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## REVIEW ARTICLE

# Emergency remote teaching due to COVID-19 pandemic and potential risks for socioeconomically disadvantaged students in higher education

Turgut Karakose 

#### ABSTRACT

**Background/purpose** – Higher education institutions worldwide rapidly switched to emergency remote teaching with a sustainable quality education approach in response to the global health threat caused by the COVID-19 virus. The sudden and largely unprepared transition to emergency remote teaching placed serious pressures on not only students, but also academics, the families of both, and also other stakeholders as well. This study aims to discuss the potential effects of emergency remote teaching due to COVID-19 on disadvantaged students in higher education.

**Materials/methods** – This study is a review article, which presents a brief literature review on the potential impact of emergency remote teaching due to COVID-19 on disadvantaged students in higher education.

**Practical implications** – This study may help to provide researchers and practitioners with a roadmap for potential future work on the impact of emergency remote teaching in response to the COVID-19 pandemic on disadvantaged groups. From this perspective, the potential effect of emergency remote teaching on disadvantaged students in higher education is examined and recommendations put forwards for solutions aimed at educational administrators and decision-makers.

**Conclusion** – The emergency remote teaching put in place due to the COVID-19 pandemic has led to the widening of the digital divide among higher education students. Therefore, integrating the digital and distance education approach into the higher education system correctly and effectively may both facilitate the achievement of instructional goals and also help to eliminate digital inequality in the higher education student population.

**Keywords** – COVID-19, coronavirus, emergency remote teaching, disadvantaged students, higher education, online teaching, online learning, distance education.

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## 1. INTRODUCTION

The COVID-19 virus was first discovered in the city of Wuhan, in China's Hubei province, towards the end of 2019. The resulting pandemic has led to significant changes and transformations across many different areas of society such as health, economy, and education, revealing a global public health crisis that has profoundly affected societies worldwide (Huang, 2020; Karakose & Malkoc, 2021a, 2021b; Remuzzi & Remuzzi, 2020; World Health Organization [WHO], 2020).

The COVID-19 pandemic has disrupted the education systems of almost every country, with the closure of educational institutions at all levels, whilst many millions of students, teachers, and other related stakeholders having been negatively affected by the crisis. Higher education institutions worldwide were forced to rapidly switch to emergency remote teaching with a sustainable quality education approach in response to the global health threat triggered by COVID-19. Although policymakers and higher education administrators implemented strategic decisions at different levels in order to ensure the continuity of teaching and learning in response to the education crisis that stemmed from the pandemic, it is clear that these practices do not fully meet the needs and expectations of university students and relevant stakeholders in all cases. In the literature, some studies have reported that in the past, some educational institutions have been forced to close either completely or partially for certain periods due to epidemics experienced prior to the COVID-19 pandemic. However, none of the epidemics experienced throughout human history have had such a profound effect on global education, nor caused such a serious educational crisis as the COVID-19 pandemic (Karakose, 2020, 2021; Sahu, 2020; UNESCO, 2020b; Viner et al., 2020).

With the novel coronavirus threatening the global population in such a short space of time, governments worldwide were forced to impose unprecedented measures and practices as a response aimed at preventing the spread of COVID-19, and thereby attempting to limit the damage of its impact. As a result of the comprehensive quarantine and lockdown measures taken during the COVID-19 pandemic, health, economy and education were the sectors most deeply affected, with higher education institutions in particular.

## 2. LITERATURE REVIEW

### 2.1. Emergency remote teaching during the COVID-19 pandemic

Countries around the world closed down the operations of almost all educational institutions with the aim of protecting the health of their citizens by attempting to limit the spread of the COVID-19 virus. This situation led to unprecedented difficulties experienced by the education systems of almost every country, resulting in the necessity for the transition to remote teaching so as to ensure some level of educational continuity (Dong et al., 2020; Hodges et al., 2020; Martinez, 2020). During the COVID-19 pandemic, millions of students around the world moved from receiving face-to-face education to experiencing emergency remote teaching (Karakose & Demirkol, 2021; Trzcińska-Król, 2020; Vlachopoulos, 2020). While all countries attempted to minimize the negative effects of the pandemic on their education systems, new course content at all educational levels had to be rapidly developed and attempts made to deliver this new revamped content via digital platforms.

Technology-based online and distance education has been considered one of the overall effective teaching and learning strategies employed prior to the COVID-19 pandemic

(Bozkurt & Sharma, 2020; Garbe et al., 2020; Rudnick, 2020). However, with face-to-face education largely or totally suspended due to the restrictions imposed by national governments in response to the pandemic, emergency remote teaching was rapidly introduced by many countries in a fast and unprepared manner. The sudden and unprepared transition to emergency remote teaching placed serious pressures on not only students, but also teachers, both their families, and also other stakeholders as well. On a global scale, it is well known that not every teacher or parent experiences the same level of digital literacy, and therefore not all are able to quickly adapt to technology-based online education in a pandemic crisis situation. For this reason, in order for higher education administrators to increase the quality of online education, it has become crucial to take urgent measures to increase the level of digital literacy of lecturers in order that they can manage the teaching-learning process more effectively, and thereby provide adequate levels of support to their students.

Almost all higher education institutions worldwide opted for emergency remote teaching early on in the COVID-19 pandemic. However, during the transition to emergency remote teaching, doubts were raised concerning the competence and digital literacy of both academics and higher education students, along with the technological infrastructure of many universities. Therefore, as part of the online education process, it has become necessary to provide particular support to disadvantaged students and families by facilitating access to technological devices and the Internet. When considered on a global scale, not all universities appear equally prepared for a technology-based teaching-learning approach. From this point of view, and with higher education administrators having largely been forced to adopt an approach centered on teaching via technological mediums in their institutions, the importance of educating both academics and students in this area is considered critical to increasing their general technological competence. In this context, developing digital skills within higher education institutions, eliminating the digital divide among students, and developing and implementing appropriate strategies may help to eliminate many of the potential issues that may be experienced in higher education in terms of digital teaching and learning.

With the closure of most educational institutions worldwide in response to the COVID-19 pandemic, the rapid transition to emergency remote teaching undoubtedly created potential risks in terms of education. For example, when considered on a global scale, many families avoided or were unable to send their children to other countries for education due to the health risks and travel/immigration restrictions, resulting in significant international student mobility limitations. This dramatic situation put many universities in a serious economic crisis and deadlock where their operating model and heavy investment in international education was adversely affected (Wang et al., 2020). However, the sudden and unprepared transition from face-to-face education to emergency remote teaching created a shock effect for both students and lecturers, who were each caught unprepared for online teaching-learning, and as a result, the various online teaching approaches on offer only increased any pre-existing inequalities in education (Clark & Mayer, 2003; Karakose, 2021; Mehta & Aguilera, 2020). In this context, this sudden transition from face-to-face education to online learning placed lecturers under serious pressure, which risked the achievement of instructional goals throughout higher education systems in some countries, and especially for those that lacked functional online platforms designed to host emergency remote teaching.

## **2.2. Risks for socioeconomically disadvantaged students in emergency remote teaching environment**

Governments worldwide imposed strict measures in order to eliminate the pandemic's well-known negative effects, having adopted a firm position to ensure educational continuity. In fact, some governments took special measures where certain disadvantaged groups were deemed to be more detrimentally affected by the COVID-19 pandemic, and took strategic decisions to support both the students and other stakeholders in this group (De Brouwer et al., 2020). The rapid and unprepared transition to emergency remote teaching further increased existing educational inequalities in both urban and rural contexts, and as a result, the necessity to develop a new vision to support disadvantaged students in online education has been largely acknowledged across the board.

The restrictions imposed during the COVID-19 pandemic will undoubtedly have varying levels of impact on higher education students and other stakeholders. From this perspective, the strains of a worldwide transition to emergency remote teaching have been more severe, and especially so for disadvantaged students who lack technology and Internet access. In this context, many countries, including those with highly developed economies, have yet to produce an effective and fair solution to the inequality of opportunities in education, which became significantly more apparent during the pandemic period. As a result, many university students worldwide had need to benefit from the opportunities offered by technology-based emergency remote teaching, but which further deepened the inequality of opportunities in education. However, the psychosocial effects of learning opportunities missed due to emergency remote teaching, especially for disadvantaged students, have undoubtedly been deeper and more detrimental in their impact.

Since the technological infrastructure and facilities of countries differ around the world, the continuity and quality of distance education offered by higher education institutions also naturally differs (Karakose, 2008, 2014a, 2014b). During the troublesome and difficult pandemic period, higher education has been conducted in the form of online courses and applications in many countries, whilst in others it has been applied through written and visual media forms, where even the educational content and plans are shared via common social media platforms (Eder, 2020; UNESCO, 2020a).

Due to the global education crisis caused by COVID-19, the closure of higher education institutions worldwide has led to almost all classes being held online, leaving students in a sense stranded to study at home. Many of the psychological and physiological effects of the pandemic on students and educators will undoubtedly become clearer in the post-COVID-19 period, when life returns to some semblance of normality. However, it should not be forgotten that the psychological and physiological health of almost all students and educators has been and continues to be at threat during the ongoing pandemic. The global health crisis caused by COVID-19 and the accompanying global education crisis has acted as a reminder to both educational policymakers and administrators to focus more on the impact of the pandemic, which still poses a serious danger to all.

## **3. CONCLUSION AND SUGGESTIONS**

The pandemic caused by the COVID-19 virus resulted in the greatest health and educational crisis humanity has faced in modern history. The fact that both the health and education systems of many countries suffered so significantly during this troubling period will likely result in socioeconomic and cultural problems whose impact may be very difficult

to compensate for in the coming years. For this reason, both countries and institutions must take all necessary measures in order to minimize the negative effects of the crisis, and to ensure they are better prepared to meet the demands of daily life in the post-COVID-19 period.

In addition to the serious risks posed by COVID-19, there are also undoubtedly certain potential opportunities that it presents. From this perspective, the pandemic has provided many countries with the opportunity to reassess and restructure their higher education systems within a reformist understanding. In this context, the global education crisis caused as a result of COVID-19 has led to higher education institutions worldwide moving towards a more innovative and functional hybrid teaching-learning model where both face-to-face lecturing and distance education initiatives are designed to coexist (Dziuban et al., 2018; Karakose et al. 2021), making such changes both necessary and inevitable. Therefore, higher education systems should adopt technology-supported digital learning as a model implemented alongside traditional face-to-face education, and consider moving to a blended and hybrid model of teaching and learning (Boelens et al., 2017).

Looking at the global current situation for COVID-19, in terms of higher education systems; it is not difficult to predict that online education will continue for an extended period and that online education as a model may start to replace face-to-face education in the coming years unless the virus is completely eradicated through mass vaccination programs and/or other factors that prevent its transmission and prevalence. Therefore, in this digital learning age, it has become even more important to support academicians with online inservice training courses aimed at improving their digital literacy and technology-based skills to the required level of proficiency. Similarly, the financial, psychosocial, and educational support required to increase the technological competence of higher education students to be able to fully benefit from distance education must also be urgently provided. During such a difficult and prolonged period, the active involvement of disadvantaged students in the digital learning process will enable them to properly take benefit from emergency remote teaching, and will therefore help to eliminate digital inequalities that especially impact on that group.

The pandemic has forced higher education institutions worldwide to switch to a technology-supported digital learning model in response to the ensuing education crisis. In this context, it has become inevitable to support all stakeholders by helping to promote better understanding of digital learning so as to best cope with the negative effects of the pandemic on the higher education system, and which triggered a paradigm shift for both policymakers and administrators alike. From this perspective, in order to ensure the continuity of educational quality in universities, integrating the digital and remote teaching approach into higher education correctly and effectively will help to ensure that instructional goals continue to be met.

In addition, one of the most important drawbacks of the digital and distance teaching-learning model is the digital inequality experienced by university students who lack access to computers or other suitable Internet-enabled equipment, as well as adequate Internet access in the home environment (Bernard et al., 2020; Verawardina et al., 2020). To meet the education and learning needs of those students considered disadvantaged, any lack of resources in this context should be corrected immediately in order to ensure that all students can benefit equally from online education.

The COVID-19 pandemic caused a massive public health crisis worldwide, forcing almost all sectors to restructure their business and operational activities, with the most effect felt throughout the health, economy, and education sectors. However, potential opportunities also became apparent along with the more obvious threats and risks. During the COVID-19 crisis, it soon became important for higher education students and academics to organize their daily lives in such a way so that educational and training activities were minimally interrupted, and this was largely down to effective time management planning. In this context, taking regular exercise, discovering new hobbies, and spending quality time with families whilst forced by circumstance to stay at home will help both lecturers and their students find some relief from the psychological impact and stress caused by COVID-19, whilst at the same time contributing to their academic self-improvement.

Additionally, in order to ensure that higher education students are best able to enjoy and maximize their benefit from emergency remote teaching, lecturers must sometimes look to organizing fun online-based activities in addition to the more formal teacher-student transfer of information within the virtual environment. This may help to make students more motivated in their lessons, whilst helping to reduce their academic-related anxiety.

Finally, so as to minimize the negative psychosocial effects of COVID-19 on higher education students, and also to meet their needs in this area, guidance should be provided through online psychosocial support programs organized by higher education professionals and administrators that aim to address the fears and anxieties of students due to the pandemic and its effect on their education.

## DECLARATIONS

**Author Contributions** The article was written by a single author, who read and approved the final published version of the article.

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**Ethical Approval** No ethical approval was sought as the article does not present any study of human or animal subjects.

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