EMERGENCY REMOTE TEACHING DURING COVID-19 PANDEMIC: CHALLENGES, OPPORTUNITIES AND FUTURE SUGGESTIONS

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ABSTRACT

This article explores the perceptions of high school students of emergency remote teaching (ERT) in Turkiye. The research used the qualitative method of conducting semi-structured interviews with 144 students at higher education. The descriptive case study type (a single case with embedded units) was applied. The qualitative data collected through the interviews were analyzed using content analysis technique. Research results reveal that views of the participants on the challenges of ERT are developed into 8 themes: Digital pedagogy, technical infrastructure and accessibility, digital competences, compatibility, assessment and evaluation, heavy workload, and lack of learning motivation while their opinions on opportunities of distance education include 5 themes: lifelong learning opportunities, flexibility, experiencing ERT or hybrid education, digital transformation in education, and an alternative to student mobility. The suggestions made by students are developed into 7 themes: creating accessible materials, university and institutional IT department-supported digital technologies, adopting a flexible approach to student participation, ensuring financial support and equipment, adopting hybrid learning, developing digital competences, and evaluation and assessment methods.

Keywords: Emergency remote teaching, COVID-19, challenge, opportunity, suggestion, education.

INTRODUCTION

Since the March of 2020, Turkish universities have been experiencing emergency remote teaching (ERT) due to the COVID 19 pandemic. It was a real crisis that educational authorities have to deal with for they are not ready for migration from face-to-face teaching to online education. Indeed, COVID-19 is a viral pandemic that affects all of us, all around the world. Particularly, the interest is significant after the start of Covid 19 focusing on the disease to improve our understanding of it (Mondal et al., 2020). However, the health crisis has quickly evolved into an economic, cultural, educational, and social crisis. The pandemic has had a big impact on educational and social lives of students, limiting their physical contact with others. In other words, social distancing or physical distancing has been the preventive action to reduce the spread of COVID -19. It is only possible to stay socially connected to friends and even family members by calling, using video chat or staying connected through social media.

According to UNESCO (2020) school closures in response to the COVID-19 pandemic have shed a light on numerous issues affecting access to education, as well as broader socio-economic issues. The COVID-19 pandemic has affected more than 91% of students worldwide, with approximately 1.6 billion children and youngsters unable to attend physical schools due to temporary closures and lockdowns. Online

learning has become a critical lifeline for education. Technology can enable teachers and students to access specialized materials well beyond textbooks, in multiple formats and in ways that can bridge time and space. Many schools across the world began conducting classes via videotelephony software such as Zoom. The Organisation for Economic Co-operation and Development has created a framework to guide an education response to the COVID-19 Pandemic for distance learning (Reimers & Schleicher, 2020). ERT has become one of the ways of which is used to support learning during worldwide crisis.

As we try to understand school closures and ERT during Covid-19, previous experiences may provide insight. For example, following Hurricane Katrina in the US, in 2005, large numbers of Louisiana and Mississippi residents were evacuated to safety. Within a month of relocation, the children were attending new schools in their temporary homes (Barrett et al., 2008). In Taiwan and elsewhere in Asia and beyond, during the 2009 H1N1 influenza pandemic,various schools in affected areas were closed for short periods (Chen et al., 2011; Klaimanet al., 2011). The 2013-16 Ebola epidemic caused extended school closures in the three main effected countries of Guinea, Liberia, and Sierra Leone (Yao, H., Memon, A.S., Amaro, D., Rigole, A., and Abdou, Y.D., 2021). Nevertheless, the school closure extension due to Covid- 19 required the use of fully remote teaching solutions for instruction or education. Using the term ERT appropriately to the context of a crisis is significant since it varies from an online distance education to avoid "wrong assumptions…wrong definitions will make us more vulnerable to errors along the way…when things are settled and go back to normal, what people will remember will be bad examples from a time of crisis, and the years of efforts it has taken to prove the effectiveness of distance education can vanish all of a sudden" (Bozkurt & Sharma, 2020). In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances.

Educational institutions deployed a strategy of ERT, which can be considered as a branch of distance education (Bozkurt et al., 2020). ERT differs from online learning, for it offers rapidly developed temporary instructional support in a crisis without pre-planned resources infrastructure (Hodges et al., 2020). In the literature, several advantages of online learning have been highlighted. According to Nagrale (2013) the best advantage of distance education is you can learn from anywhere and anytime. Brown (2017) added that distance learning is cheaper than traditional learning. It is also way of saving time, for your classroom is in your bedroom (Bijeesh, 2017). On the other hand, Brown (2017) explained that computer, webcam, and internet connections are needed for distance education. Moreover, digital competences are necessary to follow online education. Online learning is thus becoming more and more important for education during the time of the worldwide health emergency, offering the opportunity to remain in touch, even if remotely, with classmates and teachers and to follow lessons. However, online learning has challenges as technology, digital competence, intrusions, assessment and supervision, heavy workload and compatibility. Online learning, for example, in its entirety is dependent on technological devices and internet. Lack of access to technology or good internet connectivity is an obstacle to continued learning, especially for students from disadvantaged families. School closures negatively impact student learning outcomes (Aristovnik et al., 2020). Besides this, the unexpected appearance or interruption of family members, friends and or pets that may cause disruption or diversion of online learning participants' attention during the online teaching and learning process. Similarly, while remote teaching entails some difficult issues, it still presents a chance for innovation, creativity, and an opportunity to broaden communication between home and school.

Online education or distance education has been studied for decades. However, institutions of higher education have had to move to from traditional to online to help prevent the spread of COVID-19. Hodges and his colleagues (2020) called is method as emergency remote teaching due to crisis circumstances. Emergency remote teaching is a temporary teaching solution to an emergent problem. "The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis" (Hodgeset al., 2020, p. 6). In real, the threat of COVID-19 has presented some unique challenges for institutions allowing to highlight challenges and opportunities to

get ready for future to implement a better system. A no of reserahes have supplied information about the topic of ERT in different views: digital pedagogy responses to COVID 19 (Crawford etal., 2020), 13 central topics across the instutions- workload, communication and interaction, prior experience and the impact on courses, and the evaluation of the switch from in-person to online learning(Arndt et al., 2020), three trends- blended learning, access and availability to e-resources, and stakeholder theory in distance education- emerged witH ERT during COVID 19 (Bhuwandeep and Das, 2020). In order to highlight potential effects of COVID 19 on higher education in Turkiye, this paper focuses on a case of Turkish university students at education faculty in the process of transitioning to online teaching platform. In other words, to understand the challenges and opportunities of ERT on higher education and future suggestions, the following questions were addressed:

The COVID-19 has affected the higher education and face-to-face education has been replaced by ERT.

R1. What are the challenges of ERT on higher education?

R2. What are the opportunities of ERT on higher education?

R3. What are your suggestions for continuing emergency remote educational activities at higher education?

METHOD

This section includes research design, population, data collection tools, validity and reliability, research process, and analysis of data.

Research Design

In this research study the qualitative case study approach was used. There are several thypes of case studies: exploratory, descriptive, and explanatory (Yin, 2003). Guiding by the study purpose and its boundaries, the descriptive case study type was applied. The descriptive case studies set to describe a contemporary phenomenon in depth and within its real-life context. It is also a single case with embedded units. In order to ensure objectivity and clarity, the researchers collaborated closely with the participants during data collection through a series of individual interviews. The following steps were applied in the study (Figre 1):

1. The research questions were deined.
2. The design of the case sudy was decided.
3. The data was collected.
4. The data was categorized, tabulated and cross checked to address the initial propositions or purpose of the study.
5. The results were presented in a manner that allows the reader to evaluate the findings in the light of the evidence presented in the report

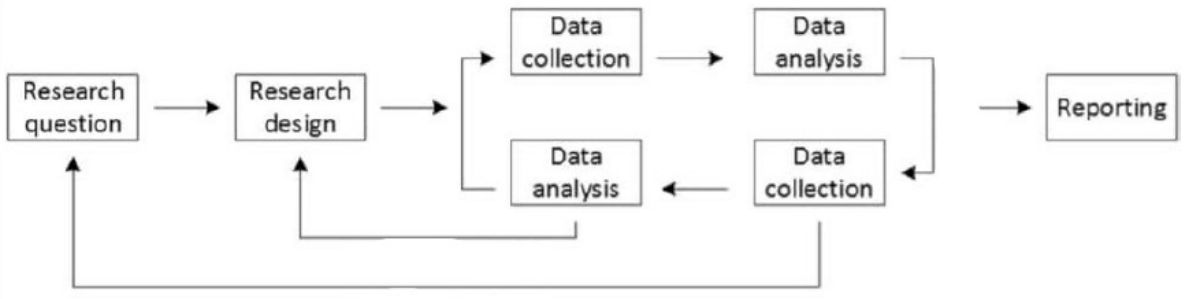

Figure 1. Research design

Sampling

The sample of this research was determined by using purposeful sampling. Purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources (Patton, 2002). This involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Cresswell & Plano Clark, 2011). The population of the research consisted of 144 higher education students who had the experience of ERT at Anadolu University, Educational Faculty. The profile of respondents is broad with higher education students (3rd level of special education and Germen language teaching). Demographic information of students is shown in Table 1.

Table 1. Demographic Information of Students

Variable	Sub variable	f	%
Gender	Female	81	56
	Male	63	44
Branch	Special education	97	67
	German teaching education	47	33

Data Collection Tool

The data of the research were collected through semi- structured interview forms. A semi-structured interview is a key technique as a much more flexible version of the structured interview in real-world research (Gillham, 2000). In the first part of the two-part interview forms, there are questions regarding the demographic information of the participants. The second part includes three open-ended questions. After literature review, the draft of the questionnaire was edited by the expert of the qualitative research method. Data collections were done in stages, through online surveys and then semi-structured interviews to obtain in-depth data.

The questions are open ended which gave participants the opportunity to report on the most important challenges encountered during the crisis; the questions allowed them to identify potential solutions with positive or negative effects on COVID-19 on education.

Data Analysis

Due to the COVID-19 pandemic semi-structured interview forms prepared for collecting data were sent to the participants in electronic environment. Nicknames were used like S1, S2, S3 … Content analysis method was applied to analyse the data. According to Babbie (2001), content analysis can be defined as "the study of recorded human communications" (p.304). It is "essentially a coding operation," with coding being "the process of transforming raw data into a standardized form" (Babbie, 2001, p. 309).

Validity and Reliability

Numerous frameworks have been developed to assess the trustworthiness of qualitative data (Lincoln & Guba, 1985) and strategies for establishing credibility, transferability, dependability, and confirmability have been extensively written about across fields (Krefting, 1991; Sandelowski, 1986). Case study research design principles lend themselves to include numerous strategies that promote data credibility or "truth value." The researchers ensured credibility by reexamining the data so that the codes and themes were consistent. Triangulation of data sources, data types or researchers is a primary strategy that can be used and would support the principle in case study research that the phenomena be viewed and explored from multiple perspectives. Yin (2017) suggests the existence of four types of triangulation: (i) data triangulation through the use of multiple data sources; (ii) researcher triangulation through the involvement of different evaluators; (iii) theory triangulation through the adoption of multiple perspectives on the same data set; and (iv) methodological triangulation through the adoption of different complementary methods. The role

of researchers in the process, the process of devel-oping data collection tools, data collection, and analysis procedures were explained in detail in order to ensure trustworthiness of the research. In order to ensure internal validity (credibility) experts opinion was obtained and triangulation technique (involvement of different evaluators) was applied. rich and dense description of the research results with direct quotations was supplied for the external validity. The qualitative data were analyzed using the content analysis method. In content analysis reliability is interpreted as intercoder reliability or the extent of agreement. Percentage of agreement is the simple percentage of agreement among all coders' decisions in coding the same units of data (Neuendorf, 2002). For this reason, the data were examined by two researchers. Miles and Huberman (1994) note that 70% or greater inter rate agreement is an acceptable level for the reliability of the research. The agreement rate in the study was 95% which shows great agreement between two coders.

FINDINGS

The perceptions of high school students on ERT in Turkiye were grouped into three themes:

Views on Challenges

The views on challenges have 8 themes: Digital pedagogy, infrastructure and accessibility, Digital competences, the field of study (compatibility), assessment and evaluation, intrusions (unexpected appearance or interruption of family members), heavy workload, lack of learning motivation (see Table 2).

Table 2. Themes and Codes for the Challenges of Distance Education

Themes	Codes	f
Digital pedagogy (communication and interaction)	Interaction, communication, sociability, nonverbal communication, facial expressions, inactivity, emotion transition, virtual environment, peer interaction, inefficiency, ineffectiveness	38
Technical infrastructure and accessibility	Infrastructure, hardware, computer, tablet, smartphone, technology, network, system crash, system breakdown, sound cut off, unclear image, technical problems	131
Digital competences	Inexperience, direct expression, competence, incompetence, digital competence, online information transfer, distance to technology	17
The field of study (compatibility)	Applied course, theoretical course, theoretical knowledge, professional life, vocational courses, business life	12
Assessment and evaluation	Homework, academic language, resource shortage, need for computer, online exam, sloppy homework	9
Intrusions (unexpected appearance or interruption of family members)	Environment, noise, impossibilities, unsuitable environments, financial impossibilities	11
Heavy workload	Exam, homework, digital education process, fatigue, stress	4
Lack of learning motivation	Motivation, apathy, inability to adapt, working at work, inability to focus, virtual environment, distraction	14

According to findings the most important challenge is technical infrastructure and accessibility. The perception of S12 on this code was as follows:

"Lack of computers, tablets, smart phones and internet access is one of the most important problems for most students." S113 added: "One of the important problems encountered in the distance education process is the technical problems experienced during the lesson. Technical problems such as sound interruption, disconnection, and unclear image reduce students' interest in the course and negatively affect their learning." S22 said: "I think the most important issue of all students living in Turkiye is that not accessibility to the online education system. Today, there are a lot of students from all age groups who do not have the internet, computers or phones at home."

The Other challenge is digital pedagogy, communication, and interaction problems. S66 remarked on this as *"Being away from sociality is the biggest problem. If my teacher does not touch my eyes, I do not understand anything from that lesson." S109 explained: "Being away from peer interaction and classroom environment, which are very effective in the learning process, negatively affects the success of the individual." S11 reported: "Regardless of the level of teacher and student; there is an invisible bond between them and this shapes the communication between them. However, in distance education they are deprived of eye contact, non-verbal means of communication, affirmative or rejecting gestures."*

Another hinder that is related to challenges of ERT is digital competences. S68 made the following comment: *"In my opinion, the most important problem encountered in terms of distance education during the COVID-19 pandemic process is the lack of digital competence of the students of the families with financial difficulties, and therefore, they cannot attend classes online that negatively affected the students." S45 added: "We are not satisfied with the education given by teachers who are used to teaching face- to- face and who are not good with technology."*

14 of the participants reported that lack of motivation is one of the challenges of ERT. The opinion of S9 regarding this is as follows: *"In my opinion, the biggest problem encountered in distance education is that students who have previously received face-to-face education throughout their school life suddenly experience adaptation problems due to reasons such as not being able to focus on distance education, lack of communication, inefficiency, etc." S17 added: "One of the problems I observe is that students' attention and motivation have difficulties in creating a new scheme for distance education, and their desires and motivations are not caused by the abstract virtual environment."*

Another theme students consider as a challenge of ERT is the field of study (compatibility). Some students views on the theme are as follows: S55: *"One of the most important problems in this period is the lack of practical courses. Although distance education is sufficient for theoretical courses, distance education can pose difficulties for practical courses." S11: "I think that distance education is not useful and effective for students who will be educators. Especially for the 3rd grade where vocational courses are concentrated. I can clearly see in my comparison between the first semester and the second semester last year that the lectures in which practice and experience are transferred rather than theoretical knowledge are more beneficial."*

Other challenges voiced by the students are intrusions, heavy workload and assessment and evaluation. S87 stated: *"Apart from that, it is almost impossible to attend and present live lectures with audio and video because there is no quiet environment at everyone's home (I assume most students are in their family home here)." Besides this, S33 remarked: "Homework-style exams, constant computer-based lessons tire and overwhelm us." S7 made the following comment on assessment and evaluation problem: "We are faced with many problems in the distance education process. For example, injustice in exams, low scores due to problems in the system during the exam."*

Views on Opportunities

Views on opportunities include 5 themes: lifelong learning opportunities, flexibility, experiencing distance or hybrid education, digital transformation in education, and an alternative to student mobility (see Table 3.). The opinions of students on digital transformation in education as follows: S23: *"Great steps have been taken in digitalization through distance education and important developments have been achieved." S101: "It has been ensured that educators and students become more integrated with technology and benefit more from technology in education."*

Table 3. Themes and Codes for the Opportunities of Distance Education

Themes	Codes	f
Lifelong learning opportunities	Access to information, discovery of information, research, self-learning, language learning, reading books, participating in courses, self-discipline, self-control	46
Flexibility (more flexible learning opportunities)	Flexible learning, listening to the registered lecture, being independent from time and place, participating in events, being able to plan your life, special education, equal opportunity.	39
Experiencing distance or hybrid education	Distance learning, hybrid education, face-to-face education, education anywhere, digital education, access to education	30
Digital transformation in education	Digitalization, digital education, digitalization process, use of technology, technology in education, digital literacy, digital competence, adaptation to technology	55
An alternative to student mobility	Distance education, Transition to distance education, eba, canvas, alternative education, innovative education model, technological infrastructure, strengthening the technological infrastructure, renewal of the education system	28

Some students emphasize the lifelong learning opportunities like access to information, self-learning, or self-control. S43 explained: *"In this process, I think I learned very well how to do research, search for articles and access information myself. Because I was very anxious about accessing information at the beginning of the first period of distance education, I learned how to access it, how to use the internet and how to choose the right information from the pool of information." S37 added: "The distance education process contributed to the development of students' own learning responsibilities, independent research skills, digital literacy skills, and skills to find, understand, analyse and share information."*

Another opportunity related to ERT is flexibility. S109 remarked on this as: *"The fact that online education is independent of time and place shows how flexible it is. In other words, when we do not have the opportunity to watch live lectures instantly or when we want to watch the lecture again, it provides the opportunity to be recorded on the system and watch it later whenever we want. I think this is a very good advantage. In addition, it has been very convenient for students with physical disabilities to receive online education without going to school." S8 made the following comment: "One of the positive effects of distance education is time flexibility. Concepts such as absenteeism and attendance, which put pressure on most students, have almost come to an end with distance education. The absence of education due to illness or special circumstances has disappeared."*

Other opportunities stated by students are experiencing distance education or hybrid education and an alternative student mobility. S33 said: *"It is an important step for using technology and distance education as additional support after COVID-19 pandemic is over. COVID-19 pandemic process taught that education can continue not only in a physical environment but also in a virtual environment."* S65 explained this: *"Staying away from face-to-face lessons, which we teach interactively, offered us another option as an alternative to traditional education: Digital Education."* On the other hand, students stated on student mobility as: S11: *"The transition of schools to distance education taught us that the school does not consist of four walls and that learning can be adapted to any environment."* S113: *"Distance education helped us to devote the time we spend to and from school for ourselves and our hobbies."*

Suggestions on the Future of Distance Education

Table 4. shows the suggestions made by students for continuing ERT that are developed into seven themes. Most of the students suggest that financial support and equipment like free internet service, tablet distribution, internet package should be ensured. S78 remarked on this: *"Students who do not have these technological devices in their homes should be identified and these devices should be provided, and free internet service should be supplied to all students to enter distance education applications."* S2 added: *"Students should be provided with unlimited internet valid for online course applications with free tablets."*

Table 4. Themes and Codes for Suggestions for Continuing Distance Education

Themes	Codes	f
Create accessible materials	Materials, software, video, technology, discussion, content, content development, effective learning	20
Use university and institutional IT department-supported digital technologies	Support point, digital support center, internet cafe, library, e-library	13
Adopt a flexible approach to student participation	Flexibility, tolerance, course follow-up, obligation to attend, working student, inability to access the internet	13
Ensure financial support and equipment	Infrastructure, hardware, reinforcement, free internet service, network lines, internet package, tablet distribution, software works, aid, non-governmental organizations, government support	116
Adopt hybrid learning	Hybrid model, mixed system, Face-to-face education, opening schools, socializing	23
Develop digital competences	Competence, digital competence, training, seminar, educational application, technology training, educational video, informative content, communication, and cooperation with parents	15
Evaluation and assessment methods	Assessment, homework, curriculum, exam, grade anxiety, feedback, adaptation to distance education	10

Some students suggest adopting hybrid learning. S97 stated: ‘*“The solution is to implement the hybrid education model. Curricula and course contents can be rearranged in accordance with hybrid education.”* S27 emphasized: *“The implementation of the hybrid system in schools and universities will carry the socialization process to a certain level, if not as before.”*

Another suggestion for the future of distance education is to create accessible materials, in fact content development and materials are emphasized for effective learning. Some students views on the theme are as follows: S87: *“Teachers should share many materials and resources required for the lesson in a way that they can reach the students. The lessons can be enriched with the necessary presentations and visuals, helping students learn more easily.”* S136: *“Live and interactive lesson plans can be produced with students. In addition, to benefit from the peer effect on learning, group assignments and weekly discussions can be planned, which students can carry out in communication.”* S1: *“For effective learning, live lessons should be done by posting videos on channels such as YouTube. Students who do not have the opportunity during the class time can access these videos later.”*

Digital competences may be developed by training courses or seminars. S4 made the following comment on this suggestion: *“Students and teachers should be informed about distance education, teaching and learning. Students and teachers should have more knowledge about the use of technological tools and educational applications.”* S76 added: *“Students should be guided about how online education should be, how it should be studied, how students can be more efficient.”* In addition, universities and institutions should support IT departments and digital technologies. S57 said: *“Providing internet service support from certain centres will be a great advantage for students.” Digital support centres should be established in villages.”* S15 remarked: *“Applications such as EBA support centres should be increased and diversified.”*

Some students suggest adopting a flexible approach to student participation with evaluation and assessment methods. S44 stated: *“Listening to the recorded broadcasts of the lectures should be sufficient without the obligation to attend.”* S78 explained this as follows: ‘*“Students who do not have the internet and have to work at certain hours can go to a place with internet at an appropriate time, take their notes by watching recorded live lectures, and participate in discussion forums.”* S12 made a remark on evaluation and assessment: *“Exams and evaluations should be suitable for distance education; homework was very tiring for us.”* S19 added: *“The education curriculum should be handled and some adaptations in the curriculum according to the distance education system should be made. Required facilities should be provided in exams and assignments.”*

DISCUSSIONS AND CONCLUSION

According to UNESCO, on 1 April 2020, schools, and higher education institutions (HEIs)were closed in 185 countries, affecting 1.542.412.000 learners, which constitute 89.4% of total enrolled learners (Marioni, Land & Jensen, 2020, p. 8). ERT was implemented within weeks following Cocid-19 pandemic all over the world. In order to understand the effect of distance education on higher education, this research was implemented, predominantly focusing on the challenges and opportunities of ERT with the suggestions for the future of it.

Research results show that views of participants on the challenges of ERT are developed into 8 themes: Digital pedagogy, technical infrastructure and accessibility, digital competences, the field of study (compatibility), assessment and evaluation, intrusions (unexpected appearance or interruption of family members), heavy workload, and lack of learning motivation. In the research it is seen that most of the students remarked 'technical infrastructure and inaccessibility' as the hardest challenge of the distance education. Infrastructure and online access are a prerequisite for shifting to distance teaching and learning (Marioni, Land & Jensen, 2020, p. 24). Many students explained that they had limited or no internet access and many were not be able to afford computer, laptop or supporting mobile phones in their homes. This challenge may enhance the gap between advantaged and disadvantaged groups. Indeed, according to Sikirit (2020), the most significant obstacle that students face when studying at home is the lack of Internet access and electronic devices. Similarly, Lau, Yang, and Dasgupta (2020) state that the successful implementation of distance education brings along infrastructure and equipment needs, which cause problems for individuals with low socioeconomic status. Similar challenges have been faced in Gabna, Malaysia, and Pakistan. Most of the students do not have access to internet and adequate learning environment (Mukhtar et al., 2020; Owusu-Fordjour, et al., 2020; Yusuf, 2020). In brief, there are those HEIs for which, within the same institution, there is a divide between students who have access to the internet and students who do not, making it difficult to provide equal opportunities for students to complete their academic year (Marioni, Land & Jensen, 2020, p. 25). In addition to technical infrastructure and inaccessibility, digital competences are emphasized by students in the research. Following the the unusual situation caused by Covid-19, Tejedor, Cervi, Escoda and Jumbo (2020) pointed out that the necessity of enhancing the main aspects such as the teacher's digital skills. They suggested rethinking higher education learning and reinforcing main issues for this transformation, mainly: communication, teaching, and digital competences. Otherwise, digital literacy is not being guaranteed, which means higher education is not accomplishing one of its main objectives.

Besides this, some participants stated that a different pedagogy is required for the distance education. In fact, teachers are not ready for the transition from face-to-face education to ERT. Laurillard (2002, p. 22) asserted that 'if there is to be innovation and change in university teaching—as the new technology requires, as the knowledge industry requires, and as students demand—then it follows that academics must become researchers in teaching.' Moving from the traditional to online education needs to explore the challenge of integration and communication practices (Garrison et al., 2010, p. 31). In real, the pedagogical role includes the intellectual and task-based activities of the online instructor. It includes activities such as setting clear objectives, encouraging participation, questioning, providing feedback, presenting, or eliciting a range of perspectives (Redmond, 2015, p. 112). Guichon (2013) implies that teacher educators are supposed to learn how to coordinate their pedagogical strategy by utilizing the available instructional platforms and to rethink their pedagogical strategy to make it appropriate to apply in their virtual classrooms.

According to Keller and Kopp (1987) instructional material should be designed with the strategies which increase the attention, satisfaction, and interest of students. In real, there are many motivational difficulties of distance learning. Perrin (2005) argued that changes in digital pedagogy are needed to support motivation of students in distance education. However, Patronis (2005) stated in his research result that online interaction can enhance learners' motivation and engagement in the learning process.

Views of students on opportunities of ERT during Covid-19 pandemic include 5 themes: lifelong learning opportunities, flexibility, experiencing distance or hybrid education, digital transformation in education, and an alternative to student mobility. One of the most important opportunities stated by students is digital transformation in education that is a shift in mindset an experience opening a new horizon of opportunities for teaching and learning. Ensuring learning continuity during the time of school closures

became a priority for governments the world over, many of which turned to ICT, requiring teachers to move to online delivery of lessons (UNICEF, 2020, p. 12). Life-long learning opportunities and flexibility are mentioned by students as opportunities of distance education. Similarly, Lou (2004) and Alharthi (2020) stated the lifelong learning as the benefit of distance education. Karadeniz (2009, p. 358) stated that learning is a process that continues formally or informally throughout the life that undERTines the idea of lifelong learning. Secondly, flexibility is mostly remarked by students as an opportunity of distance education. As reported by Zhang, Burgus & Dawson (2019, p. 303) "Formal and informal learning opportunities through open, flexible and distance learning (OFDL) models are necessary elements within the broader education system. As such, contemporary educators are increasingly experimenting with open and flexible learning and teaching models and technologies that can create socially engaged and active learning contexts."

The suggestions made by students for continuing ERT that are developed into 7 themes: creating accessible materials, university and institutional IT department-supported digital technologies, adopting a flexible approach to student participation, ensuring financial support and equipment, adopting hybrid learning, developing digital competences, evaluation and assessment methods. In real, educational institutions have been moving towards hybrid learning due to Covid-19. In other words, hybrid learning seems to be the new way of learning at higher education. However, access to technology and digital capabilities should reach the remote and poor communities to facilitate the student-learning. As Jena (2020) remarked in his research institutions and government organizations should support student digital learning. Similarly, Hurst (2001) reported that learning process of students within and outside the campus, by mixing various tools and methods. In addition, teachers' experience of distance education with digital competences is one of the most stated challenge in the literature (Conrad & Donaldson, 2011; Ko & Rossen, 2017). Methods of measurement and assessment must be consistent with the objectives and contents of teaching. Moore, Locke and Burton (2002) stated out formative assessment is the best way to ensure quality in a unit or course. It is very helpful to design formative tests in multiple choice test formats to provide rapid feedback for a large group of students. Summative assessment is used both at the end of the course and during the course. In summative assessment, performances of students on some units are measured broader than formative assessment. Research results grouped into three themes:

1. Views on challenges: Views of participants on the challenges of ERT are developed into 8 themes: Digital pedagogy, technical infrastructure and accessibility, digital competences, the field of study (compatibility), assessment and evaluation, intrusions (unexpected appearance or interruption of family members), heavy workload, and lack of learning motivation.
2. Views on opportunities: Views on opportunities include 5 themes: lifelong learning opportunities, flexibility, experiencing distance or hybrid education, digital transformation in education, and an alternative to student mobility
3. Suggestions on the future of distance education: The suggestions made by students for continuing distance education are developed into 7 themes: Create accessible materials, use university and institutional IT department-supported digital technologies, adopt a flexible approach to student participation, ensure financial support and equipment, adopt hybrid learning, develop digital competences, and evaluation and assessment methods.

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