills. The permission to use the STEM Awareness Scale and the necessary permissions were obtained from the Ministry of Education, Education and Training Department. The aim of this research is to examine the awareness of school administrators and teachers working in the Primary Education and Vocational Technical Education Department in the Turkish Republic of Northern Cyprus about STEM education. In addition, it is to examine whether the awareness of school administrators about STEM education differs according to the variables of gender, age, educational status, graduated degree program, occupational seniority, and the task performed. For this purpose, the STEM Awareness Scale was applied to a total of 126 teachers, including 43 school principal and assistants, 83 teachers, working in the schools affiliated to the vocational education department and the primary education department in the TRNC, Ministry of National Education and Culture. Due to the covid-19 epidemic, which was the sample of the research, simple random sampling method was used in random sampling methods via Google Forms. The data obtained from the scale will be analyzed with the SPSS 25 package program. T-test and one-way ANOVA test will be applied for statistical analysis in the findings of the research. The results were discussed in line with the literature. Along with the results, the STEM awareness levels of school administrators and teachers were determined and suggestions for further research were presented.

Keywords: Awareness, STEM, school principals, classroom and branch teachers.

Introduction

Definition of STEM

It is an educational approach that aims to integrate the fields of mathematics, science, technology and engineering, and aims to connect the students taking the courses between these disciplines and different disciplines, and to solve problems. STEM is also an approach that enables the fields of science, technology, engineering and mathematics to be associated with daily life (Akin, 2019).

Ceylan (2014), who has argued that STEM is an approach where students can apply the knowledge they have acquired in mathematics, science, technology, and engineering courses and aims to find original solutions, states that STEM education should be given importance in schools so that the country can become economically strong, and that the country can play a leading role in the field of science and technology (Çolakoğlu & Gökben, 2017).

STEM (Science, Technology, Engineering, Mathematics) emerged in the 1990s with the abbreviation of the first letters of the names of these disciplines for an educational purpose defined by the integration of science, technology, engineering and mathematics (Bybee, 2013; Dugger, 2010).
Features of the STEM
1. STEM education provides students with different perspectives.
2. STEM education; It encourages students to ask questions and query.
3. With STEM education, thanks to teachers, students learn in which areas they are good.
4. STEM education arouses students' curiosity and supports their exploration aspects.
5. STEM education provides cooperation between teachers and students.
6. STEM education creates a sense of responsibility in students.
7. STEM education teaches students to adapt disciplines to daily life.
8. STEM education makes a difference in education (Belek, 2018).

STEM Education and School Principals
School principals should be conscious about STEM education and should know that this education will provide students with a competence in every sense. When the managers are conscious, it is much easier to deal with the obstacles encountered. For example, when resources are insufficient in a school, the head of the school may be more active than a teacher in providing resources. School principals know school resources better, so resources can be created for STEM education by making arrangements. At the same time, school principals' knowing how important STEM education is for students will lead them to become more aware of issues such as funding or teachers' better learning of education. As a result, one of the most important points in STEM education is the willingness of school principals in this training.

STEM Education and Teachers
The attitudes and awareness levels of teachers who will implement STEM education are very important in terms of achieving success. Various teaching methods and strategies are used in STEM education. If education is to be successful, teachers must know these strategies and methods very well. If the teachers have a very good level of knowledge, their transfer level will be equally good and the students who receive training will reinforce it more. As in every education, it is normal to encounter obstacles sometimes in STEM education. Teachers are prominent people in this regard. The integrative approach of STEM education, not knowing the fields well enough, insufficient opportunities in the place where it is applied, teachers not knowing how to transfer this education, lack of communication and cooperation among the teachers can be counted as the obstacles that will arise. When teachers have sufficient knowledge of the integrative approach, strategic ways and methods, it is much easier to solve the problems (Özdemir, 2019).

One of the most important elements in STEM education is teachers because they provide the balance. The fact that the teachers who will provide STEM education have knowledge in all STEM education fields will also increase the quality of education provided. At the same time, since there are not enough studies on how to give STEM education, teachers sometimes have problems in the implementation process. As a result, the way to be successful in STEM education is possible with teachers who know and can transfer this education very well (Özdemir, 2019).

Teachers' views on STEM education depend on their level of knowledge about STEM education, their school's encouragement in the field of STEM, and their ability to find materials (Stohlmann, Moore, & Roehrig, 2012). According to the results of this research, it is important for the society to be literate in STEM fields.

Teachers also guide teaching by organizing learning environments for STEM education. Teachers' positive opinions about STEM education will contribute positively to STEM education practices (Bakır & Kutlu, 2018).

The existence of teachers with high awareness in STEM fields and STEM literate means individuals with high awareness (Tezsezen, 2017). The correct implementation of STEM education in the education system is closely related to teachers' awareness levels (Bakır & Kutlu, 2018) and their views on STEM education (Stohlmann, Moore & Roehrig, 2012). It is very important to get the opinions of teachers about STEM awareness as it will guide the practices and studies in this field.

The Aim of the Research
Bu araştırmanın amacı Kuzey Kıbrıs Türk Cumhuriyeti’nde görev yapan İlköğretim ve Mesleki Teknik Öğretim Dairesine bağlı okullarda görev yapan İlköğretim ve Mesleki Teknik Öğretim öğretmenlerinin, okul idarecilerinin ve öğretmenlerin FeTeMM eğitimi ile ilgili farklılıklarının incelenmesidir. Ayrıca okul idarecilerinin ve öğretmenlerin FeTeMM eğitimine yönelik farklılıklarının cinsiyet, yaş, eğitim durumu, mezun olunan lisans programı, mesleki kıdem, yapılan görev değişiklerine göre farklılaşıp farklılaşmadığını incelemektir.
The Significant of Research
Activities that will increase the interests and orientations of students with 21st century skills towards science, technology, engineering and mathematics are included in the content of STEM education (Baran et al. 2015). School principals and teachers have great roles in the development of 21st century skills. It is very important to determine STEM awareness and evaluate it in terms of both school principals and teachers.

Methodology
Research Model
Relational screening model was used in this study. The scanning model aims to identify past or ongoing situations. The situation that is the subject of the research is handled as it is without any effort to influence it as it exists (Karasar, 2016).

In the study, it was determined whether the attitudes of school administrators and teachers towards STEM education differ according to gender, age, educational status, graduated program, occupational seniority, and current position.

The Sample of the Research
The study group in the research consists of 126 people, 43 school administrators and assistants, 83 teachers, working in Vocational Technical and Primary Schools in the TRNC in the 2020-2021 academic year. Demographic characteristics of the study group are given in the table below.

Table 1. Demographic Characteristics of the Participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>76</td>
<td>60.3</td>
</tr>
<tr>
<td>Male</td>
<td>50</td>
<td>39.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23-30 years old</td>
<td>16</td>
<td>12.7</td>
</tr>
<tr>
<td>31-40 years old</td>
<td>42</td>
<td>33.3</td>
</tr>
<tr>
<td>41-50 years old</td>
<td>40</td>
<td>31.7</td>
</tr>
<tr>
<td>50 years and older</td>
<td>28</td>
<td>22.2</td>
</tr>
<tr>
<td>Educational Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>84</td>
<td>66.7</td>
</tr>
<tr>
<td>Masters' Degree</td>
<td>36</td>
<td>28.6</td>
</tr>
<tr>
<td>PhD</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td>Graduated Undergraduate Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom teaching</td>
<td>59</td>
<td>46.8</td>
</tr>
<tr>
<td>Pre-school teaching</td>
<td>12</td>
<td>9.5</td>
</tr>
<tr>
<td>Others</td>
<td>55</td>
<td>43.7</td>
</tr>
<tr>
<td>Occupational Seniority</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10 years</td>
<td>23</td>
<td>18.3</td>
</tr>
<tr>
<td>11-20 years</td>
<td>53</td>
<td>42.1</td>
</tr>
<tr>
<td>21 years and above</td>
<td>50</td>
<td>39.7</td>
</tr>
<tr>
<td>Current Position</td>
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<td></td>
</tr>
<tr>
<td>Class Teacher</td>
<td>33</td>
<td>26.2</td>
</tr>
<tr>
<td>Branch Teacher</td>
<td>50</td>
<td>39.7</td>
</tr>
<tr>
<td>School Principals</td>
<td>21</td>
<td>16.7</td>
</tr>
<tr>
<td>School Vice- Principals</td>
<td>22</td>
<td>17.5</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In Table 1, the distribution of the participants in the research according to gender, age, educational status, undergraduate program graduated, occupationnal seniority and current duties are examined.

It is seen that 60.3% of the participants participating in the research are female and 39.7% are male. It is seen that the age distribution of the participants participating in the research is 12.7%, 23-30 years old, 33.3% 31-40
years old, 31.7% 41-50 years old, 22.2% 50 and over. It was determined that 66.7% of the participants were undergraduate, 28.6% master degree, 4.8% Phd. 46.8% of the participants in the research work as classroom teachers, 9.5% work as pre-school teachers, and 43.7% work in other departments. It has been determined that the professional seniority of the participants is 18.3%, 1-10 years, 42.1% 11-20 years, 39.7% 21 years and above. The current duties of the participants in the research were determined as 26.2% class teachers, 39.7% branch teachers, 16.7% school principals and 17.5% school vice-principals.

Data Collection
The data collection tool consists of two parts. In the first part, there is the "Personal Information Form", and in the second part, the STEM Awareness Scale (FFÖ) developed by Buyruk and Korkmaz. Permission to use the scale was obtained by contacting Özgen Korkmaz, who developed the scale, via e-mail. Due to the covid-19, the scale was arranged in Google Forms and sent to the participants. Necessary explanations were made while filling out the form and scale.

STEM Awareness Scale
The “STEM Awareness Scale” developed by Buyruk and Korkmaz consists of 17 items. The reliability analysis of the scale, Cronbach's Alpha reliability coefficient was found to be .927. Regarding the “Positive Perspective” factor; Cronbach's Alpha values were found to be .929. Regarding the “Negative View” factor; Cronbach's Alpha value was found to be reliable as 806 (Hebebci, Usta, 2017).

The options for the 17 items in the scale are (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree.

Data Analysis
SPSS 25 package program was used in the statistical analysis of the study. It was checked whether the survey results obtained from the individuals participating in the study were normally distributed. The assumptions of the parametric and non-parametric tests were tested and it was determined that the data were nonparametric while deciding on the statistical techniques performed for the purposes. Mann Whitney U and Kruskal Wallis tests, which are nonparametric tests, were used to test the variables according to sub-objectives. In order to determine the significant difference, the p value was calculated as 0.05. K Indepented Samples tests, one of the nonparametric tests, were applied because they did not show normal distribution during the analysis.

Findings

Awareness Levels of School Principals and Teachers on the STEM Education Approach

Table 2. Descriptive Statistics of the Data

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>x̄</th>
<th>ss</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEMM awareness scale</td>
<td>126</td>
<td>2.06</td>
<td>4.94</td>
<td>3.70</td>
<td>.354</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in Table 2, the smallest value obtained from the answers of the scale was 2.06 and the highest value was 4.94. The total STEM awareness mean of the scale was found to be (x̄=3.70, sd=.354). The STEM awareness of school principals and teachers participating in the research was found to be high.

Table 3. Mann Whitney – U Test Results of STEM Awareness Levels According to Gender Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>S.O</th>
<th>S.T</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEMM Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>76</td>
<td>64,61</td>
<td>4910,00</td>
<td>1816,00</td>
<td>0,67</td>
</tr>
<tr>
<td>Male</td>
<td>50</td>
<td>61,82</td>
<td>3091,00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p>0,05
As a result of the Mann Whitney – U Test for STEM Awareness Measurements performed according to Table 3, it was determined that the awareness levels of the individuals (U=1816.00; p>.05) according to the gender variable did not show a statistically significant difference.

Table 4. Analysis of STEM Awareness Levels by Age Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>S.O</th>
<th>H</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-30 years old</td>
<td>16</td>
<td>68,22</td>
<td>1,111</td>
<td>3</td>
<td>0,77</td>
</tr>
<tr>
<td>31-40 years old</td>
<td>42</td>
<td>63,06</td>
<td>0,985</td>
<td>2</td>
<td>0,61</td>
</tr>
<tr>
<td>41-50 years old</td>
<td>40</td>
<td>65,96</td>
<td>0,842</td>
<td>2</td>
<td>0,65</td>
</tr>
<tr>
<td>50 years and older</td>
<td>28</td>
<td>57,95</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the Kruskal Wallis test, which was conducted to determine whether the STEM awareness levels of individuals show a significant difference according to the age group variable, are shown in Table 4. As seen in Table 4, the lowest mean score of the STEM awareness scale in the mean ranks of the individuals according to the age variable of the STEM awareness scale was composed of individuals aged 50 and over, with an average of 57.95. The highest average score was formed by individuals between the ages of 23-30 with an average of 68.22. There was no significant difference between the STEM Awareness Scale scores and the age variables of the individuals (p=0.77; p>0.05).

Table 5. Findings Obtained According to the Variable of Educational Status of STEM Awareness Levels

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>S.O</th>
<th>H</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>84</td>
<td>64,51</td>
<td>0,985</td>
<td>2</td>
<td>0,61</td>
</tr>
<tr>
<td>Master Degree</td>
<td>36</td>
<td>63,53</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phd</td>
<td>6</td>
<td>49,25</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the Kruskal Wallis test, which was conducted to determine whether there was a significant difference in the level of STEM awareness of individuals on the variable of educational status, are given in Table 5. As can be seen in Table 5, the lowest mean score of the STEM awareness scale in the mean rank of individuals according to the educational status variable of the STEM awareness scale was formed by the individuals with a doctorate with an average of 49.25, while the individuals with a bachelor's degree with an average of 64.51 formed the highest score. There was no significant difference between the STEM Awareness Scale scores and the age variables of the individuals (p=0.61; p>0.05).

Table 6. Findings Obtained for the Variable of STEM Awareness Levels of Undergraduate Program Graduated

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>S.O</th>
<th>H</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom teaching</td>
<td>59</td>
<td>65,64</td>
<td>0,842</td>
<td>2</td>
<td>0,65</td>
</tr>
<tr>
<td>Pre-school teaching</td>
<td>12</td>
<td>55,17</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>55</td>
<td>63,03</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the Kruskal Wallis test, which was conducted to find out whether there is a significant difference in the STEM awareness levels of the individuals on the variable of the undergraduate program graduated, are given in Table 6. As seen in Table 6, the lowest mean score of the STEM awareness scale in the mean ranks of the individuals according to the variable of the undergraduate program graduated from is the participants who are pre-school teachers with an average of 55.17. The highest average score was formed by the participants in the classroom teaching range with an average of 65.64. There was no significant difference between the STEM Awareness Scale scores and the age variables of the individuals (p=0.61; p>0.05).
Table 7. Findings Obtained in Terms of Occupational Seniority Variable of STEM Awareness Levels

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>S.O</th>
<th>H</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEMM Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10 years</td>
<td>23</td>
<td>62,20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-20 years</td>
<td>53</td>
<td>66,93</td>
<td>0,851</td>
<td>2</td>
<td>0,65</td>
</tr>
<tr>
<td>21 years and above</td>
<td>50</td>
<td>60,46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the Kruskal Wallis test, which was conducted to find out whether there is a significant difference in the STEM awareness levels of individuals on the variable of occupational seniority, are shown in Table 7. As can be seen in Table 7, the lowest mean score of the STEM awareness scale in the mean ranks of the individuals according to the occupational seniority variable of the STEM awareness scale was formed by individuals aged 21 and over with an average of 60.46. The highest average score was formed by individuals between 11-20 years with an average of 66.93. There was no significant difference between the STEM Awareness Scale scores and the variables of years of occupational seniority (p=0.65; p>0.05).

Table 8. Findings obtained according to current position variable for STEM awareness levels

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>x</th>
<th>Sd</th>
<th>p</th>
<th>Fark</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEMM Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class Teacher</td>
<td>33</td>
<td>3,40</td>
<td>0,39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Branch Teacher</td>
<td>50</td>
<td>3,41</td>
<td>0,34</td>
<td>0,00*</td>
<td>4&gt;3</td>
</tr>
<tr>
<td>School Principals</td>
<td>21</td>
<td>3,57</td>
<td>0,23</td>
<td></td>
<td>3&gt;2</td>
</tr>
<tr>
<td>School Vice-Principals</td>
<td>22</td>
<td>3,69</td>
<td>0,32</td>
<td></td>
<td>2&gt;1</td>
</tr>
</tbody>
</table>

As a result of the Kruskal Wallis Test for non-parametric measurements made according to Table 8, the scores of school vice-principals (3.69±0.32) of STEM awareness levels according to the current position variable were found to be higher than the scores of the school principal (3.57±0.23), branch teacher (3.41±0.34) and classroom teachers (3.40±0.39).

Discussion
In the study, no significant difference was found between age, educational status, undergraduate program graduated and STEM awareness scale. However, according to the current position variable, the scores of school vice-principals were found to be higher than the scores of the school principal, branch and classroom teachers.

In the thesis study of Ciğerci (2020), titled "Examination of School Administrators and Teachers' Awareness of STEM Education", no significant difference was found between occupational seniority, task, age and STEM awareness.

In the study conducted with pre-service science teachers, the STEM awareness of the candidates was examined and no significant difference was found in terms of STEM awareness of gender (Kızılot, 2019). In the study conducted with secondary school teachers, no significant difference was found in terms of gender STEM awareness (Çevik, Şanlıtürk, Yağcı, 2017). In the study examining the STEM awareness of classroom teachers, no significant difference was found according to gender, the program they graduated from and occupational seniority (Özdemir, 2019).

Conclusion and Recommendations
1. The awareness of school principals and teachers on STEM education was determined using the scale. In addition to the scale results with semi-structured questions, different results can be determined by doing research with STEM awareness and mixed method.
2. With high awareness, detailed information can be obtained with semi-structured interview questions in order to see the reflection of these awarenesses in educational environments concretely.
3. Consistency studies on students' awareness levels can be carried out in parallel with the school principal and teachers.
4. Teachers and administrators can be supported with practical in-service trainings to raise awareness.
References


THE PROBLEMS OF ADAPTATION TO ONLINE EDUCATION DURING THE COVID-19 PANDEMIC PROCESS; STARTING PRIMARY EDUCATION BEFORE GOING TO SCHOOL

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ABSTRACT
Since the outbreak of the Coronavirus (Covid-19) pandemic, it has not only affected public health, but also caused significant changes in the habits of life. In addition to many economic, sociological and vital changes, education is one of the systems most affected. Although the history of distance education dates back to the past, with the Covid-19 epidemic, our society met with home education using digital tools called online or online education. While the problems of such a rapid transition were experienced at all levels of education, children who were just going to start primary school had to start school without leaving home. Due to their structured environments, schools support the emotional, spiritual, personal, social and physical development of students as well as their academic development. As the distance education process progresses, it has been revealed that although online education closes the knowledge gap of children, it is insufficient in terms of social, physical and behavioral education. In this compilation research, especially the adaptation problems experienced by students at the beginning of primary education, the positive and negative aspects of online education, and potential solution suggestions are presented by literature review.

Keywords: Primary education, online education, behavioral education, distance education, Covid-19 pandemic

Introduction
The Covid-19 epidemic required people to change many life habits in their lives (Üstündağ, 2021). In the new living conditions, concepts such as home education and working from home quickly entered the social life and were applied. Individuals have had to cope with many negative, different and surprising situations while trying to adapt (Bulut et. al., 2020). With the transition to distance education, the school was out of order and home environments began to be the education and training environment. It has always been discussed whether distance education was applied correctly or not. Different problems arose for parents and different problems for students. The beginning of primary education, where the first separation from the home environment and parents was experienced and the first foundations of independence were laid, could not be experienced as usual. The school could not take on the role of being the safest environment for the child to meet after home, to comply with the rules of social life in addition to education and training, to gain self-knowledge, friendship, sharing, and respect. The focus was on online subjects and teaching required by the distance education curriculum. Breaks, social activities, games and physical activities, which are a separate educational environment for children, have disappeared.

It has been understood that the school is not just a building, a course, a teacher, a student, but represents the most important basis for adaptation to social life in our lives. As stated by Kran (2020); “Schools play a critical role not only in supporting the academic success of students, but also in supporting the child physically, spiritually and socially as a whole”. Learning and education take place efficiently, especially during primary school, when it is done in the school environment and by teachers. In order to get the same efficiency from online education, it has been suggested that student experiences should be similar to those in face-to-face education (Alper, 2020). Trying to create a classroom environment on computers and tablets that children used to sit in front of only to play forced both educators, students and parents.

Being away from the school environment also eliminated equality of opportunity, which is one of the most important goals of education (Clover, 2017). All the features that can or cannot be owned at home created the school environment for children. As Alper (2020) stated, it has become difficult to have uninterrupted internet, computers, tablets, mobile phones, and even for families with children who have more than one online education to offer equal opportunities to every child (as cited in Sintema, 2020). Domestic habits and rules have changed. The communication tools that technology has created addictive for children, which parents have tried to keep away and set limits, have become necessary for education. Parents had to sit their children full time in front of the technological tools they tried to reduce their use, and it was seen that the use of these tools increased (Erol & Erol, 2020).

Parents suddenly found themselves in education. The school, which they sent to school in the morning, greeted in the evening and talked about how it went with a few sentences, took place inside the house. It was the duty of the parents to follow the lessons, to prepare homework, to constantly warn the child on these issues, and sometimes even to listen to the lessons together and do homework.
The difficulties of distracting the children, who missed their friends and teachers, and their efforts to relieve their boredom forced the families. While the fear of contracting the disease could turn into anxiety (Golberstein et al., 2020), the longing for open spaces and old habits of life affected all family members.

**Things to consider in dealing with such negativities**

- It should not be forgotten that this process is challenging for all members of the family (Erol & Erol, 2020). Parents should give their children time to adapt to this process.
- Families should limit the use of educational tools provided to their children for play and similar purposes. In order to achieve this, it is recommended that parents consciously evaluate the necessity of using digital tools (Neumann, 2015).
- Stimulating methods can be developed for children who have difficulty in attending class on time.
- It may be helpful to prepare to continue with habits similar to how one would attend classes beforehand. If taking notes, such as preparing pen and paper, creating a quiet environment, creating a workspace in the home.
- Statements such as “The child's year wasted” may negatively affect the child's motivation. Instead, it would be helpful to redefine responsibilities with your child and to identify measures to be taken before potential problems arise.
- Maintaining teacher-parent cooperation is as important as face-to-face education. For this reason, it is recommended to maintain the interaction between family and school (Çelenk, 2003).
- It has been seen that learning to use these tools at the level where the course will be followed or controlled will be beneficial (Çelen et al., 2011). Online groups of children's peers can be formed to support social interaction. In these groups, it can be ensured that they share in areas such as games and chat.

**Conclusion**

Although the difficulties are mentioned, it is an important advantage for the society to offer education online, to reach information or informants quickly via the internet, and to be able to continue education (Sezgin, 2021). Studying from home and working from home required the effective use of digital tools. In this way, technological developments in education have been positively affected (Aslan, 2006). At the same time, it is considered as a good development that educators develop themselves rapidly in the technological field in order to offer online education, and find presentations, methods and techniques in their own fields (Aslan, 2006). Due to the fact that online education is recordable, students had the chance to listen to these lectures whenever they wanted (Clover, 2017). According to studies, they benefited from increasing academic achievement and reinforcing the learned subject (Özdoğan & Berkant, 2020).

Even if face-to-face education is introduced, continuing the use of the positive aspects of digital education will have a positive impact on the diversity of education methods (Aslan, 2006). According to the researches, in order for distance education to be carried out in a healthy way, it is necessary to use television-based applications more widely, especially to strengthen the internet infrastructure (Can, 2020). The reasons why students who could not benefit from online education due to technical problems or inadequacies should be investigated and methods and techniques for compensatory education should be developed and applied.

In addition, it is recommended that the distance education process be better planned and necessary studies should be carried out for students with special education needs and educators working in this field.

**References**


