

DISTANCE EDUCATION DURING THE COVID-19 PROCESS IN TURKEY: IMPLICATIONS OF WEB CONFERENCING FOR OPEN SCHOOLING

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ABSTRACT

In this information age, the Covid-19 pandemic surrounding the whole world and the limitations brought by its consequences have made the importance of distance education more aware. In this connection, distance education has gained a very crucial role, especially in the Covid-19 process. The reason for this is that with distance education applications, the restrictions in face-to-face education are eliminated and the education continues uninterruptedly. In this study, by referring to the historical development of distance education, the point where distance education has reached today with technological developments, distance education applications, and opinions on Zoom video conferencing system, which is the most used application among web conferencing systems in the Covid-19 pandemic and Open Schooling will be tried to be explained through literature reviews and personal experiences.

Keywords: Distance Education, Video Conferencing, Zoom, Covid-19, Open Schooling.

INTRODUCTION

Zoom Video Communications, Inc. (Zoom) is a US communications technology company founded in San Jose, California. It provides video telephony and online chat services. In addition, it is used for teleconferencing, telecommunicating, social networking, and distance learning. This cloud-based software gives the opportunity to have direct communication. Zoom was founded in 2011 by Eric Yuan, a former engineer, and CEO of Cisco Webex, and launched in 2013 (Weiner, 2017). Today, it can be accepted that Zoom, as a video conferencing system, has become more popular in the Covid-19 process thanks to its user-friendly interface. Features such as online chat, group video sessions, screen sharing, and the ability to record sessions may have made Zoom almost the first system that comes to mind to be used in distance education but it is a system that was launched in 2013, well before Covid-19, and is already in use. When the literature on Zoom is examined, it is possible to say that this video conferencing system has been developed in the light of technological developments since its inception and has taken its current form which is quite practical for distance education.

Zoom (Zoom, 2023), whose founding mission is to ensure that video communication is carried out smoothly and securely, is used in the field of distance education today but based on the research, it can be indicated that there are some difficulties in terms of teachers and students in distance education given with the Zoom Video conference system in Turkey and that the efficiency of distance education given with the video conference system should be evaluated. The recently conducted studies give information about the comparisons or general structures of video conferencing systems. In this context, presenting findings of related literature in line with the opinions of teachers and students in online lessons given via Zoom might contribute to the related literature as there is a limited number of studies on online education given via Zoom video conferencing system during the Covid-19 in Turkey.

Notably, it can also be concluded that Zoom is not only used for distance education and it may also be used in the Open Schooling system to provide smooth and secure education in the world. In addition to this perspective; today, humankind still tries to find more alternatives to the existing education systems due to large student numbers and increases in expenditures for education. In the Open School system student at the school level is physically separated from the teacher and in this situation ICT is used to provide teaching and learning by bridging the gap between the teacher and the learner using alternative teaching methodologies. The 'open' in Open School is used to mean the openness of the system. In

the Open School system, there are rarely rules about student ages, prerequisites for study, courses to be chosen, number of which courses to take, registration of students and even timing for exams. Students can join any course anytime and continue their studies at their convenience. Students also have advisors who they can meet face-to-face with to find solutions to problems they may encounter while studying the material in the Open School system, but advisors do not teach students the subject matter and may even be uninformed about the course being studied. The role of the advisor is to guide the student and help him/her understand how to use the content. However, in the Open School system, in addition to the advisor, there is also a subject specialist who can be contacted by phone or e-mail to provide information about the subject content that the learner is learning (Philips, 2006). So, this article also aims to guide research on the subject by informing that Open Schools, which will create an alternative to the traditional school system that countries have today or complement the existing education system, will play an important role in meeting the education need that will be encountered in the future for different reasons.

DISTANCE EDUCATION AT A GLANCE

Covid-19 caused by the SARS-CoV-2 virus, which first started to spread rapidly overseas in November 2019 (Dias & Lopes 2020) has become a global issue through the virtual press conference published by the World Health Organization on March 11, 2020 (WHO, 2021). In this context, a disease that has never been exposed before can be defined as a pandemic as it is contagious to other people has dangerous consequences, and continues to be transmitted easily and in increasing numbers to other people.

According to the data of the Ministry of Health (2021) General Coronavirus (Covid-19) Table, the pandemic, which was detected for the first time in Turkey on March 11, 2020, caused the death of 49,874 people in Turkey as of July 3, 2021. In this context, the negative effects and reflected results of the crisis caused by the Covid-19 pandemic, which can have deadly results worldwide, on the economy, human psychology, daily life, and education, especially in the field of health, continue, and there is no definite data on when this situation will end.

During the pandemic process, schools in Turkey were initially closed from March 16, 2020, until April 30, 2020, and weekly lesson schedules at primary and secondary education levels were restructured as of March 23. Within the scope of open and distance education applications, it has been announced that it has been decided to continue education via Education Information Network (EBA) online and via TRT (MEB, 2021) on television screens. With this official statement made by the Ministry of National Education (MEB), distance education officially started in Turkey during the Covid-19 pandemic process.

DISTANCE EDUCATION IN TURKEY

The distance education system, which started with written correspondence in the past to meet the lifelong educational needs of people, has developed with the advanced internet technologies in the information age we live in, and today learners have the opportunity to receive education independent of time and place (Türkoğlu, 2002). In this way, individuals who want to continue lifelong learning can continue to improve themselves by using the opportunities to receive education wherever, whenever and however they want. According to Moore and Kearsley (2005), distance education is a planned and institutional administrative arrangement designed for students and teachers in different places with course designs in which different teaching methods are applied by the use of various technologies.

In these days when we experience the information age, distance education has also developed with the developing internet technologies, and with the help of this technology, it has been possible to provide education independent of time and place (Türkoğlu, 2002:210). In other words, distance education can easily build and maintain active communication between learners and educators in different places, as well as enable learners to receive education from different educational institutions in different countries. Thus, equality of opportunity in education can be created by eliminating the concept of distance education for learners. With distance education, learning habits, and skills can be reinforced while gaining the behaviors that need to be acquired through learning the learner.

A properly designed distance education can be more beneficial if it is evaluated in many ways. The cost of the program, the provision of specialist staff, education planning, assessment, and provision of learning resources must be carefully planned. In addition, the distance education programs used should

have the capacity to provide all kinds of support to the learners. Distance education programs are expected to support the goals, evaluate whether the goals have been achieved, and provide learners access to the resources they need to reach them. Meticulous implementation of distance education systems can increase the effectiveness of the program and enable the learner to benefit from education efficiently. It can be indicated that it is essential to update the applications regularly and developments required for distance education by experts in the field (Ghirardini, 2011).

Distance education provides access to the right and desired resource in a short time, synchronously or asynchronously via virtual connections, and distance education materials can be updated and used in a shorter time and at less cost. The education contents prepared for distance education are designed to ensure that everyone has access to the same standard of educational information. There is an equal sharing of information and there is no limitation in the learning time and the person determines the learning speed himself/herself. In other words, with distance education, the knowledge that two individuals who live in difficult conditions in a remote part of the world or receive education in the center of a metropolitan city acquire will be the same.

DISTANCE EDUCATION METHODS

Distance education is the opportunity to follow the education program from different environments with an internet developed in a single environment. This advantage of distance education provides independence from distance and time. That is, people can participate in an Internet-enabled teaching program at any time of the day (independent of time), using any computer platform (independent of tools), from anywhere in the world (independent of distance). The synchronous and asynchronous communication options provided by the internet add a highly interactive communication environment to the learning-teaching process (Altıparmak, Kurt ve Kapıdere, 2011). In other words, distance education is carried out in two ways today. Lessons are taught synchronously and asynchronously in distance education. Asynchronous lessons are with assignments and projects. On the other hand, generally in synchronous lessons; videos, activities, and question-solving lessons are applied (Avcı, 2020).

Asynchronous Education

Yorgancı (2015) defines asynchronous education as a form of education independent of place and time, where there is no communication between the student and the teacher, and the documents required for the course are shared with the student on the internet. In addition, in the asynchronous education system, educational institutions constantly update themselves to make online courses accessible to a broader student population by producing new course materials suitable for the system. In this system, the task of the trainer is to direct, not to teach, and learning takes place independently of space and time, so it can be said that its use is more common.

Negative factors such as the high cost of the face-to-face education approach, the fact that it is often inadequate and sometimes boring to the students, and the necessity of reaching the instructor in order to get extracurricular help due to the fact that the teacher is at the center of the classical understanding have led to the emergence of the asynchronous education approach. Asynchronous training has shaped the education method by taking into account the above-mentioned deficiencies and aiming to create a student-oriented and need-oriented system.

Synchronous Education

Karaman, Aydemir, Küçük & Yıldırım (2013) define synchronous education as environments where students and instructors are simultaneously present on the system and have instant communication. The biggest advantage of synchronous education is that even when applied through a web-based virtual classroom, it can transfer the atmosphere of mutual discussion, which plays a major role in making traditional classroom education effective, into the virtual classroom environment.

In synchronous education, the requirement for the educator and learner to have extensive technological infrastructure knowledge and the ability to use technology may be one of the biggest obstacles to the implementation of this system. On the other hand, both parties need an uninterrupted, wide internet network to be able to connect unremittingly.

Due to the pandemic, we are experiencing today, educational institutions in different fields have switched to the e-learning system through different channels since March 2020. In this process, some institutions aimed to achieve maximum efficiency by continuing their training mostly synchronously and by supporting education asynchronously.

Asynchronous education is more common as there is no restriction to be simultaneous, and with well-designed educational content, asynchronous education, and learning activities can be carried out effectively. However, it is considered that at least a certain part of the education should be delivered synchronously or should be activated or activated asynchronous education (enriched with communication tools), as the student will feel isolated and his motivation will decrease with the asynchronous education method. Much more successful results have been obtained with this kind of co-education. (Duran, Önal, & Kurtuluş 2006). In this context, it can be concluded that an effective distance education system for the learner can be achieved as a result of combining synchronous and asynchronous education methods both.

DISTANCE EDUCATION IN TURKEY DURING COVID-19

Due to the Covid-19 pandemic, distance education has been started in schools at all education levels in Turkey as well as all over the world. In this process, distance education was provided to 18 million students at primary, secondary, and high school levels via the EBA (Education Information Network) and three TV channels of TRT. It has been observed that the education activity carried out by MEB is mostly TV-oriented, one-way, and mass education (Can, 2020).

During this period, teachers gave life lessons to students with tools such as Zoom, Google Meet, and Skype, as well as the EBA platform. All lessons in primary, secondary, and high schools were carried out synchronously, while distance education continued asynchronously at universities. With the decrease in the effect of the pandemic in September, it was tried to ensure the continuity of education during the Covid-19 Pandemic Process by providing both distance and face-to-face education with applications such as hybrid education and blended education (Yaman, 2021).

On the other hand, Arık (2020) argued that despite the opportunities shared by MEB, there may be students who cannot access distance education or watch distance education tools effectively due to the conditions they are in. The result of the research conducted by Can (2020) also confirms that students cannot access distance education courses or experience problems due to insufficient internet packages, insufficient internet infrastructure, students' lack of equipment such as computers and tables, and sometimes even power cuts. And such inequalities in access and use of information and communication technologies affect learning (Salman, 2020).

In order to find a solution to this inequality in distance education given during the Covid 19 process, MEB (2020a) and Anadolu Agency (2020) announced that no separate measurement and evaluation will be made for the courses conducted with distance education, and 8 GB of support will be provided to students by internet service providers. However, it is difficult to say that the gift internet package provided by the government provides equality in education for students who do not have the infrastructure to use the internet or a device such as a phone or a tablet and it can be considered that the lack of assessment and evaluation in this process reduces student motivation and attendance to lessons.

From another point of view, the open school system can also use web conferencing systems to provide education continuity by filling the communication gap between the teacher and the learner. The world's largest open school with more than 1.3 million students enrolled, the National Open Schooling Institute (NIOS) was founded by The Commonwealth of Learning (COL) and has a prominent presence both in India and internationally. The open schooling system aims to provide education to students (and their parents) who live in places where traditional, face-to-face education is not possible for different economic and social reasons, have dropped out of school, or are illiterate and over a certain age. Although there is an age limit of 14 for starting open school, there is no upper age limit. More than 30% of national open school students are over the age of 20, with some over the age of 50. Access to the system is not difficult. A student who has completed primary school can continue to secondary school in an open school. Course choices can be chosen by students according to their individual interests, there are no restrictions in this regard. Students can continue learning at their own pace, entitled to up to 5 years to complete 5 courses. A student can learn one or more courses at the same time and can

delay his/her education for any reason without the need for permission. Open-school educational materials are prepared by experienced teachers and writers. The materials are written in plain language, interactive, and semi-programmed for self-study. Audio tapes and video cassette programs for selected topics and difficult topics support learning. The national open school system offers students the opportunity to take an exam when they are ready. Students can choose between the biannual exams and earn credits for each course they pass. When these credits are obtained in sufficient amount, the learner deserves to receive a certificate about the education received (Mukhopadhyay, 1994).

As another distinguishing feature of the open school system, there are face-to-face sessions with the facilitator to provide support about the difficulties that the student may experience while studying the learning materials. Facilitators do not teach, nor do they have to be knowledgeable about the subject matter, they simply guide students and show how the material content is studied. Facilitators evaluate students' exercises and assignments, give feedback and provide assistance if necessary. These meetings with facilitators of learners can often take place in libraries, churches, non-governmental organizations (NGOs), schools, or other semi-public learning centers, these meetings can be conducted via virtual applications such as teleconferencing, television broadcasts, interactive radio, or e-mail (Phillips, 2006). Considering the unique features of the above-mentioned Open School system, it can be indicated that Open Schooling has a more flexible system than the distance education system, it can be shaped according to the needs and characteristics of the learner, and the distance between the learners and the facilitators is minimized by facilitating feature in the Open School system. We can also assume that the feedback given to the student products motivates the learner and this situation affects the system positively.

VIDEO CONFERENCING SYSTEMS USED IN DISTANCE EDUCATION

Video conferencing systems, which have started to be used in order to maintain the continuity of education independently of time, place, and place during the Covid-19 process, can be called today's online distance education system. In this context, the EBA distance education system is considered one of the first examples of distance education systems developed in Turkey during the Covid-19 process, while many video conferencing systems have been activated to provide distance education after Turkey started the distance education system. According to Singh and Awasthi (2020); Google Meet, Microsoft Teams, Cisco WebEx Teams GoToMeeting, and Zoom applications are video conferencing applications that are frequently used today.

Today, synchronous conference tools and systems such as Adobe Connect Pro, BlueJeans, Elluminate Live, RingCentral Meetings, UberConference, iChat, and Skype can be used to ensure both education continuity and uninterrupted online communication. When the literature on the subject is examined; with its 200 million daily users, the Zoom videoconferencing tool is considered to be one of the most used systems among synchronous education application tools. Zoom helps teachers and students work together during the Covid-19 pandemic process thanks to its easy use, despite the high number of problems in security and privacy issues.

What Is Zoom? What Are Its Features?

Zoom is a cloud-based video web conferencing application with 1000 video participants and up to 10000 viewers capacity to create meetings, provide group messaging and live login. It has features such as HD video and HD audio, group messaging, screenful-screen view, simultaneous screen sharing, breakout rooms, and whiteboard usage. Zoom is easy to use and has an intuitive user interface. Also, Zoom video conferencing is stable and supports long video calls (Nurieva & Garaeva, 2020). With the Covid-19 process, the Zoom platform has started to be used more as a platform for education, online lessons, online interviews, or meetings, and the time limit in the free version is 40 minutes per session. It is possible to download the program to your computer, tablet, or smartphone to perform the above-mentioned applications via Zoom, or to continue via a web browser without downloading it. The Zoom platform can be defined as a tool that facilitates the teaching process thanks to its features from an educator's point of view and gives teachers and students the opportunity to share their knowledge more practically and quickly. Zoom (Zoom, 2019) video conferencing systems provide the opportunity to record the lesson for students who have internet problems or cannot attend the lesson while providing a calendar about the lessons and allowing them to gain a sense of community. This also provides teachers with a collective classroom teaching experience, increasing teacher communication and student participation in the lesson (Lapitan, Tiangco, Sumalinog, Sabarill, & Diaz, 2021). In other words,

video conferencing systems such as Zoom constitute an important part of distance education and it can be said that communication, interaction, and efficiency increase in distance education thanks to these systems.

ZOOM in distance education

When the literature about the positive situations created by the use of the Zoom platform in education is examined, similar results are observed among the studies. For example, according to the results of a case study conducted by Ramadani and Xhaferi (2020) with the participation of 4 male and 2 female teachers between the ages of 32-47, about the experiences of teachers teaching through the Zoom platform. Zoom is the most useful tool to help advance the teaching and learning process during Covid-19.

In another study, which includes the opinions of foreign language students about the Zoom Breakout Room application, it is seen that Zoom is preferred compared to WebEx, especially because of the Breakout Room feature in Zoom (Lee, 2021). It can be stated that the Breakout Room feature of the Zoom video conferencing system is preferred over other video conferencing systems in foreign language education, as it allows group or two-person speaking activities, which are very necessary for language education. Breakout Rooms can ensure that students who are shy, unsure of themselves, or who do not like to speak in public can be more active participants by working with more active students in small groups, increasing class participation and continuity. It can be predicted that teachers who think that Breakout Rooms will increase class participation will also prefer to use the Zoom application. Thanks to the features of the Zoom video conferencing system, instructors can share their online classes with the learner without any limitations, **and they can** easily transfer the voice frequencies, gestures, and facial expressions that they frequently use to increase the effectiveness and permanence of the education, and can access the learners from all over the world with internet access at the same time, while the learners can continue their education in the comfort of their homes.

With the start of the Covid-19 pandemic process in Turkey, the Zoom video conferencing system, which needs less memory on the computer, consumes less internet, is easy to download and install, can share screens, have a special online board where notes can be taken, has Breakout Room feature, is able to be connected with devices such as tablets, computers, smartphones, includes up to 100 participants in the same lesson for 40 minutes in a single session, has a 'raise your hand' button so that students can ask their questions, continues communication without interrupting the lesson with the 'chat' feature, has fluent audio and video quality, supports document sharing with its chat feature, records lectures, gives participation and microphone, camera, and chat features control to the session server, can be considered to be the most useful tool by both teachers and the students.

When the literature about the deficiencies or difficulties of the Zoom platform is examined, it can be concluded that there are not many negative opinions or results, but there are significant deficiencies in some aspects. As the first opinion, Deregözü & Kuyumcu (2015) states that the use of body language is a method for effective information transfer, but since the use of body language in the Zoom platform is limited to the camera screen view, it can be admitted that it restricts the use of body language in education thus also reducing the effect of transferred information. In addition, it is clear that an uninterrupted internet connection is required for uninterrupted communication with the Zoom platform. However, in the education given via Zoom platform during Covid-19, it can be observed that the participants who connect to the lessons from networks with different internet infrastructures have problems from time to time about having an uninterrupted internet connection and online lessons.

Other typical technical difficulties experienced in training provided with the Zoom platform include; low internet bandwidth, old hardware usage, and limited webcam and/or microphone usage are shown. In addition, in this research on technical difficulties, it was concluded that although Zoom is seen as a user-friendly system, the majority of the participants (88%) had technical difficulties in participating in the sessions. (Archibald, Ambagtsheer, Casey & Lawless, 2019). Considering that the participants and educators are composed of individuals with different technological backgrounds, it can be said that such technical problems regarding participation in the sessions are the expected types.

According to Ramadani and Xhaferi (2020), teachers have difficulty assessing students appropriately in lessons taught on the Zoom platform because some students are reluctant to work with Zoom or use technology, or cannot demonstrate their knowledge through online teaching and learning because they

are shy. In this context, as a result of students being reluctant or shy in education with Zoom, teachers may experience difficulties in evaluating their students, it may also cause difficulties in measuring the efficiency of education, and the efficiency of the education given via Zoom platform may decrease over time as the educational outputs cannot be evaluated correctly.

In addition to the problems experienced in the lessons given over the Zoom platform, the weakness of the online teaching infrastructure, the inexperience of the teachers, the knowledge gap, and the nonconforming atmosphere at home is also stated as the weak points of the education given via the internet (Murgatrottd, 2020). It can be concluded that these weak points also pose an obstacle in the online lessons given with the Zoom platform, and the education process is negatively affected due to the weakness of the infrastructure in the transition to distance education in Turkey during the Covid-19 process, the inexperience of the teachers in distance education and the inconvenience of the environment in which the students participate in distance education.

Security of communication is important for both teachers and students in distance education. In this context, Palupi and Raharjo's (2020) research showing Zoom as a tool in education over the internet states that Zoom is an easy system to hack. Likewise, research conducted by Gureeva, Valyaeva, (2020), shows that Zoom platform causes user personal data to leak. It has been stated that it has potential security vulnerabilities.

While there are studies in the literature showing the lack of security of the Zoom platform, Zoom Video Communications Inc., (2016) contrary to these studies, includes security features; specified user-specific authentication, real-time encryption of meetings, and backup of recordings to online remote server networks ("cloud") or local drives that can then be shared securely for collaboration purposes. Looking at the results of the research based on user opinions, it can be said that the vulnerability claimed by Zoom Video Communications Inc., (2016) is valid.

CONCLUSION

With the Covid-19 pandemic process in Turkey, social awareness about distance education, which is an important part of learning life, is increasing day by day. Thanks to distance education, learners can receive equal education regardless of the conditions they have, regardless of time and place conditions. The importance of distance education, which has started to be applied more widely with the limitations brought by the current pandemic, has been better understood by the whole world thanks to the role it has taken in the Covid-19 pandemic process.

It can be mentioned that the technical problems experienced due to an unprepared start during the sudden transition to distance education reveal the importance of infrastructure works and web conferencing systems and during open and distance education applications, there are some important requirements such as establishing the infrastructure of education, providing technical equipment, measuring and evaluating student success, and sustainability of the application. From the statements made by the MEB (2020b), it can be mentioned that there are inadequacies in areas such as measurement, evaluation, and feedback in distance education applications conducted with TV.

On the other hand, UNESCO (2020a) recommends that the critical roles played by teachers in distance education implemented during the Covid-19 pandemic process should be recognized and supported. In this context, it can be accepted that it is very important for teachers to be supported and motivated so that they can perform distance education more effectively and use video conferencing systems such as the EBA platform and Zoom more effectively. In addition, considering the psychological effects of the pandemic process on students, teachers, and parents, it can be assumed that they should be supported not only technically but also psychologically. In this context, psychological support and guidance applications can also be integrated into open and distance education applications.

Considering the role played by web-supported applications such as Zoom and EBA in distance education, it is clear that especially the internet infrastructure needs to be strengthened throughout the country. By means of this, the rate of participation in distance education can increase. This idea is also supported by UNESCO (2020b), which states that the absenteeism rate in online learning is between 5-8% in a technologically well-prepared European country.

In addition, the news (CNNTURK, 2020; Hürriyet, 2020) published that there may be security problems in the lessons given with the Zoom video conference system, which plays an active role in the pandemic process, aroused great repercussions. For this reason, it can be concluded that the programs used for interaction in distance education should be reliable, accessible, and practical. In this context, it can be indicated that there is an opinion that domestic platforms should also be developed and updated in the context of needs but since distance education infrastructure formation and web conferencing systems development require high costs, studies should be designed and implemented carefully. If this process is managed in a planned manner, high benefits can be obtained from distance education in the long run. Although the investments in distance education may seem high at the beginning, it should always be considered that the investment in education is the investment with the highest return, and the quality of the education people receive will determine the basis of global development and change that will be experienced in the long term.

Finally, as mentioned in the introduction of the research, the research shows that Open Schools can be a complementary or alternative system to the traditional school system in the future, and supports the establishment of more open schools to face the challenges of education demand that many countries will face in this process. In other words, it is assumed that the world may face a deficit in education as well as resource and energy fields as a result of the population growth to be experienced in the near future, and it is thought that it will be difficult to meet this education demand and need to the desired extent without resorting to the open schooling approach. Based on these results, it can be concluded that the Open Schooling system is a viable system in the future.

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