Systematic Analysis of Studies on Emergency Remote K–12 Teaching (ERKT)

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EXECUTIVE SUMMARY

This chapter examines research to reveal the effects of the COVID-19 pandemic on K-12 education. This systematic survey focuses on the literature on emergency remote teaching (ERT) at the K-12 level published in 2020-2021. Therefore, it provides a detailed overview of identified trends and patterns. Based on the findings from 199 articles surveyed in this study, the most commonly used method of analysis is found to be qualitative method, the most used keyword is COVID-19, and the most preferred data collection tool is questionnaire. Moreover, it is observed that the data were collected predominantly online, and the convenience sampling was utilized in the USA, Philippines, Greece, and Turkey. Additionally, this chapter discusses the identified problems, concerns, and crucial points, and provides suggestions for the educators. This chapter is believed to make an important contribution to the literature presenting a picture of emergency remote teaching implementation at the K-12 level.

INTRODUCTION

The global COVID-19 pandemic has left an indelible impression on the education world, during which many countries have had to initiate emergency remote teaching (Duggan et al., 2021). Rice (2006) states that the sudden transition to online education poses numerous challenges for school administrators, teachers, parents, and students. This emergent educational transition in 2020 confirms Rice's position. As Grover et al. (2020) mention, these stakeholders were not prepared to experience and tackle these challenges. Among these challenges, the need for technological devices, for the development of teachers' online course design skills, for the improvement of infrastructure, and for parental support can be listed (Karataş & Karataş, 2021; Shamir-Inbal & Blau, 2021).

Education has always been interrupted for various reasons: Wong et al. (2014) report that the unforeseen school closures in the United States between 2011 and 2013 were due to weather conditions and natural disasters. However, very few studies concentrated on the measures for such interruptions before the COVID-19 pandemic (Francom, 2021). Specifically, the lack of a pandemic plan in more than 84% of K-12 schools in New York City demonstrates the level of preparedness (Thomas et al., 2007). In another instance, K-12 teachers had to provide ERT during school closures in Hong Kong due to the SARS epidemic that lacked clear guidelines about the instructional mode and information about the possible duration of ERT (Fox, 2004).

It is evident that the education sector, like many others, was unprepared for the COVID-19 pandemic. Education may be interrupted regionally or globally due to not only epidemics such as COVID-19 but also natural disasters such as earthquake, flood, and fire. For example, İzmir Earthquake in 2020 in Turkey, the tornado outbreak in the southern states in April 2020 in the USA, and the Amphan hurricane on the coastal areas of India and Bangladesh in May 2020 and forest fires in Turkey during summer 2021 resulted in regional school closures. Therefore, having pandemic/disaster plans, and emergency remote teaching directives are mandatory. Francom et al. (2021) point out that the current pandemic reminds teachers and administrators to reassess the readiness of schools for distance learning. School districts are advised to have plans for any possible transition from face-to-face teaching to distance education. It is suggested that the plan be adaptive to various emergencies and include information about the standards, the expected learning outcomes, and types of technologies to be used (Fox, 2004; Francom et al. 2021). The plans might be based on the systematic studies that provide comprehensive information about ERT.

As stated by Huck and Zhang (2021), distance and hybrid learning models will continue to persist; therefore, conducting systematic reviews of the work carried out at the regional, school, and classroom levels will inform future practice. They highlight the need for a deeper understanding of sudden transition to distance learning during mandatory school closures through a systematic literature review with comprehensive concept mapping. Hence, systematic analyses gain importance to learn from the past experiences and to apply this information to enrich and deepen our understanding.

The need for systematic studies about distance education has been emphasized by numerous researchers. Shamir-Inbal and Blau (2021) compare distance education studies in K-12 in different time periods and point out the limited number of studies in 2020 as was in 2015. Anderson (2021) claims a limitation in that systematic studies on the use and effectiveness of distance education focus mainly on higher education. Dixson (2010) states the differences within and between online education in K-12 and higher education settings, in terms of the variety of methods, practices, and tools. Aguliera and Nightengale-Lee (2020) indicate that student experiences and instructional needs differ in each pedagogical context. It is seen that only a limited number of studies yet investigated teachers' experiences during the transition

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