



Effectiveness of distance education applications used in pandemic period: the case of TRNC universities

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ABSTRACT

In this paper, the transition processes of higher education institutions in the Turkish Republic of North Cyprus (TRNC) to distance education during the Covid-19 pandemic and their development in this regard are evaluated and examined. The aim of the research is to evaluate the practices of higher education institutions in the TRNC in the transition to distance education during the pandemic period. For this purpose, the transition processes and developments of higher education institutions in the TRNC to distance education during the Covid-19 pandemic are evaluated and examined in this study. In the research, descriptive survey model, which is one of the survey models, was used. The number of participants consisted of 30 people from 8 major universities in the TRNC. Participants were determined through purposive sampling. An interview form consisting of 8 open-ended questions was used to obtain the data that would form the basis of the research. It was seen that although there were minor setbacks in some universities during the full transition to distance education in the pandemic period, these problems were resolved in a short time, and in general, universities in the TRNC managed distance education well during the pandemic process.

Keywords: Covid-19 pandemic, TRNC, distance education, Moodle, synchronous class, live class application.

1.INTRODUCTION

With the SARS-CoV-2 which emerged in China in 2019 the world saw restrictions in several areas, and the inevitable rise in the number of cases brought life in many countries to a standstill. When the first case was seen in Turkish Republic of North Cyprus (TRNC) in 10 March 2020 a sudden lockdown was ordered; almost all human activities with the exception of health services were restricted and even halted. Education services also had their share and face-to-face education at all levels from elementary schools to universities was stopped (Karahan et al., 2020: 204).

Some universities, which previously had a certain online education infrastructure and had limited experience with this type of education, introduced some applications available in their systems, while some others used online meeting applications (zoom, meet, teams) that were available before the pandemic.

In fact, distance education in universities operating under the Republic of Turkey Higher Education system in Turkey and in TRNC started with the establishment of Anadolu University-Open Education Faculty (1982-1983) (Akdemir, 2011: 69; Al; Madran, 2004: 261). After this first step, distance education developed further in the 1990s and claimed a place in the education offered by universities in Turkey and Cyprus.

In the universities of TRNC, which is the main study area of the paper, lectures were given mostly asynchronously through distance education web pages from the 2000s to the beginning of the pandemic. The courses that are preferred to be given asynchronously in distance education during the said time period are the common courses offered in many different departments in the university, such as History, English, and Turkish Language, which are generally offered jointly in all universities (Korkmaz et al., 2021: 239; Fidan et al., 2018; Yaman, 2015). The classes that should be given synchronously are usually in the form of a short summary of the pre-loaded videos (Bilgiç&Tüzün, 2015: 39).

In the ongoing process, universities have made considerable progress in online education and have started to offer courses live synchronously. Naturally, there were several problems and shortcomings in this process, and different distance education applications were performed in universities and even in the departments within the universities (Tüzün&Toroman, 2021: 840). These problems and deficiencies were witnessed even more especially in applied courses (internships, hospital practices, laboratory, workshop and studio courses) (Kahraman, 2020: 44,54).

In this sense, it can be said that universities have changed and developed in different ways and levels in distance education during the Covid-19 pandemic. In this study, the transition processes and developments of higher education institutions in the TRNC to distance education during the Covid-19 pandemic will be evaluated and examined.

1.1 Purpose of the Study

The aim of the research is to evaluate the practices of higher education institutions in the TRNC in the transition to distance education during the pandemic period. For this purpose, the transition processes and developments of higher education institutions in the TRNC to distance education during the Covid-19 pandemic are evaluated and examined in this study.

2. METHOD

2.1. Model of Research

In the study a descriptive survey model, which is one of the survey models, was used. Descriptive survey consists of research conducted on large groups, in which the opinions and attitudes of the individuals in the group about a phenomenon and event are sought, and the phenomenon and cases are tried to be described (Karakaya, 2012: 59). This research method is used to describe the structure of objects, societies and institutions, and the functioning of events (Cohen et al., 2007)

2.2. Sample

Participants consisted of 30 people from 8 major universities in the TRNC who were determined through purposive sampling. Purposive sampling is a non-random sampling approach that allows for in-depth research by selecting information-rich situations depending on the purpose of the study (Büyüköztürk etc., 2016). This method is preferred when one or more specific cases that meet certain criteria or have certain characteristics are desired to be studied. Data were obtained through face-to-face interviews.

2.3. Collection and Analysis of Data

An interview form consisting of 8 open-ended questions was used to obtain the data that would form the basis of the research. The opinions of two experts were used in the preparation of the survey questions, which were created by making use of the literature. SPSS 2.4 data analysis package program was employed in the statistical analysis of the research data; then the findings were shown in the tables and interpreted.

3. FINDINGS

In this study, the distance education systems implemented by higher education institutions in the TRNC during the pandemic period were evaluated, and interesting and significant results were obtained.

Table 1. Live class software used in universities

| Live class software | F | % |
|------------------------|----|----|
| <i>Big Blue Button</i> | 6 | 20 |
| <i>Microsoft Teams</i> | 9 | 30 |
| <i>Google Meet</i> | 12 | 40 |
| <i>Zoom</i> | 3 | 10 |

Note: The software intensively used by the universities were taken as basis.

When Table 1 is examined, it is seen that the most widely used live course software is Google Meet. Google Meet stands out as an easy-to-use application where users can hold meetings with up to 250 participants. As a matter of fact, one of the participants (K4) supports our view by saying “Google Meet is a very practical and easy to use application”. Other live course software used in TRNC universities were Microsoft Teams, Big Blue Button and Zoom, respectively.

Table 2. Teaching of courses at universities

| Teaching status of courses | F | % |
|---|----|----|
| <i>Except for the common courses, all of them were taught synchronously.</i> | 18 | 60 |
| <i>All courses are taught synchronously.</i> | 3 | 10 |
| <i>Common courses were taught asynchronously, most courses were taught synchronously, and some of them were taught with the flipped learning model.</i> | 9 | 30 |

As can be seen in Table 2, all of the universities in the TRNC participating in the study taught almost all of the courses synchronously, taking into account the recommendation of the Council of Higher Education. The aforementioned common courses such as History and English were continued asynchronously as before the pandemic. Based on this result, it can be said that the distance education infrastructure of the TRNC universities participating in the study is sufficient. One of the participants (K17) who participated in the study said “I think the university organizes synchronous and asynchronous courses well in terms of infrastructure”. Another participant (P21) expressed his opinion as follows: “Even though minor problems arose at the beginning of the pandemic, after a short while, there was no problem in the synchronization of the classes. In the first days of the lockdown, although the academicians stated that it would not be as effective as face-to-face education, they adapted to the process and taught effective synchronous classes”.

Table 3. Reasons why universities prefer live course software

| Reasons to prefer live course software | F | % |
|--|----|----|
| <i>Having the system installed prior to the pandemic process</i> | 6 | 20 |
| <i>Ease of use</i> | 12 | 40 |
| <i>Program compatible with Moodle system</i> | 3 | 10 |
| <i>Confidence of the company and software in terms of infrastructure</i> | 3 | 10 |
| <i>University corporate decision</i> | 6 | 20 |

As can be seen in Table 3, a significant part of the universities preferred live course software that is easier to use and that they were familiar with before. In the selection of live course software, it has been seen that universities prefer live course software that is in a certain price range and is practical to use. This is extremely important, especially in the transition period, in terms of faster adaptation of faculty members to the newly emerging education system. One of the participants (K17) expressed his opinion as follows: “The fact that it provides opportunities and conveniences to its customers in terms of service played an important role in the university's preference for this software”. Another participant (K24) expressed his opinion on this subject as follows: “Many features such as being compatible with almost every device, ease of use, the student's ability to write what he wants to convey to his teacher by using the message box, and the white board feature are the reasons for choosing this software.” Another participant (K13) said: “Since it is a system we knew before the pandemic, we immediately thought of using it in such a situation.”

Table 4. Tools and materials used in the distance education system

| Tools and materials used | F | % |
|---|----|------|
| <i>Class videos</i> | 22 | 73,3 |
| <i>Presentation files (power point etc.)</i> | 21 | 70 |
| <i>Lecture notes (slide, pdf, word, etc.)</i> | 30 | 100 |
| <i>Survey use</i> | 15 | 50 |
| <i>Submitting homework</i> | 27 | 90 |
| <i>Taking exam</i> | 21 | 70 |
| <i>YouTube links</i> | 15 | 50 |
| <i>Audio recordings</i> | 6 | 20 |
| <i>Short instructional videos</i> | 1 | 3,3 |

Note: Participants mentioned more than one tool and material.

As seen in Table 4, the systems preferred by universities work in harmony with different tools and equipment. While some faculty members stated that they used a significant part of them, others emphasized that the tools and materials used may differ from department to department.

Table 5: Strengths of the distance education system

| Strengths of the system | F | % |
|--|----|------|
| <i>Effective use of time is one of its greatest strengths.</i> | 10 | 33,3 |
| <i>No shortage of space.</i> | 6 | 20 |
| <i>Ability to transfer more information.</i> | 6 | 20 |
| <i>Due to the recordings, the courses can be viewed at any time.</i> | 3 | 10 |
| <i>It offers the opportunity to communicate with more people at the same time.</i> | 1 | 3,3 |
| <i>I think it provides equal opportunity in education.</i> | 3 | 10 |
| <i>Exams can be evaluated very easily.</i> | 1 | 3,3 |

In Table 5, the participants were asked about the strengths of the distance education system, and it was seen that a significant part of the participants thought that distance education was advantageous in terms of using time effectively. The participants stated that other advantages of the distance education system were that there was no shortage of space, more information could be transferred in a short time, and that it was easy to communicate with several students at the same time. Three participants said that distance education provided an advantage in terms of equality of opportunity, and one participant said that the exams were evaluated much easier because they were delivered through the system. One of the participants (K18), who said that he was advantageous in terms of time, expressed his opinion as follows: "There are positive aspects of distance education in terms of time. Information transfer can be done in a short time." Another participant (K24), who drew attention to the issue of space, expressed his opinion as follows: "Providing the student the opportunity to attend the class wherever he is." One of the most striking answers to this question is that distance education is thought to provide an advantage in terms of equality of opportunity. One of the participants (P14) in favor of this idea expressed his opinion as follows: "With the distance education system, students with physical disabilities also receive education under equal conditions." Another participant (K27) commented as follows: "As live lecture recordings can be watched whenever desired; it allows each student to learn at their own pace."

Table 6. The weaknesses of the distance education system

| Weaknesses of the system | F | % |
|---|----------|----------|
| <i>Failure to make an accurate measurement and evaluation</i> | 12 | 40 |
| <i>Failure to ensure student attendance</i> | 6 | 20 |
| <i>Internet problems from time to time, although not constantly</i> | 5 | 16,6 |
| <i>Students' lack of knowledge about technology</i> | 4 | 13,3 |
| <i>Occasional power outages</i> | 2 | 6,6 |
| <i>I think that distance education is problematic in terms of equality of opportunity in education.</i> | 2 | 6,6 |

In Table 6, where the shortcomings of the distance education system are questioned, it is seen that a significant part of the participants agree that healthy measurement and evaluation cannot be made. One of the participants (K22) said, "It increases the probability of students cheating". Another participant (K17) stated that it is almost impossible to measure and evaluate what students have learned from the courses they take in online education. The issue that the participants drew attention in addition to the disadvantage about measurement and evaluation was the low motivation of the students in participation. In this regard, one of the participants (P11) said, "The low motivation and distraction of the students are one of the biggest problems of distance education". Another participant (K24) said: "We have difficulties in turning on the cameras and voices of the students in distance education" and reported that the faculty members had difficulties in providing the motivation of the students towards the class. Other disadvantages expressed by the participants about distance education are as follows: Internet problems, students' lack of knowledge about technology, occasional power outages, and distance education's inability to provide equal opportunities. While three of the participants in the previous question thought that distance education provides equality of opportunity, it is quite remarkable that one of the participants in this question stated that distance education does not provide equality of opportunity. The participant (K29), who thinks that distance education damages equality of opportunity, expressed his opinion as follows: "I have had students who could not have the technological opportunities needed during the pandemic period. In this sense, I think that distance education damages equality of opportunity."

Table 7. Difficulties Experienced in Transition to Distance Education

| Problems in the transition process | F | % |
|---|----------|----------|
| <i>It was difficult for me to familiarize the students with the process.</i> | 10 | 33,3 |
| <i>I had difficulties in adapting the course materials to distance education.</i> | 6 | 20 |
| <i>I had a hard time adopting the process.</i> | 5 | 16,6 |
| <i>I had a lot of trouble getting attendance.</i> | 4 | 13,3 |
| <i>Internet and electricity proved to be problems.</i> | 3 | 10 |
| <i>I had problems in class management.</i> | 1 | 3,3 |
| <i>I had problems in learning the system used.</i> | 1 | 3,3 |

As seen in Table 7, most participants had difficulty in familiarizing the students with the process. In this process, it was not easy to deal with some of the problems of the students and to motivate them to the class. It is obvious how difficult this is, especially when the stress and fear brought by the pandemic are considered together. However, providing course materials suitable for distance education, difficulties in adopting the

process, taking the attendance completely, internet and electricity problems, classroom management difficulties, and learning the system used proved as other difficulties experienced by faculty members in the transition to distance education. The participant (K18), who said that he had difficulties in classroom management, expressed his opinion as follows: "I had considerable difficulty in classroom management at first. Students were kicking each other out of class, one was turning off another's voice." The participant (P11), who stated that he had difficulty in familiarizing the students with the process, expressed his opinion as follows: "There were students who did not want to participate in the class in any way. Some students did not speak a word and said their name even though I asked questions. Sometimes I even thought that they were not in the class because they did not want to open the camera for different reasons. It was not easy to adapt to the process students who exhibit these behaviors." A quote from a participant (K19), who stated that he had difficulty in learning the system used, is as follows: "There were difficulties in learning the system during the transition, but our university took measures by organizing in-service trainings and the system was learned in a short time."

Table 8. Opinions on the post-pandemic education system

| Opinions on the post-pandemic education system | F | % |
|---|----------|----------|
| <i>Distance education will continue, albeit to a limited extent, from now on.</i> | 18 | 60 |
| <i>It seems that it will continue especially in terms of PhD level courses.</i> | 5 | 16,6 |
| <i>I think that every country will make significant investments in educational technologies.</i> | 4 | 13,3 |
| <i>I think we will switch to traditional education.</i> | 2 | 6,6 |
| <i>Digital competencies will be given more importance and education systems will be arranged accordingly.</i> | 1 | 3,3 |

In Table 8, the participants were asked about their thoughts on the education system of universities after the pandemic, and it was seen that a majority of them expressed their opinions that distance education would not be out of our lives. One of the participants (K22) who thought this way expressed his opinion as follows: "I think we should change the education policy that needs to be followed and design a significant part of our classes as face-to-face and some classes as online." One of the participants (K17) who thought that they would switch to traditional education expressed his opinion as follows: "Although it is well organized, I think that the low motivation of students and teachers based on distance education also affects the quality of education. Therefore, I think that traditional education should be resumed." One of the participants (K20) gave a remarkable answer and underlined the importance of training both students and teachers in terms of digital competencies in the future.

4. DISCUSSION AND CONCLUSION

It is extremely important for the governors of a country to manage crises in a healthy way and to ensure that the society overcomes it with the least damage during crisis periods that affect all areas such as the pandemic. The Covid-19 pandemic has also been one of the serious crises that has affected the entire world in almost every area since 2019. COVID-19 has affected almost every sector such as health, economy, and education and created serious damage. One of the most affected sectors is education. The most serious damage caused by the pandemic to the education sector has been the closure of schools all over the world. With the closure of schools, serious learning losses and inequality of opportunity have emerged among students. In this process, universities had to switch to distance education processes in almost all courses overnight. While some universities, which were unprepared for what to do in crisis processes such as earthquakes and epidemics and did not have a distance education infrastructure, had a very difficult time in the said process, universities with the necessary infrastructure continued their education activities by adapting to the process very quickly.

In this study, the practices carried out by the universities in the TRNC during the said process were revealed by referring to the opinions of the faculty members working at the universities and some interesting results were obtained.

It has been observed that universities in the TRNC which were covered by the study mostly use live course software such as Google Meet and Microsoft Teams, while it has been determined that some universities prefer Big Blue Button and Zoom. Some of the participants stated that the software they used at the beginning of the distance education changed after a week or two. This is an indication that universities make decisions based on the conditions, opportunities and ease of use after a brief experience. As a matter of fact, the majority of the faculty members participating in the study pointed to the ease of use as the reason for preference of live course software. Kaçan and Gelen, in their study titled "A Glance at Distance Education Programs in Turkey", attributed the preference of Moodle to the ease of use, in parallel with the result we found in the selection of such software (Kaçan & Gelen, 2020: 17). The fact that some of the participants said that the live course software was installed in universities before the pandemic is an important indicator that some universities in the TRNC have a vision.

It has been observed that the faculty members of TRNC universities participating in the research enrich teaching as much as possible by using various tools and materials such as lecture videos, presentation files, lecture notes, youtube videos, audio recordings, and short lecture videos in the distance education process. Serhat Çoban also stated that the materials used in distance education are constantly developing and pointed out that with the use of multimedia materials, the distance education system can sometimes be complementary to classical education and sometimes an alternative to it (Varol, 2002 as cited in Çoban, 2012: 2).

In this study, which questions the strengths of the distance education system, it was seen that a significant part of the participants thought that distance education was extremely beneficial in the effective use of time. Akman and Güler also emphasized that distance education both reduces financial costs in learning processes and saves time for students (Akman & Güler, 2008: 48). One of the remarkable answers to this question is that some of the participants think that distance education provides equal opportunity. Muhammet İbrahim Akyürek also emphasized that distance education is important for everyone and provides equal opportunity in education, and that children, young people, the disabled and those who cannot go to school because they work can also benefit from this type of education (Yildiz, 2004 from Akyürek, 2020: 4). In the article titled "A Quantitative Study on the Evaluation of the Experiences of Faculty Members and Students at Faculty of Theology/Islamic Sciences with the Distance Education System during the Covid-19 Pandemic Process" written by Yazıbaşı et al, it has been displayed that students and instructors agree that online education does not provide equal opportunity in undergraduate education (Yazıbaşı et al., 2020: 260). As can be seen, there are different opinions among researchers or participants about equal opportunity. Although distance education system seems to provide equality of opportunity in some respects, it is an undeniable fact that it triggers inequality of opportunity, especially for families experiencing economic difficulties. The point that researchers express more intensely about the deficiencies of distance education is that measurement and evaluation cannot be done in a healthy way. Özalkan also stated that there is no suitable measurement-evaluation method for distance courses in his study titled "Assessment and Evaluation in Distance Education: Rethinking Social Sciences Education in the Pandemic Process". The author emphasized that the reasons such as lack of interaction due to being in different places physically reduced motivation for both parties (Özalkan, 2021: 22). One of the most important issues stated by the participants in terms of the shortcomings of the distance education system is that the students have problems with active participation in the class. Bulut and Kırmızı also drew attention to the same problem in their articles, and underlined that students' being outside the classroom environment during the distance education process reduced their interest in the class. Researchers stated that a complete lack of motivation was observed in students in this process regarding participation in the class (Bulut & Kırmızı, 2021: 11). The inability to create a full classroom environment in distance education and the fact that students are away from motivation sources such as appreciation and competition naturally affect the interest and participation in the class negatively. As a matter of fact, in this study, one of the most important points underlined by the participants was the low motivation and distraction of the students. However, if we pay attention to Table 7, the most difficult aspect of the participants in the transition to distance education was to familiarize the students with the process. Due to the low levels of motivation, it was difficult for the students to get used to the newly formed distance education due to the pandemic. In addition, it was revealed that some faculty members had difficulties in adopting the process during the transition period. In Altan's study, in which he evaluated the online teaching practices of pre-service teachers, it was seen that they were not sufficiently motivated in the internship courses they attended through distance education (Altan, 2021: 757).

In the study, the participants who expressed their opinions on the future of the education system stated that after the pandemic, distance education will continue in universities in the TRNC in a more limited way. Aydemir et al. stated in their paper that distance education would remain an important part of education in our lives from now on (Aydemir et al., 2021, p.62). However, the authors, who stated that they expect countries to make significant investments in educational technologies in the future, underlined that especially in terms of digital competences, the education of both students and teachers will be given great importance and the education systems of the countries will be shaped accordingly. Bozkurt, on the other hand, emphasized in his article titled "The coronavirus (Covid-19) pandemic process and the evaluations on education in the post-pandemic world: New normal and new education paradigm" that digital skills, digital competencies and digital literacy knowledge are the basic requirements of the digital age. In the same article, the author underlined that, in line with our findings, digital learning and distance education will often be on the agenda in the new normal (Bozkurt, 2020: 130).

In conclusion, it was observed that although there were minor setbacks in some universities in the transition to distance education during the pandemic period in the TRNC, these problems were resolved in a short time, and universities in the TRNC have generally managed distance education well during the pandemic process.

5. RECOMMENDATIONS

Universities in the TRNC managed the pandemic process well in general and showed adaptation to distance education. On the other hand, some of the problems experienced and the related process have once again shown

the importance of using technology in education. Therefore, it is extremely important to raise awareness of both faculty members and students about the use of technology in education.

When the pandemic is over, distance education applications should not be terminated completely, and one or two of the courses with appropriate content should be offered to students through distance education.

Digital platforms created and/or used more effectively during the pandemic process should also be employed in a manner that they can support face-to-face classes.

Further scientific studies can consult the opinions of families, students and distance education experts regarding the courses conducted with distance education and identify the deficiencies of the educational activities carried out, so that these deficiencies can be eliminated more easily.

In addition, the pros and cons of the distance education process can be observed more clearly by giving place to the views of the said stakeholders in scientific studies.

Similarly, distance education applications carried out at undergraduate, graduate and doctoral levels can be evaluated from the perspective of students, faculty members or education experts, and it can be revealed at what level distance education can be more effective.

Finally, the problems experienced by students in the context of adaptation to school after the pandemic and the reasons for these problems can be analyzed.

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