



Beyond the Face-to-Face Learning: A Contextual Analysis

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Citation: Louis-Jean, J., Cenat, K. (2020). Beyond the Face-to-Face Learning: A Contextual Analysis. *Pedagogical Research*, 5(4), em0077. <https://doi.org/10.29333/pr/8466>

ARTICLE INFO

Received: 2 Jun. 2020

Accepted: 17 Jul. 2020

ABSTRACT

The novel coronavirus (COVID-19) pandemic has altered every aspect of life across the world. The global economy, health care systems, social life and most importantly education have all been affected. The severity of the virus forced students, educators, and all other non-essential workers to confine to their respective homes to limit the spread of the virus. Many states have enacted curfew laws, restaurants and grocery stores have established new rules and regulations, and teachers are obliged to alter their teaching pedagogy from the face physical walls of the classroom [face-to-face learning] to web-based distance learning. The resulted massive exposure towards web-based learning is well administered by institutions with previous competency while other institutions find it difficult to operate remotely. This communication briefly examines the nature of web-based learning caused by the COVID-19 global pandemic.

Keywords: coronavirus, distance learning, education, technology

INTRODUCTION

The novel coronavirus (COVID-19) continues to challenge the public health sectors in many countries and territories (Louis-Jean et al., 2020). To mitigate the spread of the virus, the US Centers for Disease Control and Prevention (CDC) has continuously providing many preventative measures (Coronavirus Disease (COVID-19) Advice for the Public, 2020; Coronavirus Disease 2019 (COVID-19)- How COVID-19 Spreads, 2020). These measures include social distancing, sheltering-in-place, and practicing coughing and sneezing etiquette. These efforts are shown to be effective. However, the impact of the virus leads to global economic disaster, physiological and emotional distress, many deaths, and forces a massive exposure towards web-based learning (Evans, 2020).

As a result of COVID-19, schools across the world have shut their doors to mitigate the spread of the virus. Students, teachers, and parents now have to adapt to a whole new education system of web-based distance learning. While this is a smooth adaptation for some, for others, it is a new challenge and a reminder of the inequality that exist in the education system. Limited access to electronic devices (i.e., tablets and computers), internet service, technology fluency, and limited professional developments on web-based teaching for teachers combined has made distance learning a lot more challenging than expected.

REMOTE LEARNING: CHALLENGES & ADAPTATION

The United Nations Educational Scientific and Cultural Organization (UNESCO) recently reported that nearly 1,292,378,969 students are affected in response to the virus due to school closures (UNESCO, 2020). This is based on 186 countries which have implemented nationwide school closures in addition to 7 countries which only implemented local closures (Figure 1). Altogether, the virus has impacted nearly 73.8% of the world's student population (UNESCO, 2020). This number peaked 91.3% in mid-April 2020 (Setiawan, 2020). In response to the COVID-19 pandemic, in the United States, all schools (K-12, higher education, and professional schools) are physically closed following stay-at-home orders. Federal and State officials advised schools to develop online learning plans and curriculums to minimize the disruption of student learning from the academic calendar. As a result, students and educators are forced to rely on technology-enabled learning devices and platforms to continue with their academic calendar.

Very recently, online school learning (e-learning) was somewhat considered inferior to traditional (face-to-face) learning. However, as the world becomes more technologically interconnected, various institutions begin to offer online courses and a number of software and platforms have systematically made it possible for the advancement of e-learning. In many aspects, video conferencing (Zoom, WebEx, etc.) and learning management systems (Canvas, ALEKS, Blackboard, Google classroom, etc.) are the

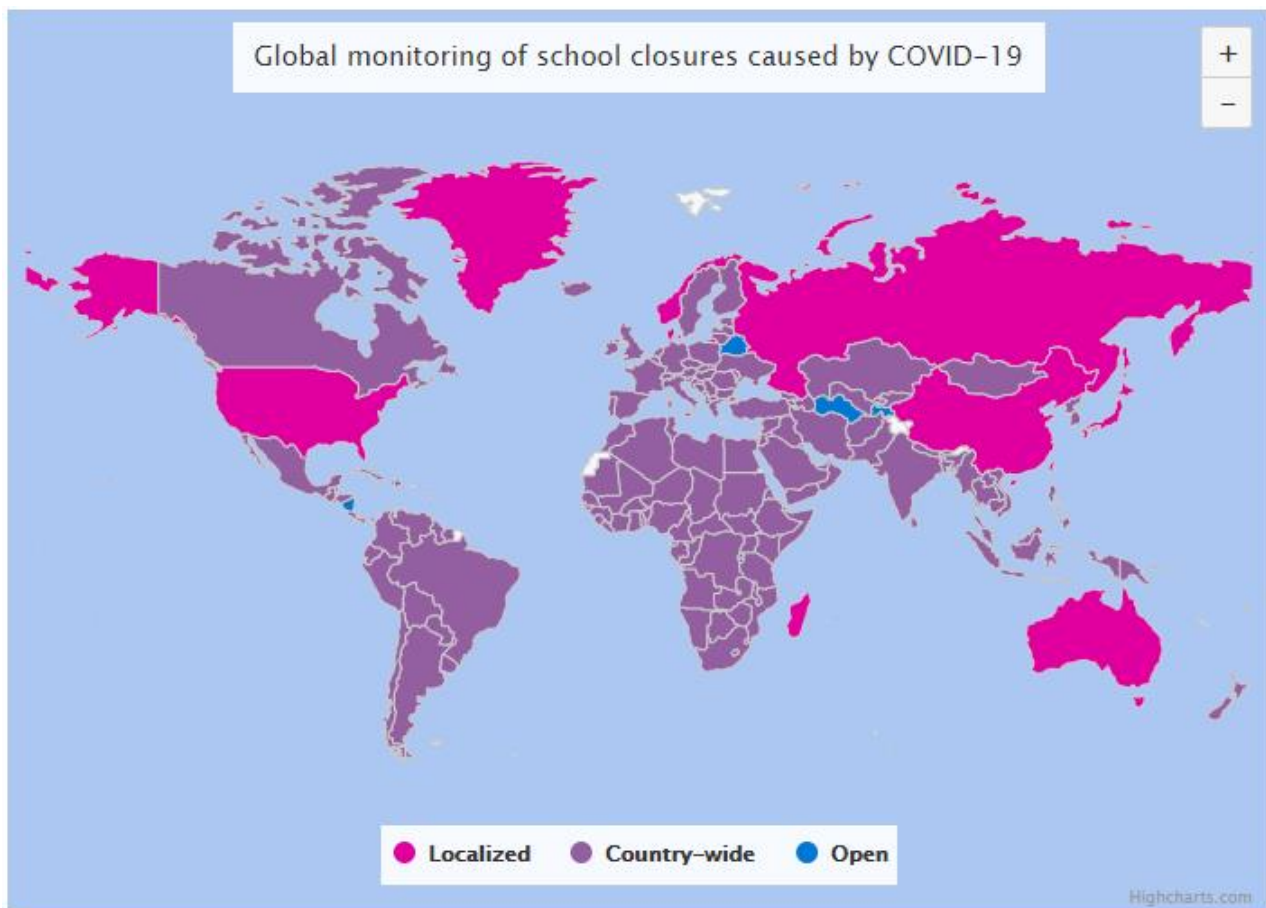


Figure 1. Geographical representation of school closures due to the COVID-19 global pandemic as reported by UNESCO (UNESCO, 2020)

workhorses of the mass e-learning movement amidst the COVID-19 pandemic. This is in addition to enabling software (i.e., Proctorio) which monitors students while taking exams and quizzes online.

While e-learning has been shown to be very useful and successful, many schools are completely unprepared for the massive e-learning caused by the impact of COVID-19. Institutions that already have e-learning capabilities are not necessarily affected by the virus. However, institutions with limited resources – operating underbudgets – are mostly impacted. For instance, their educators do not have the foundation to prepare and design online lesson curriculums and establish a strong, successful e-learning experience. In addition, many of their students have limited to no access to technological-enabled learning devices and limited to no internet access. Altogether, these students are at a higher risk of not being able to satisfy their e-learning studies.

Fundamentally, internet access is beyond broadband – boxes and wires. Research data has shown that household income plays a major role in home internet access. This is based on digital divide or digital disparities. In the United States, an estimated 56% of individuals with households earning \$30,000 have access to home internet services (Anderson, 2019). Meanwhile 92% of those with households earning \$75,000 have internet access. In addition, 17% of individuals have internet access only through their smartphone devices (Anderson, 2019). This represents a challenge for students to complete assignments, do research, and complete exams and quizzes using tinier keyboards and screens. To tackle some of these challenges, many school districts in the United States have loaned laptops and tablets to their students. In rural California, Google has distributed nearly 4,000 Chromebook laptops to students. In addition, a selected number of internet service providers have temporarily offered free internet services to low-income families.

While many companies have offered free internet services and school districts have distributed laptops and tablets to students, the real challenge lies in adapting to a new technological system that is beyond the student's realm of social media technology. For students and educators, this adaptation is a challenge in itself. Many students have never been taught on how to use a tablet or laptop for academic purposes. Many of them lack the basic technological (Kyker, 2014) knowledge of Microsoft word, power point and excel. In addition, majority of them use technology for leisure more often than for academic purposes. A recent study explains how technology education is not mandatory in most schools across the United States; "teachers teach the exact same subject matter as they did 100 years ago – reading, writing, math, history and foreign languages" (Goddard, 2019). Older teachers struggle to understand the "21st century" platforms such as Zoom, Edmodo, and Microsoft teams (Olson et al., 2011; van derKaay & Young, 2012). Not only are many students struggling to adapt to using Microsoft and other academic platforms, but older teachers are struggling in using these platforms as well. Nonetheless, nearly 79% of teachers across the United States would like to receive more professional development on how to better implement technology (Goddard, 2019). However, teachers in high poverty schools are less likely to receive technology-integration training (Herold, 2017). On the other hand, students and

teachers in more affluent schools find the adaptation less strenuous. In affluent middle-class neighborhoods, parents can assist their children in using the distance learning platforms. Teachers and students in more affluent schools have been exposed to and have easier access to technology – in school and at home. Nearly “half of all teachers in higher income students say all or mostly all of their students have access to the digital tools they need at home. That same figure drops to 20% in teachers in middle to low income students” (Kang, 2013). Among teachers who work in high incomes areas, nearly 70% of them have received good support for incorporating technology into their teaching compare to teachers in low income areas where only 50% have received support from their school to incorporate technology (Soltan, 2019). In less affluent and underperforming schools, students have very limited access to no exposure at all in using technology. Majority of students in under performing schools are placed in intensive classes – intensive math, intensive reading, and others – and suddenly are expected to master the use of technology distance learning platforms to complete and submit assignments.

Another challenge affecting distant learning education is student attendance. In Florida for instance, the Florida Department of Education expects schools to maintain an attendance rate of 95% and above (“Coronavirus (COVID-19),” 2020). During the COVID-19 pandemic, student attendance is taken daily by logging into their student portal. Since this shift, student attendance has dropped significantly, mainly amongst inner city schools. Schools are averaging 60-70% attendance rate compared to the expected 95%. School principals have reported the varying reasons for low attendance participation. Many students are caretakers of their siblings during this time as parents are not home or are away working. Many students, especially those not academically inclined, do not have the motivation to log into their portal to check or complete assignments, and ESOL students or students with IEPs no longer receive the special accommodations provided within the classroom. In school, students receive various incentives as a source for motivation, but during the pandemic, all these avenues have been cut short. Distance learning education has a lot of positives and negatives, however, as in all situations, minorities have to bear the burden twice as much in all aspects of economic, health, and education (Louis-Jean et al., 2020).

Altogether, the face-to-face teaching interaction and feedback is not fully reflected in remote or e-learning. For younger students (i.e., K-12), ESOL students, and those with disabilities or special needs, e-learning may not be ideal. These students do not have the attention spans, independent learning skills, and maturity to succeed in an e-learning environment. This is in addition to user errors and the troubleshooting skills needed to manage e-learning devices. While parents are the new substitute teachers, most of them are working remotely and it could be a challenge for them to assist their children during e-learning operation time. Altogether, these students could find it very difficult to remain in front of their e-learning devices for 7 to 8 hours a day to complete their studies. Parents and educators should continuously engage in not only the educational needs, but also the mental and emotional well-being of students. These students will soon be the ones in power, working collaboratively to solve the world’s biggest challenges and obstacles.

CONCLUSION

Amidst the COVID-19 pandemic, some institutions were able to rapidly innovate and implement e-learning as they have already established familiarity with e-learning. As a result, these institutions are less disrupted by the effect of the virus. Other institutions that lack e-learning preparations and necessary tools in addition to digital disparity, are experiencing many challenges. Altogether, school officials and educators should currently take the chance to observe and carefully analyze deployed educational technologies in use during this crisis driven massive e-learning. This includes well-established, tested, and untested educational technologies. This could help educators and students in establishing easy-to-use, innovative technology and platforms for the advancement of e-learning. In addition, educators need relevant training on how to facilitate better understanding and engage students through e-learning. This could intrinsically require educators to work with educational technology companies to figure out and develop the best instructional designs to make the best out of e-learning.

The emerging COVID-19 pandemic makes it clear that all institutions should have e-learning capabilities. Institutions with no experience in such field need to cultivate the competency in order to be ready for any upcoming crisis and meet the demands that will come from adopting to e-learning as COVID-19 will soon show. This is very critical; and since the world is unstable, various crises (i.e., virus, hurricane, flooding, climate change, etc.) will continue to impact the education systems. It is relevant for educators to understand that e-learning is more than providing students with files and information and asking them to learn the materials. E-learning can be effective given successful planning, resources, collaborations with educational technology, and thoughtful designs. This campaign will require schools to update their technology-enabled learning equipment and digital infrastructure.

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