

## 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 Namık 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 Namık 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 Namık 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 1. Table of codes used in qualitative data analysis

Question no:	Questions:	Answer sample:	Classification:	Codes:	Code belonging to answer sample:
1	What kind of problems did you encounter during the distance education process?	“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)	Problems	Low motivation, Disciplinary problems, no sanction, absenteeism, Internet connection problem, portal insufficiency, lack of content.	Equality of opportunity, tablet, mobile internet, sanctions, motivation, portal.
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?	“Lack of internet, lack of technical equipment (few computers in the house). I took care of all of them myself.” (Teacher 12)	Problems	Lack of internet, lack of devices.	School administration, technological equipment, MoNE tablet.
3	Have you had any educational problems in distance education? If so, what kind of problems? What has been done to overcome these problems?	“It was the first time the children and us experienced distance education, and communication problems occurred.” (Teacher 12)	Problems	Lack of content, lack of planning, student course follow-up. Joint plan	Technological competence Joint plan Follow-up
4	How did your school administrators support you during the distance education process?	“They supported in all matters.” (Teacher 15)	Solution recommendations	Support was given	In-service training, technological assistance.
5	What are your opinions on achieving the desired targets in the annual plan in distance education?	“I think they can be reached.” (Teacher 15)	Solution recommendations	Target can be reached	Target is achievable, Efficiency is low
6	What are your opinions on the materials and training methods you use in distance education?	“There are not enough resources in terms of content, I think it will be more useful when students have resources.” (Teacher 3)	Solution recommendations	Development of e-content	e-content
7	How has distance education affected your professional development?	“We see that technology is everywhere. This period has improved me in terms of lecturing on computer and smart phone.” (Teacher 3)	Solution recommendations	Positive, development	Positive, development
8	Have you received in-service training on distance education? If so, what are your opinions on these trainings?	“I received help and training from the computer teachers working at our school. I can say it is enough for me.” (Teacher 1)	Solution recommendations	I received, school administration	I received, school administration

9	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.	Conversation, face-to-face education, engaging visuals and contents.
10	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	Whatsapp, guide
11	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	School administration, MoNE, motivation
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?	“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	School administration, MoNE, Teacher, Student, parent

## FINDINGS

15 teachers from Namik 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. The opinions of the 15 teachers in the study group are as follows:

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 teachers → 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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