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Evaluation of The Effect of Technology on Lectures With Teachers' Opinions

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Abstract

This study aims to understand the effect of technological content developed in education on classroom teachers' lecture performance in the context of teacher opinions. In this study, which was designed according to the qualitative research method, the interview technique was used as a data collection tool. After the expert opinions and the pilot application, ten questions were included in the interview form. The study group consists of 20 volunteer teachers. The participants are from different schools and work in schools with and without technological infrastructure. Content analysis was performed in the analysis of the data. For the analysis's reliability, the encoder's reliability was checked. As a result of the study, it was seen that the majority of the teachers were willing to use technology, and most of them actively used it, but they did not have sufficient technological literacy. Teachers stated that they were aware of the technology-related goals of the program. Technology provides convenience in the teaching process for teachers. Technology is more effective on listening skills and visuality in the primary school teaching process and creates a more enjoyable lesson environment for students. Although the teachers said that technology is exciting and useful, on the other hand, they also stated the risk of causing addiction. A higher quality education system can be achieved if the teachers are adequately trained in terms of technology and the infrastructure of the schools is equipped with internet and technological equipment.

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INTRODUCTION

With the development of technology in the world, there is a great change and transformation in every field. Educational content is also affected by this change and transformation. Teachers, who are one of the main elements of education, must keep up with the rapid change of these contents and use the technological content widely. Therefore, the opinions of today's teachers, who are educators of the age of digital speed and artificial intelligence, about technological content are important.

The most important feature that distinguishes and differentiates the twenty-first century, which is the age we live in, from previous ages is that rapid technological transformations are taking place in this century (Kolburan-Geçer and Bakar-Çörez, 2020). It can be said that a huge digital revolution has been experienced around the world with the increase in the use of technological tools that enter all areas of life together with the rapid transformations in the technological sense (Alamri, Jhanji, and Humayun, 2020; Sarsıcı and Çelik, 2019). Digital change has shown a very serious and radical change in education, as in other fields. Depending on the continuous development of technology in its field, equipped with the technical structure of its period in the field of education, The education process, which started with chalk and blackboard, has been replaced by products such as computers, tablets, smartphones, and smart boards over time (Kolburan-Geçer & Bakar-Çörez, 2020). When the history of education is examined worldwide, it is seen that different technological tools have been used since the 1920s (Hannafin & Savenye, 1993). For example, although not in all countries, overhead projectors were used in the 1930s, and videotapes, copiers and headphones were used in the 1950s (Ömrüuzun, 2019). Technological tools in education started in Turkey in the 1970s, with the decision to use tools such as television and radio for non-formal education (Aksoy, 2003). Now, almost all over the world, many technology tools such as e-book readers, computers, the internet, tablets, and smartphones are used in education. In addition to all these developments, not only technology devices have changed; The purpose of the use of technology in the field of education and the content of technological products have changed.

The use of technology in the field of education was initially in the form of using technology to teach any lesson. However, later on, it turned into the aim of raising individuals who were raised according to the needs of their age and equipped with the equipment of their contemporaries (Kaya, 2019; Ersoy, 2010). In this context, it is necessary to raise technology-literate individuals to reach science and information and use it effectively. This seems to be possible by using technology correctly and appropriately in education (Çakır & Yıldırım, 2009). For technological digital tools and content to be used following countries' needs, countries need to constantly renew their technological goals by adapting to rapidly changing developments and transformations (Türel, Akgün, Aydın, & Creator, 2020).

As it is seen that the use of technological tools and digital content is a serious need and necessity in education planning in all areas, it is an inevitable necessity for today's teachers to know and use technology effectively (Yetik, Akyüz, & Bardakçı, 2019). In particular, they stated that one of the important priority issues in teacher training programs is preparing teachers to use technological tools and digital content in the field of education (Powers & Blubaugh, 2005). In today's perspective, serious work falls on newly trained teachers and teachers continuing their duties. Alamri et al. (2020) stated that as a requirement of age, teachers are also aware that societies are experiencing serious technological changes and should know that they are responsible for preparing educational environments that can meet the wishes and needs of their students. They attributed the effectiveness and usefulness of information technologies and digital content in schools to the fact that teachers can use these technologies effectively and use these technologies effectively in their programs (Comi, Argentina, Gui, Origo, & Pagani, 2017).

Dumancic et al. (2019) discussed the technology-based learning environments thought to be needed by knowledge-based societies today and in the future by referring to the possibilities provided by portable digital technology products and tools in their work. These researchers suggested that a smart learning environment model should be developed to support smart education since portable technologies will be a decisive alternative in learning environments in the future. In their research, Sarsıcı and Çelik (2019) proposed a model in which the technological changes on earth are adapted to the field of education. In this model developed by the teachers, the lessons they teach are recorded by means of digital materials, uploaded to the computer and the internet, and then watched again, making it easier for the students to repeat the lesson. In this way, the student's academic success will be expected to increase with re-watching. All these studies give us; It shows how important it is to train teachers who can use the current technology, follow the developing technology closely and serve the purpose of education (Kırındı & Durmuş, 2019; Yiğit-Koyunkaya & Tataroğlu-Taşdan, 2019).

Today, senior teachers carry out educational work without learning to use technological tools, and new-generation teachers are appointed by taking technology education to teach in the same schools. For this reason, it is necessary to consult teachers' opinions regarding the evaluation of the effect of using technological materials and contents on teachers' lectures in the context of teacher opinions. In this respect, teachers working in schools are expected to express their views on the evaluation of the effect of the use of technological materials and digital content in education on teachers' teaching in the context of teacher views. The purpose of this study was determined as the evaluation teachers working in schools and the effect of technological content developed in education on teachers' teaching in the context of teachers' opinions. For this purpose, this study aims to reveal the opinions of primary school classroom teachers on the effect of technological products and contents developed in education on teachers' lectures. The reason why classroom teachers were chosen in the study is that classroom teachers teach all lessons, not just a branch. It is thought that a teacher's views on the effect of technology related to many lessons or not on the lecture performance will make it easier to understand the result of the subject.

This study tries to answer the thoughts of classroom teachers working in schools about the effect of technological content developed in education on teachers' teaching. Sub-problems of the study:

1. What are the teachers' opinions about the innovations that the technological content developed in education brought to the lectures?
2. What are the teachers' views on the positive and negative aspects of technological products and contents that bring to teachers' lecture performance?

METHOD

Research Model

The model of the Study In this study, which aims to determine the opinions of classroom teachers about the evaluation of the effect of technological content developed in education on teachers' lectures in the context of teacher opinions, the qualitative research method was used. Qualitative research is defined as "a form of research in which data collection methods such as observation, interview, and document analysis are used, and a qualitative process is followed to reveal perceptions and events in the natural environment in the closest to reality and the collective way" (Yıldırım & Şimşek, 2016). In the study, the interview technique, which is one of the qualitative research method data collection tools, was used. Interviewing is an organized, regular and organized work activity that can be done to learn the subject (Merriam, 2013). In this study, the interview technique was used since it aimed to obtain regular and detailed information from the classroom teachers.

Working Group

The study group participating in this research consisted of 20 classroom teachers working in primary schools in Haliliye, Karaköprü, and Suruç districts of Şanlıurfa province. In selecting the study group, to reach the target more healthily, the central schools with technological facilities were selected as well as the village schools without technological facilities. Teachers who were different from each other in terms of seniority, age and gender were preferred in selecting teachers.

Tablo 1. *Demographic Characteristics of Teachers*

Demographic Features	*Groups*	*f*	*%*
Gender	Male	13	65
	Female	7	35
Age	20-29	2	10
	30-39	10	50
	40-49	4	20
	50 and over	4	20
Seniority	0-5	3	15
	6-10	2	10
	11-15	5	25
	16-20	4	20
	21 and over	6	30

When Table 1 is examined, it is seen that a total of 20 teachers, 13 male, and 7 female, participated in the research. While most teachers are in the "30-39" age range, only 2 are under 29 years old. The working years of teachers are between 3-29 years. Most of them have 21 working years or more.

Data Collection Tools

An interview form was used as a data collection tool. While preparing the interview form, the data collection tools of the research were examined from the sources. Interview questions to be held with teachers were prepared by choosing among the questions created depending on the sources. For the questions to be qualified and appropriate, expert opinions were taken from the university lecturers. Sample interviews were conducted to determine whether the questions were clear and understandable. The teacher interview form was prepared as ten questions.

Data Collection Process

After the data collection tool was worked on and given its final shape, interviews were held with the volunteer classroom teachers, and these interviews were recorded. The classroom teachers who will participate in the interviews were chosen among the volunteers. After the voice recorder recorded the interviews, the analysis process was started.

Data Analysis

The data obtained after the interview was analyzed by making content analysis. The main purpose of content analysis is to reach scientific concepts that can explain the obtained data. In the descriptive analysis, the data interpreted and summarized by the researchers are processed more during the content analysis. Concepts and themes that cannot be noticed with the descriptive approach can be discovered as a result of this analysis (Yıldırım & Şimşek, 2016). After the research topic was determined, a literature review was conducted, and questions were formed. The questions were presented to the adequacy opinion of the teachers from the Department of Basic Education of the Faculty of Education of Harran University. It consisted of 7 female and 13 male teachers of 20 class teachers. The data obtained from the teachers in the form of voice recording through a voice recorder were recorded. It was stated that the audio recording would only be used for the relevant scientific

study, and permission was obtained from the teachers. The teachers were told that this is a scientific study, so that they act objectively will further strengthen the scientific result. Each teacher was asked 10 questions. The answers received with audio recordings were later transcribed. Analysis units were created by coding in the light of the data. The units were given their final shape by combining the analysis units with similar commonalities.

Validity and Reliability

In order to ensure the validity of the study, a detailed field study was conducted. The data collection tool, which was prepared following the purpose of the study, was finalized by taking expert opinion from the Department of Basic Education of the Faculty of Education of Harran University. In this direction, a sample interview was conducted to ensure that the data collection tool was suitable. For reliability, the coder reliability presented by Miles and Huberman (1994) was made.

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RESULTS

In this section, the analysis findings of the qualitative interviews with 20 primary school teachers working in primary schools in Haliliye, Karaköprü, and Suruç Districts of Şanlıurfa are given. According to the content analysis results obtained from individual interviews with the classroom teachers, the data are gathered around three themes. These themes are; Lecture performance, technology use, and education development in terms of technological content.

Tablo 2. *Theme and Code List Obtained as a Result of Interviews with Classroom Teachers*

Themes (Subjects)	*Codes*
Lecture performance	1. The innovation it brought 2. The positive and negative aspects of technology 3. Adequate Training and insufficient equipment knowledge
Use of technology	1. Distance learning 2. The use of technological contents 3. Approach to technological products and contents
Development of education in terms of technological content	1. Teaching profession with developing technology 2. Digital development and robot teacher

The information obtained as a result of the interviews with the classroom teachers was interpreted by considering the themes and codes created by content analysis. The themes and codes obtained from the classroom teachers' interviews are given in Table 2 above. When the themes and codes were examined, it was seen that classroom teachers and teachers generally expressed their opinions depending on their own experiences. These problems were examined under three themes (lecture performance, use of technology, and development of education in terms of technological content) and codes related to these themes.

Individual opinions of teachers under the lecture performance (theme); "The innovation it brings, the positive and negative aspects of technology, adequate training, and insufficient hardware information," are collected under the subheadings (codes).

The Innovation It Brought

In the opinions of the classroom teachers, At the beginning of the innovations that the technological content developed in education brought to the teaching of the teachers, they stated that it saves much time, facilitates the teaching of the teachers, embodies the abstract information, is interesting because it appeals to the students visually, and this accelerates learning and facilitates access to information. Interviewed; Twenty (15) classroom teachers, as *"CT1, CT2, CT3, CT5, CT6, CT7, CT8, CT9, CT11, CT14, CT15, CT16, CT18, CT19, CT20"*, They expressed the situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority)*"… By establishing a virtual-concrete relationship in the digital environment, permanent changes can be made in students. …"*.

CT2: (Male, 37 years, 13 years seniority)*"… lecture hours increased. The teacher teaches the lesson more efficiently because it helps the teacher…"*.

CT3: (Male, 32 years old, 5 years seniority) *"… Time losses are minimized …".*

CT5: (Female, 36 years, 14 years seniority) *"Repetition and visuality are very important for the lesson to be permanent for the student. Watched videos and digital activities will make learning more permanent".*

CT6: (Female, 33 years, 7 years seniority) *"…It is more effective to attract students' attention and start the lesson with educational videos. It also allows the use of many additional resources and materials".*

CT7: (Male, 35 years, 12 years seniority) *"…The use of technology in lessons, with which children are intertwined from the moment they are born, makes it easier for them to draw their attention to the lessons".*

CT8: (Female, 52 years, 27 years seniority) *" Developing technological content provides both convenience and time savings to us teachers' lectures. It increases the interest of students who are intertwined with technology in the lesson".*

CT9: (Female, age 53, 29 years seniority) *"I think it is important in terms of preparation for the lesson, effective expression, and visual support".*

CT11: (Female, 38 years, 14 years seniority) *"It enables the development of comprehension and perception skills with multidimensional aspects. Learning is accelerating and more information is available quickly.".*

CT14: (Male, 50 years old, 22 years seniority) *"… By giving plenty of examples without wasting time. Visual and auditory samples become more permanent".*

CT15: (Male, 48 years, 25 years seniority)" *Technological contents have caused teachers to teach the lesson more easily and with different methods*".

CT16: (Female, 45 years old, 23 years seniority) "*Technological content provides an advantage in terms of using time more efficiently and motivation of students*".

CT18: (Male, 40 years old, 15 years seniority) "*Klasik sunumdan ziyade anlatımı daha dinamik hale getirdi. Uzak yerlerdeki birçok ürün ve farklı alternatifler ulaşılır hale geldi*".

CT19: (Male, 29 years old, 4 years seniority)" *It offers the opportunity to teach regardless of time and place. Another thing; it can be unusual for children and this increases the focus on the lesson in the classroom*".

CT20: (Male, 27 years old, 3 years seniority) "*It provides multidimensional knowledge transfer to students and increases permanence*".

The Positive and Negative Aspects of Technology

The opinions of the classroom teachers, They stated the positive and negative aspects that technological products and contents in education bring to teachers' lecture performance. Interviewed; Twenty (20) classroom teachers, including *"CT1, CT2, CT3, CT4, CT5, CT6, CT7, CT8, CT9, CT10, CT11,*

CT12, CT13, CT14, CT15, CT16, CT17, CT18, CT19, CT20" They expressed the situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority) *"Dijital materyaller zamandan tasarruf sağlar. Öğrenmeyi görsel, işitsel olarak karşılar ancak dokunma, hissetme somut dönemde dezavantaj oluşturabilmektedir".*

CT2: (Male, 37 years, 13 years seniority) *"Enriching the content and supporting it with technological products are positive examples. The negative side of not having a remote control in the teacher…"*

CT3: (Male, 32 years old, 5 years seniority) *"The positive aspect is that the teacher's time to spend on education and training increases and this time makes more useful applications… It may cause digital addiction in students.".*

CT4: (Male, age 46, years seniority) *"Watching the lessons like watching a movie is positive, providing the opportunity to learn down to the smallest details. They quickly forget the subjects that come to their convenience while they are watching".*

CT5: (Female, 36 years, 14 years seniority) *"Materials brought in three dimensions provide more permanent learning in education, but repetitions of watched videos may be required".*

CT6: (Female, 33 years, 7 years seniority) *"While the positive aspects are attention, progress at an individual pace, less cost and appeal to the five senses; The negative aspects of the teacher can make the learning environment passive by using ready-made content".*

CT7: (Male, 35 years, 12 years seniority) *"We can say that today's children have increased their interest in lessons much more. But it needs to be dosed well. Constant technology can also lead to distraction".*

CT8: (Female, 52 years, 27 years seniority) *"The positive aspect of using technological products and contents provides permanent training in visual and auditory aspects. The negative side is that when you use it too much, distraction occurs".*

CT9: (Female, age 53, 29 years seniority) *"On the positive aspects, as I answered in the previous questions, the teacher can benefit from getting support while lecturing. It will remain virtual if the negative aspect is more than teacher and student activity".*

CT10: (Male, age 33, 8 years seniority)*" The positive aspect is easy to practice… Fun student collaboration… If the negative aspect is excessive, again, the dependent teacher…".*

CT11: (Female, 38 years, 14 years seniority) *"I can say that its positive aspects minimize professional deformation, decrease in manpower, and facilitate learning. When its negative aspects are constant, it does not have an effect, it does not have an attraction. Classroom management is getting harder".*

CT12: (Male, 54 years, 30 years seniority) *"Its positive aspect enriches the learning environment. The negative side is pushing the teacher into laziness".*

CT13: (Female, 39 years old, 17 years seniority) *"I find it positive that students listen to the lesson both audibly and visually and participate in the lesson. Every school has an environment and a student profile, and it is necessary to get to know the student. Content suitable for children should be presented, and the student should be ready".*

CT14: (Male, 50 years old, 22 years seniority) *"Positive: Thanks to technological products, laboratory, nature, etc. moves to the classroom. Negative: Ads for tech products sometimes have a moral hazard".*

CT15: (Male, 48 years, 25 years seniority) *"Technological products and contents facilitated and diversified the lectures. On the other hand, it increased digital addiction".*

CT16: (Female, 45 years old, 23 years seniority) *"It provides a more permanent and sufficient education opportunity. However, if students are constantly taught about technological products and content, both technological addiction and ordinary nation can occur".*

CT17: (Male, 39 years, 16 years seniority) *"In terms of narration performance, we are able to consider the subject to be told in a shorter time".*

CT18: (Male, 40 years old, 15 years seniority) *"The downside is that the relevant content needs to be prepared in advance, the risks of a power outage and device failure. The positive aspects are different expression and openness to dynamic learning".*

CT19: (Male, 29 years old, 4 years seniority) *"Teaching a lesson completely dependent on technology can negatively affect the teacher's oral expression. Positively, it provides sample diversity and appeals to multiple intelligences".*

CT20: (Male, 27 years old, 3 years seniority) *"While providing easy access to multiple materials and questions, the absence of a permanent document and material leads to easy forgetting".*

Adequate Training and Insufficient Equipment Knowledge

In the opinions of the classroom teachers, They stated the effect of technological products and contents in education on teachers' lecture performance in terms of adequate education and insufficient knowledge of equipment. Interviewed; Twenty (17) classroom teachers as *"CT1, CT2, CT3, CT4, CT5, CT7, CT8, CT9, CT11, CT12, CT13, CT14, CT15, CT16, CT18, CT19, CT20"* expressed this situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority) *" It cannot be said that teachers are sufficient in terms of the use of technology. Because the rate of development of technical content is faster than the rate of teachers updating themselves in this sense. However, since technological products are expensive commodities, it is not always possible to equip educational environments with technology".*

CT2: (Male, 37 years, 13 years seniority) *"Adequate training is provided through oba and other internet environments, but the training does not yield results because the former teachers do not have hardware knowledge".*

CT3: (Male, 32 years old, 5 years seniority) *"Teachers receive the necessary training at the university and gain theoretical knowledge. When they start work and land on the field, the target that the training wants to reach cannot be reached because the equipment and equipment are unavailable"*.

CT4: (Male, age 46, years seniority) *"In order for teachers to use technological content, they must be prone to such technological products. If he is not inclined, no matter how many courses and seminars are given, he may have some knowledge at that moment and then forget it. If he needs to use technological content constantly and obligatory, he will reach his goal to some extent. So, teachers should be given frequent courses for the necessary equipment and technological content, and they should not be bothered with unnecessary courses".*

CT5: (Female, 36 years, 14 years seniority) *"First of all, I don't think everyone has complete knowledge of how all teachers should use technology. Because teachers generally use technology to watch videos or to reflect the book on the screen. In addition, there are many interactive activities (separately for each class), and I think they should be introduced to teachers. Eba helps us in this regard, but the content there is insufficient and mixed, so teachers usually prefer separate sites rather than there. The content on this subject can be a little simpler and attract the students' attention".*

CT7: (Male, 35 years, 12 years seniority) *"Considering that technology is developing rapidly, we, teachers, must keep up with this development. In this regard, seminars and courses on technological developments in education should be organized by authorized persons for our teachers to improve themselves".*

CT8: (Female, 52 years, 27 years seniority) *"In today's world where technology is advancing rapidly, I think that teachers' education and hardware knowledge about technological content is insufficient. I think that we need to constantly receive innovative training in order to use technological content effectively".*

CT9: (Female, age 53, years seniority 29) *"New graduates are better equipped than us in terms of using technological content. As you know, they met technology much earlier than us, which is an advantage for them. There is a general inadequacy of senior colleagues in this regard. Although various courses were given from time to time for using computers, they were not enough".*

CT11: (Female, 38 years, 14 years seniority) *"The Covid 19 epidemic has shown us that education and technology should always be intertwined, and teachers should always be open and ready to use this information technology. However, education faculties in Turkey are insufficient in preparing the teacher for the use of information technologies of the age. Teachers should be open to developing and changing technology and adopt the use of technology in transferring knowledge. In addition, the Ministry of National Education should change and renew itself with continuous in-service training. Currently, the online in-service training of the national education offers the opportunity to receive training without tiring us, it should be permanent and compulsory".*

CT12: (Male, 54 years, 30 years seniority) *"I think that the infrastructure of our teachers is very inadequate. In terms of equipment, the infrastructure of both our teachers and students is almost non-existent. We are also inadequate in terms of education".*

CT13: (Female, 39 years old, 17 years seniority) *" I think that sufficient education is given through courses and training, but it is optional, it is difficult, it should be made compulsory, teachers should be informed about innovations, they should be encouraged, there is insufficient equipment for the courses, there are still schools without smart boards, even if there is no internet in some village schools".*

CT14: (Male, 50 years old, 22 years seniority) *"The Directorate of National Education has opened enough courses on this subject. In this regard, we, the teachers, need to be willing and make an effort to improve ourselves".*

CT15: (Male, 48 years, 25 years seniority) *"It cannot be said that teachers are sufficient in terms of the use of technology. Because the rate of development of technical content is faster than the rate of teachers updating themselves in this sense. However, since technological products are expensive commodities, it is not always possible to equip educational environments with technology".*

CT16: (Female, 45 years old, 23 years seniority) *"Every teacher should be able to use technological content and follow the developing technology in their field. This can only be achieved by planning within a sustainable education policy and providing adequate, up-to-date, and applied training. Teachers are not and should not be responsible or authorized for adequate or inadequate equipment. The teacher should be adequately equipped. Contemporary generations can only be raised with age-appropriate educators".*

CT18: (Male, 40 years old, 15 years seniority) *"Knowing the language and usage practice of the technological content is directly proportional to the teacher's interest and education, and the teacher's knowledge of the equipment of the technological tool will enable him to find more creative and practical solutions to the problems that may arise in the use of the content, and a more successful job can be done in the production of new content. if the content is not suitable for use (old processor, low ram, low memory), this will reduce fluency and motivation, and also cause a waste of time".*

CT19: (Male, 29 years old, 4 years seniority) *"I think that the number of teachers with sufficient knowledge about technology use is in the majority. However, they have problems integrating this knowledge into education. If we talk about primary school, since student achievements contain very little information, the teacher finds it easier to give this*

information with the material. While exemplifying the subject, ready-made templates come into play when technology is needed. With a few adjustments, it is already prepared for the lesson. Since he found what he was looking for, he considers his technological hardware knowledge sufficient".

CT20: (Male, 27 years old, 3 years seniority) *"Regarding the use of technological content"*

Distance Learning

In opinions the classroom teachers; They stated their opinions about the effect of technological products and contents developed in education on teachers' lecture performance when distance education is taken into account. Interviewed; Twenty (14) classroom teachers as *"CT1, CT2, CT3, CT4, CT5, CT6, CT7, CT8, CT9, CT11, CT12, CT13, CT14, CT16"* expressed this situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority) *"Our students can use technology. However, our teachers do not have full knowledge of this competence. Our teachers cannot prepare digital content and cannot use digital content in distance education…".*

CT2: (Male, 37 years, 13 years seniority) *"Teachers who follow technology or have just started their profession did not have much difficulty in the distance education process and were even productive. However, older teachers had a lot of difficulty in this because they were not related to technology. Distance education was efficient for those who use technology, it was torture for those who did not understand it".*

CT3: (Male, 32 years old, 5 years seniority) *"Teachers took the concept of class from between four walls and transferred it to life…".*

CT4: (Male, age 46, years seniority) *"Distance education is out of necessity. It can never be even half as much as face-to-face training".*

CT5: (Female, 36 years, 14 years seniority) *"It has a great contribution. The video watched during the lesson or after the lesson will make the learning permanent. The course can be watched again without a time limit".*

CT6: (Female, 33 years, 7 years seniority) *"Since the students and parents access the contents at the same time, we see that it is beneficial for the student to follow and progress at the individual pace of the student. Facilitates collaboration".*

CT7: (Male, 35 years, 12 years seniority) *"First of all, it has emerged that every teacher must have the ability to use technology in education in the distance education process. I think that the skills gained in this period should be used in face-to-face education".*

CT8: (Female, 52 years, 27 years seniority) *"…The importance of having the ability to use technology in education has emerged".*

CT9: (Female, age 53, years seniority 29) *"…Speaking on behalf of my class, I think that parents are passive in every subject, but they make a positive contribution when they work together with the concerned parents".*

CT11: (Female, 38 years, 14 years seniority) *"…We had the opportunity to improve ourselves with distance education.".*

CT12: (Male, 54 years, 30 years seniority) *"…I think that teachers, students, and parents were caught unprepared. I think that all three groups were included in the environment by trial and error…".*

CT13: (Female, 39 years old, 17 years seniority) "…*Participation was low due to lack of internet, lack of computer and telephone at home, number of siblings... I'm sure it's not like a school".*

CT14: (Male, 50 years old, 22 years seniority) *"Participation was low due to lack of internet, lack of computer and telephone at home, number of siblings... I'm sure it's not like a school…".*

CT16: (Female, 45 years old, 23 years seniority) *"Since the distance education infrastructure was not sufficient in the past period, the lecture performance of the teachers was adversely affected".*

The Use of Technological Contents

In the opinions of the classroom teachers, They expressed their opinions about the effect of teachers who teach by using technological products and content in education on teachers' lecture performance. Interviewed; Twenty (16) classroom teachers as *"CT1, CT2, CT3, CT4, CT5, CT6, CT7, CT8, CT9, CT10, CT11, CT14, CT15, CT16, CT19, CT20"* expressed this situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority) *"Teachers who use technological tools can make more gains for students by consuming less energy".*

CT2: (Male, 37 years, 13 years seniority) *"The teacher, who uses technological products, do not understand how the time passes, and the children listen to the lesson because the stimuli are different, and they understand more".*

CT3: (Male, 32 years old, 5 years seniority) *"Instead of wasting time by writing a text or problem on the board before, a great waste of time is avoided by reflecting it on the board with the help of the product and content we used".*

CT4: (Male, age 46, years seniority) *"By using technological products, the performance of lectures is increased one hundred percent".*

CT5: (Female, 36 years, 14 years seniority) *"The lesson, which is passed by watching only the video, will make the teacher passive. But videos should be helpful, not essential".*

CT6: (Female, 33 years, 7 years seniority) *"Lessons are fun and students want to participate in the lesson. Difficulty in finding resources and questions is reduced".*

CT7: (Male, 35 years, 12 years seniority) *"…I think it provides great convenience and wealth to teachers".*

CT8: (Female, 52 years, 27 years seniority) *"…teachers enable their students to learn more permanently because they involve them in the lesson more actively".*

CT9: (Female, age 53, 29 years seniority) *"…I find its contribution to attracting attention and visually very meaningful".*

CT10: (Male, age 33, 8 years seniority)*" More fun, easier, more practical, making lessons colorful, students productive fun and enjoyable".*

CT11: (Female, 38 years, 14 years seniority) *"…I think we can convey more difficult subjects more easily".*

CT14: (Male, 50 years old, 22 years seniority) *"…they are more tired than they spent the whole time to the fullest".*

CT15: (Male, 48 years, 25 years seniority) *"More methods have been obtained in this case".*

CT16: (Female, 45 years old, 23 years seniority) *"I think that success increases as there is an opportunity to reach different and more teaching methods and techniques"*.

CT19: (Male, 29 years old, 4 years seniority) *"…The biggest opportunity it adds to life is to save time. Teacher can cover more topics by saving time"*.

CT20: (Male, 27 years old, 3 years seniority) *"It has enabled the different dimensions of the subjects to be addressed by explaining and understanding the subjects faster".*

Approach to Technological Products and Contents

In the opinions of the classroom teachers, stated their opinions about teachers' approaches to technological content. Interviewed; Twenty (17) classroom teachers as *"CT1, CT2, CT4, CT5, CT6, CT7,*

CT8, CT9, CT10, CT11, CT13, CT15, CT16, CT17, CT18, CT19, CT20" expressed this situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority) *"Our pre-1980 teachers prefer to use traditional and old methods".*

CT2: (Male, 37 years, 13 years seniority) *"The new young generation is very enthusiastic about the following technology. However, the older generation is so far away from technology".*

CT4: (Male, age 46, years seniority) *"All teachers and students should be given the opportunity to access technological content"*.

CT5: (Female, 36 years, 14 years seniority) *"New generation teachers actively use technological content, but I do not think that every teacher has knowledge".*

CT6: (Female, 33 years, 7 years seniority) *"Every teacher argues that technology is useful and should be used…".*

CT7: (Male, 35 years, 12 years seniority) *"I think younger teachers use more technological content".*

CT8: (Female, 52 years, 27 years seniority) *"Although I have colleagues among teachers who are prejudiced against technological content, I think that they are generally approached positively".*

CT9: (Female, age 53, 29 years seniority) *"Although I have colleagues among teachers who are prejudiced against technological content, I think that they are generally approached positively".*

CT10: (Male, age 33, 8 years seniority)*" The new generation uses it better and more effectively".*

CT11: (Female, 38 years, 14 years seniority) *"It facilitates teaching in general".*

CT13: (Female, 39 years old, 17 years seniority) *"…But the majority of new generation teachers tend to use technological content. I think it eases the workload".*

CT15: (Male, 48 years, 25 years seniority) *"They have very poor knowledge".*

CT16: (Female, 45 years old, 23 years seniority) *"I think they don't have enough information and they act prejudiced".*

CT17: (Male, 39 years, 16 years seniority) *"New teachers adapt more quickly".*

CT18: (Male, 40 years old, 15 years seniority) *"Teachers who are open to innovations always have a positive attitude…".*

CT19: (Male, 29 years old, 4 years seniority) *"We were having conversations that they needed to diversify".*

CT20: (Male, 27 years old, 3 years seniority) *"I think that new teachers are more active in this subject".*

Teaching Profession with Developing Technology

In the opinions of the classroom teachers, They expressed their opinions about whether the rapid development of technology poses a threat to the teaching profession. *Interviewed; Twenty (15) classroom teachers, as "CT1, CT2, CT3, CT5, CT6, CT7, CT9, CT11, CT12, CT13, CT14, CT16, CT18, CT19, CT20", expressed this situation as follows.*

CT1: (Male, 39 years old, 16 years seniority) *"There can be no such thing as the development, stagnation or disappearance of teaching. Distance education showed us that school is not just a place where knowledge is taught".*

CT2: (Male, 37 years, 13 years seniority) *"…He is the teacher who gives meaning to technology. Technology alone is not enough".*

CT3: (Male, 32 years old, 5 years seniority) *"Nothing can do with the warm relations to be established with the student in the classroom environment, such as making eye contact with the student. In other words, I think that no development can replace the teaching profession".*

CT5: (Female, 36 years, 14 years seniority) *"…no video can replace teacher face-to-face training".*

CT6: (Female, 33 years, 7 years seniority) *"I don't think it does. Because there will always be a need for a guide who will use them, manage them and create cooperation".*

CT7: (Male, 35 years, 12 years seniority) - CT8: (Female, 52 years, 27 years seniority) *"…On the contrary, I think it will be an advantage".*

CT9: (Female, age 53, years seniority 29) *"…I do not think that any training is as effective as face-to-face communication".*

CT11: (Female, 38 years, 14 years seniority) *"It makes up for me. With distance education, only the academic identity of the teacher came to the fore instead of the personal and moral identity. Anybody or machine can teach just fine".*

CT12: (Male, 54 years, 30 years seniority) *"…Nothing replaces the teaching profession".*

CT13: (Female, 39 years old, 17 years seniority) *"The teacher should be a mentor in the classroom. I don't see it as a threat. I think the teacher should blend technology into his profession like a locomotive".*

CT14: (Male, 50 years old, 22 years seniority) *"No threat if careful…".*

CT16: (Female, 45 years old, 23 years seniority) *"…It allows us to do our job more effectively".*

CT18: (Male, 40 years old, 15 years seniority) *"The teaching profession has existed for thousands of years and will become even more important in the future with its ability to use technological tools".*

CT19: (Male, 29 years old, 4 years seniority) *"I don't think there will be a threat as the teacher assumes the role of the guide".*

CT20: (Male, 27 years old, 3 years seniority) *"This threat will be eliminated with the training to be given to teachers in accordance with technological developments".*

Digital Development and Robot Teacher

In the opinions of the classroom teachers; With the rapidly developing digital transformations, they expressed their opinions about the possibility of robot teachers teaching in classes. Interviewed; Twenty (20) classroom teachers, including *"CT1, CT2, CT3, CT4, CT5, CT6, CT7, CT8, CT9, CT10, CT11, CT12, CT13, CT14, CT15, CT16, CT17, CT18, CT19, CT20"* They expressed the situation in the following ways.

CT1: (Male, 39 years old, 16 years seniority) *"Robots that are not sensory beings can never replace the teacher as the leader of a social environment".*

CT2: (Male, 37 years, 13 years seniority) *"An impossible dream… technology is a tool, not an end. Students make the robot teacher inactive during a class hour".*

CT3: (Male, 32 years old, 5 years seniority) *"It is obvious that even if robot teachers are placed in the classrooms, it will be necessary to have a teacher at the beginning. Even with the existence of such a possibility, I do not think that the teaching profession will be endangered".*

CT4: (Male, age 46, years seniority) *"There will never be systems that can fully replace the teacher in education".*

CT5: (Female, 36 years, 14 years seniority) *"I don't think it's possible because it can't replace the teacher in any way".*

CT6: (Female, 33 years, 7 years seniority) *"Robot teachers help with reinforcement, feedback and repetition, but they cannot replace the teacher".*

CT7: (Male, 35 years, 12 years seniority) *"Teaching is not just giving lectures, academic education. There is an emotional bond between the teacher and the student. For this reason, a robot can never replace a human".*

CT8: (Female, 52 years, 27 years seniority) *"Robot teachers can only teach in classrooms. But we are in constant interaction with our students in every sense in our classrooms. I do not find it appropriate".*

CT9: (Female, age 53, years seniority 29) *"There is no education in education without the contribution of social communication, mutual eye contact, gestures and facial expressions. Therefore, it is necessary to think about how well the robot teacher can achieve these".*

CT10: (Male, age 33, 8 years seniority)*" No robot can replace a teacher. However, it becomes a helpful assistant to the teacher".*

CT11: (Female, 38 years, 14 years seniority) *"I think it can increase academic success. Human values may not be given. But we also see that these values cannot be given only with the teacher in today's conditions".*

CT12: (Male, 54 years, 30 years seniority) *"I see it as a slim possibility".*

CT13: (Female, 39 years old, 17 years seniority) *"I see it as a very remote possibility. The teacher should touch the child's consciousness. A teacher should touch. There should be an exchange of information".*

CT14: (Male, 50 years old, 22 years seniority) *"It may be possible, but the society's culture, moral values, belief, national and spiritual values may be negatively affected. A teacher is like a mother and father. But robot?".*

CT15: (Male, 48 years, 25 years seniority) *"Technology will create that opportunity. But this is not a threat to teaching".*

CT16: (Female, 45 years old, 23 years seniority) *"Even if it is not today, it will happen with the developing technology. However, from the point of view of supporting the psychosocial development of students, the work will not be the same. Robots can only be used".*

CT17: (Male, 39 years, 16 years seniority) "*I don't think this will happen until the very distant future*".

CT18: (Male, 40 years old, 15 years seniority) *"I don't think it would be possible in elementary school. Contrary to the learning-by-doing style".*

CT19: (Male, 29 years old, 4 years seniority) *"It will negatively affect the feeling in the classroom and the feedback to be received from the student".*

CT20: (Male, 27 years old, 3 years seniority) *"This may be a possibility if it is thought of as just transferring information. I do not think this can happen in the context of individual situations and differences of individuals".*

CONCLUSION AND DISCUSSION

The results of the interviews to determine the teachers' opinions about how the lecture performances changed with the use of technological content by the classroom teachers were discussed.

From the ideas of the classroom teachers interviewed, It has been seen that while teachers explain the positive aspects of technological products and contents to their lecture performance, it saves them time and provides convenience, provides permanent learning for students, and provides a fun and wide range of product content. Dursun et al. (2013) emphasized that the use of technological tools in education makes teaching the lessons easier and enjoyable and enriches the content of the

lessons. It has been observed that while teachers talk about negative aspects, they generally discuss the danger of technology addiction. It has been warned that students may be exposed to the dangers of digital environments. Demirer and Dikmen (2018) emphasized in their research that the positive aspects of teachers' use of technological products outweigh the negative aspects. However, they state that the misuse of technology negatively affects students' participation in the course. As it can be understood from here, it can be said that technological products and contents have positive and negative aspects to their lecture performance, and students are open to both positive and negative aspects.

The active use of technological content and the fulfillment of its function are possible with the teacher's knowledge on the subject. Newly developed technological content related to education should be well introduced and taught to teachers. Without enough information, we cannot use the content efficiently and actively". When the literature was reviewed, Gülcü, Aydın, and Aydın (2013) stated that teachers were inadequate in terms of technology because they could not receive adequate maid training and seminars. This result supports the results of our study. Ayvacı, Bakırcı, and Başak (2014) stated that, as in our study, teachers have a lack of in-service training during the implementation of technological tools in schools.

From the ideas of the teachers interviewed, It has been seen that the teachers are of the opinion that the training given to them is not enough to use technology and their performance is low because they are not competent enough to use technological products. It can be said that the desired level of success could not be achieved due to the inadequacy of the technological infrastructure and equipment. It can be said that the use of technological products and content in educational environments cannot be provided to teachers on time and in place by the authorities, and this causes disruptions. From this, it can be concluded that teachers should be adequately trained and educational environments should be adequately equipped. When the studies of Gülcü, Aydın, and Aydın (2013) are examined, it is seen that teachers complain about the lack of equipment related to technological infrastructure. This is in agreement with the result of our study.

From the ideas of the classroom teachers interviewed; It has been said that teachers, who teach lessons using technological content, save time and find the opportunity to teach more actively and more. It has been seen that it attracts attention because it enriches the course environment, and it actively engages students in the course, and provides permanent learning. It is mentioned that it eliminates the problems of finding resources and provides great convenience to the teacher in terms of technique and technique. From this point of view, it can be said that the lecture-performances of the teachers who teach using technological content are positively affected. Altın (2014) concluded in his study that teachers who use technology save time and achieve more effective results.

From the ideas of the classroom teachers interviewed; teachers, teachers who have reached a certain level of seniority in education have a lack of interest due to not knowing how to use technological content. However, it was understood that every teacher said that it would be positive to benefit from technology. It has been observed that teachers of all seniorities and genders are more effective in teaching when they develop themselves and learn to use technological products. It has been observed that young teachers trained by using technology are more positive and active. From this point of view, it can be said that young teachers are more inclined to use technological content than senior teachers.

From the ideas of the classroom teachers interviewed; It has been observed that teachers say that nothing can take the place of the teacher in the classroom, no matter how advanced it is. It has been stated that no matter how much the equipment of the classrooms is developed, a teacher will need to manage and guide the equipment. Young students need socialization and attention in the educational environment.

SUGGESTIONS

Under this heading, solution suggestions are presented based on the results obtained from the research findings.

- Schools should be equipped with internet and technological infrastructure.
- Internet should be provided in places where there is no Internet infrastructure.
- Teachers should be supported in the use of technology and constantly trained depending on the developments.
- Students should be trained in using technological products and content.
- Parents and students should be educated to raise awareness about the benefits and harms of technology.

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- The first author made significant contributions to the creation of the conceptual framework, planning, data acquisition and analysis and interpretation of the data.

- The second author contributed to the review of the findings related to the article's content, the preparation of the draft, and the final form of editing.