

# CHALLENGES AND OPPORTUNITIES OF DISTANCE LEARNING DURING COVID-19 IN UAE

Najeb Masoud, Al Dar University College  
Om Prakash Bohra, Al Dar University College

## ABSTRACT

*The COVID-19 pandemic has affected educational systems not just in UAE, but globally as well, where the total number of 1.725 billion students had been affected by the closure of schools and higher education institutions on April 15, 2020. Due to the characteristics of educational settings in UAE, it has recommended and further adopted the use of distance learning programs and open educational application and platforms that support affected students and families. For educational practices and distance learning in areas that are affected with COVID-19 predicaments, urgently required teaching students in many ways with technology and online platforms under the umbrella of “distance learning” or “remote teaching”. The present research paper endeavor to explore the alternative solutions recommend imparting essential knowledge about COVID-19, its details guidelines, and how educational practices is affected in the areas, such as, UAE. Explore how it can respond to future challenges. The research paper further reviews the present practices in the curriculum and make it more responsive to the learning experiences outside needs of the students to take the responsibility for their learning even beyond the conventional classrooms.*

**Keywords:** COVID-19, Education System, Curriculum, Distance Learning, Environmental Economic and Health Education.

## INTRODUCTION

The COVID-19 pandemic is a disease caused by spread of coronavirus and even referred to as the 2019 novel coronavirus or ‘2019-nCoV’ (Bender, 2020). It is observed that the most common symptoms of COVID-19 are fever, tiredness, dry cough, and some patients may even have aches and pains, nasal congestion, running nose, sore throat or diarrhea (Bender, 2020; Meng et al., 2020). On January 30, 2020, the World Health Organization (WHO) announced that this outbreak had constituted a public health emergency of international concern with nearly 10,000 people have been infected and that over 200 have died (Mahase, 2020). As of the end of February 26, 2020, COVID-19 has been recognized in 34 countries, with a total of 80,239 laboratory-confirmed cases and 2,700 deaths (WHO, 2020b). The COVID-19 is spreading across the globe crossing all the boundaries. The countries which are highly affected by this pathogen are US, Brazil, Russia and India.

The first case of Covid-19 in the UAE was identified on January 29, 2020. In reaction to the COVID-19, the government has taken stringent steps aimed at controlling the spread of the virus with adhered to stay-home for more than two to three months. On March 26, 2020 Ministry of Human Resources and Emiratization announces limits private sector companies’ in-office workforce to 30 per cent as Federal Authority for Government Human Resources announces remote working for all public sector organizations from 29<sup>th</sup> March, 2020. On May 18, the UAE Attorney General announced that individuals failing to follow rules and regulations to curb the spread of COVID-19 will face additional fines varying from 1,000-100,000 Emirati dirhams (AED). The number of cases was spreading day and night without any break. As of May 31, the number of cases reached to 34,557. In total, 17,932 people in

the country have recovered, including a Chinese family who were among the first reported to have the virus in the Emirates, country reported 264 casualties, reached to more than 330 as of July 11, 2020. Due to the characteristics of educational settings, most governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the COVID-19 pandemic which impacting over 60% of the world's student population (UNESCO, 2020). According to UNESCO, 138 countries have closed schools nationwide, impacting over 1.3 billion children and youth, while 11 countries have implemented localized school closures as a result of COVID-19, with a total of 1.1 million in UAE schools adopted the remote teaching or say distance learning at school and higher education level.

Given such overlapping challenges and benefits of distance education, scholars have called for the creation of developmental opportunities that support staff and students in learning about and working in partnership enables to benefit from each other's experiences (Cook-Sather, 2014; Marquis et al., 2016). The paper demonstrates that in distance learning modes with high levels of inquiry, teachers focused on knowing about students' achievement during COVID-19 pandemic. We propose that students are the beneficiaries of teachers' inquiry, it makes sense that they participate in the process at certain points. For instance, students can take responsibility for working towards achieving learning goals or priorities that have been identified by teachers through inquiry. As such, collaboration with students is a goal for SoTL, which is identified as significant by several authors (Felten, 2013). In this respect, teacher inquiry, where the teacher's own practice is under investigation, can be seen both as a way to improve day-to-day teaching in the distance learning and as professional development for teachers. As such, it should also have a role in teacher education. In this research paper, we present the iterative development of the ways, (based on relevant experience of distance education) to introduce the essential knowledge about COVID-19 guidelines, and how educational practices are responding to future challenges in the information and technology-rich classroom.

Therefore, the aim of this paper is to describe students' attitudes towards a "forced, first-time" distance learning model in the context of present challenges and opportunities? Thus, the general objective in this study is to identify the degree of importance UAE students attribute to the variables that influence them in their choice of distance learning programs.

In addition, UNESCO estimating that over 90% of the world student population is confined to their learning from home-or known as distance education, providing an alternative learning solution, which has become the top priority for every ministry of education. On March 3, UAE's Ministry of Education announced that all schools, colleges and universities across the country will close for a month starting Sunday, March 8, as part of efforts to contain the spread of coronavirus. Spring break, which originally begins on March 29, instead, began on March 8 and lasted for two weeks. Distance learning was introduced during the remaining two weeks, with pupils learning from home. On 30 March, 2020, UAE announced that the 2-week distance learning modes reschedule the ongoing exams and assist their students learning regularly for schools and higher education institutions would continue until the end of the academic year 2019-2020. It is now expected that this will continue in some form into the next academic year 2020-2021 until the COVID-19 crisis remains unchanged. Finally, some scholars have celebrated the potential for staff and students partnerships to destabilize repressive power structures and dominant discourses, suggesting, for instance, that partnership might contribute to making teaching and learning more democratic (Cook-Sather & Luz, 2015) as a professional activity that can continuously be improved, teacher inquiry is a form of distance learning modes with high levels of inquiry.

## **OVERVIEW OF RELATED RESEARCH**

The year of 2019 has its bad ending. The sudden appearance of COVID-19 pandemic has had a serious impact on all educational stakeholders such as, students, instructors, and educational organizations not only in UAE but around the world. Due in part to the limited number of professional development offerings and a lack of a common entry point in to the distance learning or a standardized path for advancement once in the learning outcome (Chism et al., 2010; McDonald, 2010), educational developers follow varied paths into and through the profession (Harland & Staniforth, 2008; McDonald & Stockley, 2008). The “Distance Learning (DL)” section addresses implications of our approach for our future practice and describes ways in which the approach could be transferable to other educational developers.

### **Distance Learning and Its Challenges**

Based on the need for series of challenges have arisen in the wake of the COVID-19 pandemic in the UAE context, this article presents opportunities for educational systems, and the challenges to overcome in the system of distance learning/remote teaching, including economic setbacks and adverse health and physical distancing, that concerns raised due to the safety of the COVID-19 pandemic.

### **Distance Learning of Collaborative Teacher Inquiry**

Due to the COVID-19 pandemic, education intuitions the world over are shifting to distance learning through distance learning programs. In the past history, “distance learning” was also called distance education, first took hold in the 1930s, with over 25 state boards of education, 200 schools’ systems and several colleges and universities offering educational programs broadcast over public radio (Loveless & Betz, 2020). Teacher inquiry is about solving problems that are job embedded and relevant a pressing area of need that the collaborating group finds challenging to teach and difficult for students to learn (Lewis, 2002, Mertler, 2009). Amongst others, one of the main advantages of distance learning where students are not required to be present in a physical classroom, but can be the personalized approach to get education regardless of the channels to attend training centers and universities (Toquero, 2020).

Although this learning delivery can present curriculum courses and resources in different digital format (text, web links, video, lectures, etc.), usually teachers can select lectures and exercises. The students should watch and follow these learning sessions, and the tutors then through messages and synchronous classes (OECD, 2020). Therefore, having all students connected at the same time may be a problem in some places, and access to IT infrastructure should also be monitored to provide good access to all, perhaps within certain time frames. Additionally, countries that are having the limited technologies have problems in schools, and these schools are not ready for the complete and effective implementation of the countrywide learning education (Sintema, 2020). Very recently, a premier institution of management in India (Indian Institute of Management-Calcutta-IIM-C) has decided to go for distance learning (distance /remote teaching), which is very late after losing considerable valuable time of the students’ community.

During this tough time, the concern is not about whether distance learning methods can provide quality education; it is rather how academic institutions will be able to adopt distance learning in such a massive manner (Carey, 2020). These difficulties and problems associated with modern technology range from connectivity and speed problem, downloading errors, many issues with installation and updating of software, login problems, problems with audio and video, and so on. Sometimes student finds distance learning to be boring and

unengaging in general students of higher education, and the school going children (primary level of young kids) in particular (Dhawan, 2020). However, institutions must focus on pedagogical issues and emphasize collaborative learning, case learning, and project-based learning through distance instructions (Kim & Bonk, 2006). Despite these challenges, in some contexts, it is clear that the Ministry of Education (MoE) in UAE implemented remote specialist training for more than 25,000 government school teachers and administrators in addition to more than 9,200 private school teachers and principals focused on creating virtual learning communities aimed at enhancing the teachers' capabilities to remotely manage the education process and documenting the best practices to have an efficient learning process of high performance. In that case, this brings an opportunity for training for the teachers who further can improve student learning in educational programming for the instructors to facilitate the goals aligned to the learning goals of higher education institutions (Ludeman et al., 2009).

### **Economic Setbacks**

Since the COVID-19 outbreak the economic fallout from the pandemic raises the risks of a global economic recession have reached a consensus that the world has been plunged into a global recession (Giles et al., 2020), with levels of unemployment not experienced since the Great Depression of the 1930s. Globally, over 300 million formal economy jobs lost, and 1.5 livelihoods lost in the informal economy (Burrow, 2020). On May 8, 2020, the Bureau of Labor Statistics (BLS) reported that 20 million Americans lost their jobs in April 2020, pushed the national unemployment rate to 14.7% (with some caveats), the highest since the Great Depression of the 1930s (Jackson et al., 2020). In Europe, over 30 million people in Germany, France, the UK, Spain, and Italy have applied for state support of their wages, while first quarter 2020 data indicate the Eurozone economy contracted by 3.8% at an annual rate, the largest quarterly decline since the series began in 1995 (Collett, 2020). During this pandemic, East Asia and the Pacific will grow by a scant 0.5%. For example, South Asia will contract by 2.7%, Sub-Saharan Africa by 2.8%, Middle East and North Africa by 4.2%, Europe and Central Asia by 4.7%, and Latin America by 7.2% (World Bank, 2020). In very recent data provided by IMF on global public debt indicate that "Global public debt hit highest in history. In advanced economies, the gross public debt (as percent of GDP) has grown from 104.7 to 131.2 from January 2020 (WEO update) to June 2020 (WEO update). Similarly, fiscal balance (as percent to GDP) has also witnessed rising trend. It has grown, as percent to GDP, from (-) 3.0 to (-) 16.6, for the same period from (January to June 2020). The scenario for the "Emerging Market Economies" is different. In case of "Gross public debt as percent of GDP", it has risen from 56.3 (lower than advanced economies) to 63.1 (also lower than advanced economies). It has further observed that with respect fiscal balance (as percent of GDP) the figure increased from (-) 5.1 to (-) 10.6 (all the figures are from January 2020 WEO update to June 2020-WEO update) (IMF, 2020). These downturns are expected to reverse years of progress toward development goals (MDG-millennium development goals and SDG-Sustainable development goals) and tip tens of millions of people back into extreme poverty. Under this downside scenario, global growth could shrink by almost 8% in 2020. Furthermore, it has swiftly caused significant disruption to economies and societies on an unprecedented scale (Gibson, 2020).

In response to growing concerns over the global economic impact of the pandemic, policy maker of most of the economies, advanced as well as emerging market economies, have announced stimulus package to enhance the level of employment which in turn production and aggregate demand and the economy. In line with these stimulus package, the UAE Government in March 15, 2020, has announced 100 billion-dirham (AED) (\$27 billion)

stimulus package to deal with the economic effects of the COVID-19 pandemic; it cut the rate on one-week certificates of deposit by 75 basis points and will also ease regulatory limits on loans. On the 5th of April, 2020, the UAE Government also, announced new measures to guarantee liquidity in the banking system in the face of the pandemic, boosting its stimulus to a total of 256 billion dirhams (\$70 billion) from a previously announced 100 billion dirhams (\$27 billion) package. It also halved banks' reserve requirements for demand deposits to 7% from 14%, which will inject about 61 billion dirhams of liquidity to support banks' lending and liquidity management, extended the duration of a previously announced deferral of loan principal and interest payments for customers until the end of the year, and said banks participating in the scheme can benefit from a capital buffer relief of 50 billion dirhams until December 2021, among other measures.

### **Health and Physical Distancing**

During the crisis due to COVID-19, the practice of "social distancing" has become the new paradigm in many countries as they endeavor to curb physical contact. The World Health Organization (WHO) is now using the phrase "physical distancing" in place of "social distancing" in order to add more nuance to its guidance. Since the first case of novel coronavirus disease was diagnosed in December 2019, the COVID-19 pandemic has spread to almost all countries of the world. Physical distancing called in most cases "social distancing" in countries all over the world, which lockdowns of businesses, schools and overall social life, and have become commonplace to curtail the spread of the disease, have also disrupted many regular aspects of life, including sport, gyms and other physical activity. This policy brief changes in national behavioral patterns and shutdowns of usual day-to-day functioning. As of March 18, 2020, there were more than 198,000 COVID-19 infections recorded globally, and 7,900 deaths (Zhou et al., 2020). In the recent information, (as of 11 July, 2020), the number of cases reached to 12,532,302 and death 559,987, across the globe. For the UAE, the total number of cases reached to 54,050 and 330 casualties. Psychological symptoms relating to COVID-19 have already been observed on a population level including anxiety-driven panic buying (Collett, 2020) and paranoia about attending community events. Constantly, the COVID-19 pandemic has seen the incidence of domestic abuse dramatically increase globally because of reduced options for support, increased exposure to exploitative relationships and disaster-related instability within the household. Similarly, there has been an increase of 32–36% in domestic abuse incidents in France, 21–35% increase across the USA, 25% increase in UK domestic abuse hotline calls and a 75% increase in Google searches relating to domestic abuse support (Alradhawi et al., 2020). However, in the US President Trump's judgments of the pandemic witch rejection of COVID-19 as a serious and unique public health concern (Trump, 2020).

Specifically, the countries across the globe have taken different steps to contain and delay the spread of the virus within their borders, with differing degrees of success. China, for example, appeared to have halted the exponential increase of confirmed cases of the virus by limiting the freedom of citizens to move around their cities, provinces, and the country as a whole (Graham-Harrison and Kuo, 2020). The British government followed the instructions of its scientific advisors to delay the cancellation of mass gatherings and the closure of schools, instead favoring a policy that looked akin to pursuing herd immunity (whereby vulnerable groups are isolated, and healthier individuals are exposed to the virus to gain immunity at the population level (Fine et al., 2011). The Italian government has implemented a similar strategy, placing much of the country into lockdown and preventing groups of people from congregating in public spaces. The USA, for example, waited more than 2 weeks after the first confirmed case within its borders to enact localized testing procedures (Baird,

2020). The UAE Government has launched the national sterilization program for public and private facilities, streets, public transportation, and the metro during the weekend starting from 08:00 pm on Thursday, March 26 and until 06:00 on Sunday, March 29, 2020, during which citizens' movement was restricted. This kind of restriction were different in different Emirates, e.g., Dubai has imposed restrictions until recently, the restriction were completely removed and 30% to 100% occupancy in all public and private offices were allowed. Other countries have been slower to respond with such drastic action.

At the same time, in relation to COVID-19, while perceiving the virus to be severe has been linked with worse mental health outcomes (Li et al., 2020), feeling personally at risk of infection predicted a greater propensity to engage in hand washing and social distancing behaviors in the early stages of the pandemic (Wise et al., 2020). Even among the aforementioned (Li et al., 2020) research, subjectively judged self-control attenuated the link between perceived COVID-19 severity and poorer mental health, suggesting that combining a sensible level of fear about the illness with messages related to personal agency could encourage safety promoting behavior in the form of hand hygiene and social distancing. Hence, the social-distancing and sheltering-in-place measures are essential to minimizing the spread of COVID-19; however, they are likely to dramatically increase the risk of domestic and inter-family violence. At this time, UAE has been working on improving access to care as part of its 2021 strategy including the increase of the number of beds, healthcare workers over the last decade.

### **Opportunities to Be Seized**

Crises are events where 'all bets are off' and the 'rules of the game' can be up for renegotiation and rewriting, where there are new openings for new ideas, practices and possibilities (Barry, 2020). Despite challenges stemming from the COVID-19 pandemic, presented opportunities for improving the government of continuing the education of students away from schools, colleges and universities. Now these opportunities have become available to everyone, in an easy and simple way, all you have to do is to determine what you are looking for to increased connectivity through technology, family, and intergenerational relationships and to improved quality of life by reducing social isolation, increasing self-care and management, and improving awareness of advanced directives.

Although there is a wealth of evidence that having a rapid development of information and communication technologies and the move towards more knowledge-intensive, interdependent and internationalized societies create new challenges and opportunities for the design and delivery of education and managing work. For the student distance learning means increased access and flexibility learning including their access to technologies and the necessary infrastructure. It may also mean a more learner-centred approach, enrichment, higher quality and new ways of interaction. For employers it offers high quality and usually cost-effective professional development in the workplace skills. It allows upgrading of skills, increased efficiency, productivity and continuous learning culture. In addition, it means sharing of costs, of training time, and increased portability of training contents.

### **SOTL and Understandings**

The Scholarship of Teaching and Learning (SoTL) is a growing discipline dedicated to taking teaching and learning as serious intellectual work to enhance student e-learning practices. Boyer (1990) identifies the SoTL as the practice "which both educates and entices future scholars" (p.23). In this, Boyer clearly identifies key elements in his view of the scholarship of teaching worthy of further thought. Other research, for instance, defined SoTL

as “problem posing about an issue of teaching or learning, study of the problem through methods appropriate to the disciplinary epistemologies, applications of results to practice, communication of results, self-reflection, and peer review” (Cambridge, 2001; Witman & Richlin 2007). As such, collaboration with students is a goal for SOTL, which is identified as significant by several authors (Felten, 2013). Felten (2013), and Cook-Sather, (2014), argued that engaging with students as collaborative partners in educational knowledge acquisition and professional development, well supported the idea of students as central to inquiry into the SoTL.

For the most part in terms of learning and our relations with students, therefore, the power resides with the authority of the lecturer and is often reinforced through our social practices of teaching and our interactions. In several respects, some Japanese lesson study groups, choose problems that are even broader, such as “[using] higher order thinking and critical thinking skills” and then narrow in on more specific instructional topics during the planning process (Lewis, 2002; Puchner & Taylor, 2006). Thus, SoTL resembles other scholarly endeavors in that it involves peer reviewed publication of research. Teachers participating in inquiry use a variety of forms of evidence and data to conduct their study of a problem and learn to rely on this evidence, and what actions needs to be tried next. At the same time, student interviews, work, questionnaires, checklists, self-assessments, portfolios, systematic classroom observations, test results, audio or video recordings from the classroom, are all potential sources of data that teachers might use to inform their investigations (Fernandez et al., 2003; Ferrance, 2000). Along these lines, each of the teacher inquiry models reviewed highlight the need for a goal-oriented persistence as teachers work over a period of time to understand/resolve a dilemma and discover specific cause-effect findings about teaching and learning.

### **Technology Skills and Gained Experience**

One of the challenges during and aftermath of the COVID-19 pandemic is distance learning faces challenges for institutions. It is a challenge for teachers to move from offline mode to distance learning mode, changing their teaching methodologies, and managing their time. It is challenging to develop content which not only covers the curriculum but also engage the students (Kebritchi et al., 2017). It is a challenge for these environments, students can be anywhere (independent) to learn and interact with instructors and other students (Singh & Thurman, 2019). Many academic institutions are, therefore, seeking the help of learning so that learning platforms are needed, where: (a) video conferencing with at least 40 to 50 students is possible, (b) discussions with students can be done to keep classes organic, (c) internet connections are good and speedy, (d) lectures are accessible in mobile phones also and not just laptops, (e) possibility of watching already recorded lectures, and (f) instant feedback from students can be achieved and assignments can be taken (Basilaia et al., 2020).

Furthermore, while 21st century technology and information-rich classrooms (Reimann et al., 2016) enable new pedagogy and new ways of learning, and generate new types of data that can be used for improving teaching and learning. The teachers also provide new opportunities for teacher inquiry into student learning (Wasson & Hansen, 2016). To complement the educational programming to increase access to education in the COVID-19 era and beyond, the UAE government asserted that the futuristic vision of the UAE’s wise leadership, the state-of-the-art technological infrastructure, and the flexibility to develop proactive solutions and keep pace with changes and emergencies, enabled a rapid response to deal with the impact of COVID-19 on the education sector and ensure the continuity of distance learning for more than 1.2 million students in schools and universities in the UAE, using modern technologies and applications, while maintaining the health and security of

society under such exceptional circumstances (UAE Ministry of Cabinet Affairs and The Future, 2020).

With regards to increasing need for learning institutions to incorporate innovative methods of instruction (e.g., Toquero, 2020), transition to distance learning has emerged as an unavoidable option in the current COVID-19 era and beyond (Bao, 2020; Naciri et al., 2020). Besides, it allows teachers to personalize instruction (Steel, 2012) and allow students to self-regulate learning (Sha et al., 2012). Thus, although the UAE Telecommunications Regulatory Authority has decided to temporarily allow the use of certain Voice over Internet Protocol (VoIP) applications. Skype for business, Microsoft Teams, Zoom, Google Hangouts, Blackboard and Canvas, have all been unblocked in the country. The TRA has also issued a notice to telecommunications companies to refrain from suspending or disconnecting mobile services due to the expiry of supporting documents and Emirates ID. These tools can successfully be used as an alternative for face-to-face classes (Basilaia et al., 2020).

### **Response to The Covid-19 Pandemic**

The government of the UAE has taken significant steps to address the complex public health, educational systems and economic impacts of the COVID-19 pandemic. On 18th of May, 2020 the UAE has responded to the COVID-19 crisis by providing over 549 metric tons of aid to 48 countries, supporting more than 549,000 medical professionals in the process. As of May 14, 2020, over 1.5 million COVID-19 tests have been conducted across the country, a per-capita testing rate of more than one in ten. During the same time, it has set up 13 drive-through COVID-19 test centers across the country, including the country's largest detection and testing laboratory in Abu Dhabi's Masdar City. The Ministry of Education has activated virtual learning for nearly 1.2 million students from various schools and universities. In addition, service providers are offering a free mobile internet connection for families without home internet services to help them access remote learning. The Ministry of Community Development and Ministry of Economy are collaborating to launch the "Al Meer" initiative to provide essential food supplies to 12,000 vulnerable families and foreign workers. The lesson learned from the COVID -19 will force a generation of new laws, regulations, platforms and solutions for future cases (Basilaia & Kvavadze, 2020).

Next-steps: The COVID-19 pandemic is still an ongoing issue and the estimates provided by international institutions such as the International Monetary Fund (IMF) and the World Bank are being revised every week to reflect real-time information. Much remains to be done and how the educational institutions can effectively respond to another future virus outbreak. On the other hand, it is imperative to implement public-health education programmes and campaigns to increase awareness of health issues, and for self-regulatory mechanisms and professional treatments to be made more widely and readily accessible. These challenges are very significant and need to be addressed very effectively. Together they require a response that precludes a return to the pre-pandemic status quo. The biggest opportunity presented by COVID-19 is the chance to reset some of our economic approaches in a way that maximizes the chances of developing more resilient and sustainable approaches to globalization. Innovation and adaptation are particularly important when dealing with global challenges that threaten everyone, like pandemics and climate change. These are areas in which collective action is at its most important but often hardest to achieve.

### **CONCLUSION**

In this spirit, we identified and discussed distance learning, arising from the COVID-19 pandemic in UAE. The threat of COVID-19 pandemic has presented some unique challenges for educational institutions after schools, colleges and universities closures



followed in a very limited span of time to enforce social distancing measures. All stakeholders involved such as students, faculty, and staff are being asked to do extraordinary things regarding course delivery and distance learning that have not been seen on this scale in the lifetimes of anyone currently involved. Our responses, nationally and internationally, will determine whether we are able to learn from this crisis in order to forge a more resilient and sustainable approach to globalization.

Drawing from these findings, other initiatives seeking to enhance student getting involved in supporting staff using technology in distance learning and teaching might aim to balance the development of community with practical support around project implementation, perhaps drawing from community of practice or faculty learning community modes that engage associates of participants in both advancing particular initiatives and developing supportive relationships (Cox 2003, Matthews et al., 2016). Significantly, both students and staff should be actively involved in such initiatives, working together as both participants and facilitators. Understanding the relationship between teaching and student learning is important, not only for teachers, but also for student teachers. Emphasising this relationship during teacher education could lead to a more systematic approach in developing teachers' practice.

**Conflict of Interest:** The authors declare that they have no conflicts of interest.

## REFERENCES

- Alradhawi, M., Shubber, N., & Ali, Y. (2020). Effects of the COVID-19 pandemic on mental well-being amongst individuals in society- A letter to the editor on "The socio-economic implications of the coronavirus and COVID-19 pandemic: A review". <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7198428/>.
- Baird, R. P. (2020). What went wrong with coronavirus testing in the U.S.? Retrieved from: <https://www.newyorker.com/news/news-desk/what-went-wrong-with-coronavirus-testing-in-the-us>.
- Bao W. (2020) COVID-19 and online teaching in higher education: A case study of Peking University. *Hum Behav & Emerg Tech*, 1-3. <https://doi.org/10.1002/hbe2.191>.
- Barry, J. (2020). This is what a real emergency looks like: what the response to Coronavirus can teach us about how we can and need to respond to the planetary emergency. [www.greenhousethinktank.org/uploads/4/8/3/2/48324387/this\\_is\\_what\\_a\\_real\\_emergency\\_looks\\_like\\_final\\_15-04-20.pdf](http://www.greenhousethinktank.org/uploads/4/8/3/2/48324387/this_is_what_a_real_emergency_looks_like_final_15-04-20.pdf) (accessed Jun 30, 2020).
- Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 coronavirus (Covid-19) pandemic in Georgia. *Pedagogical Research*, 5(4), 1-9.
- Basilaia G., Dgebuadze, M., Kantaria, M., & Chokhonelidze, G. (2020). Replacing the classic learning form at universities as an immediate response to the COVID-19 virus infection in Georgia. *International Journal for Research in Applied Science & Engineering Technology*, 8(III).
- Bender, L. (2020). Key Messages and Actions for COVID-19 Prevention and Control in Schools. Retrieved from <https://www.unicef.org/romania/documents/key-messages-and-actions-covid-19-prevention-and-control-schools>.
- Boyer, E.L. (1990). *Scholarship reconsidered: priorities of the professoriate*. Princeton, NJ: The Carnegie Foundation.
- Burrow, S. (2020). Work: The Pandemic that Stopped the World. World Economic Forum. [http://www3.weforum.org/docs/WEF\\_Challenges\\_and\\_Opportunities\\_Post\\_COVID\\_19.pdf](http://www3.weforum.org/docs/WEF_Challenges_and_Opportunities_Post_COVID_19.pdf).
- Cambridge, B. (2001). Fostering the scholarship of teaching and learning: Communities of practice. In *To Improve the Academy: Resources for Faculty, Instructional and Organizational Development*, vol. 19, ed. D. Lieberman and C. Wehlburg. Bolton, MA: Anker, 3-16.
- Carey K. (2020). Is everybody ready for the big migration to online college? Actually, no. *The New York Times* <https://www.nytimes.com>.

- Chism, N., Gosling, D., & Sorcinelli, M. D. (2010). International faculty development: Pursuing work with colleagues around the world. In K. J. Gillespie & D. L. Robertson (Eds.), *A guide to faculty development*(2nd ed.), (pp. 243-258). San Francisco, CA: Jossey-Bass.
- Cook-Sather, A., & Luz, A. (2015). Greater engagement in and responsibility for learning: What happens when students cross the threshold of student-faculty partnership. *Higher Education Research & Development, 34*(6), 1097-1109.
- Cook-Sather, A. (2014). Student-Faculty partnership in explorations of pedagogical practice: A threshold concept in academic development. *International Journal for Academic Development, 19*(3), 186-198.
- Collett M. Coronavirus update: more COVID-19 cases confirmed across Australia as shoppers stock up on toilet paper, groceries. 2020. Available at <https://www.abc.net.au/news/2020-03-04/coronavirus-live-updates-toilet-paper-panic-buying-limits/12023040> (accessed Jun 25, 2020).
- Cox, M.D. (2003). Fostering the scholarship of teaching and learning through faculty learning communities. *Journal on Excellence in College Teaching, 14*(2/3), 161-198.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis, *Journal of Educational Technology Systems 0*(0)1-18. doi: 10.1177/0047239520934018.
- Felten, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry The ISSOTL Journal, 1*(1): 121-125.
- Fernandez, C., Cannon, J., & Chokshi, S.M. (2003). A US-Japan lesson study collaboration reveals critical lenses for examining practice. *Teaching and Teacher Education, 19*(2), 171–185.
- Ferrance, E. (2000). Themes in education: action research. Retrieved August 17th, 2008, from The Education Alliance: [http://www.alliance.brown.edu/pubs/themes\\_ed/act\\_research.pdf](http://www.alliance.brown.edu/pubs/themes_ed/act_research.pdf).
- Fine, P., Eames, K., & Heymann, D. L. (2011). “Herd immunity”: a rough guide. *Clinical Infectious Diseases, 52*, 911-916. <https://doi.org/10.1093/cid/cir007>.
- Gibson, C. (2020). Guidepost from ‘social distancing’ to ‘care in connecting’: An emerging organizational research agenda for turbulent times. *Academy of Management Discoveries*. <https://doi.org/10.5465/amd.2020.0062>.
- Giles, C., Greeley, B., & Arnold, M. (2020). Global recession already here, say top economists, *Financial Times*. Retrieved from <https://www.ft.com/content/be732afe-6526-11ea-a6cd-df28cc3c6a68> (accessed May 25 2020).
- Graham-Harrison, E., & Kuo, L. (2020). China’s coronavirus lockdown strategy: brutal but effective. Retrieved from <https://www.theguardian.com/world/2020/mar/19/chinas-coronavirus-lockdown-strategy-brutal-but-effective>.
- Harland, T., & Staniforth, D. (2008). A family of strangers: The fragmented nature of academic development. *Teaching in Higher Education, 13*(6), 669-678.
- Hermanns N, Schmitt A, Gahr A, et al. (2015). The effect of a diabetes-specific cognitive behavioral treatment program (DIAMOS) for patients with diabetes and subclinical depression: results of a randomized controlled trial. *Diabetes Care, 38*, 551-560.
- International Monetary Fund IMF. (2020). Latest information on the IMF and COVID-19. Retrieved from. <https://www.imf.org/external/index.htm>.
- Jackson, J.K., weiss, M.A., Schwarzenberg, A.B., & Nelson, R.M. (2020). Global Economic Effects of COVID-19. <https://fas.org/sgp/crs/row/R46270.pdf>
- Kebritchi M., Lipschuetz, A., Santiago, L. (2017). Issues and challenges for teaching successful online courses in higher education. *Journal of Educational Technology Systems, 46*(1), 4-29.
- Kim K.J., Bonk C.J. (2006). The future of online teaching and learning in higher education: The survey says. *Educause Quarterly, 4*, 22-30.
- Lewis, C. (2002). *Lesson study: A handbook of teacher-led instructional change*. Philadelphia: Research for Better Schools, Inc.
- Li, J.B., Yang, A., Dou, K., & Cheung, R.Y.M. (2020). Self-control moderates the association between perceived severity of the coronavirus disease 2019 (COVID-19) and mental health problems among the Chinese public. *PsyArXiv Preprints*. <https://doi.org/10.31234/osf.io/2xadq>.
- Loveless B., & Betz, A. (2020). Distance Learning. <https://www.educationcorner.com/distance-learning/>.

- Lu, R., Zhao, X., Li, J., Niu, P., Yang, B., Wu, H., Wang, W., Song, H., Huang, B., Zhu, N., Bi, Y., Ma, X., Zhan, F., Wang, L., Hu, T., Zhou, H., Hu, Z., Zhou, W., Zhao, L., Chen, J., Meng, Y., Wang, J., Lin, Y., Yuan, J., Xie, Z., Ma, J., Liu, W. J., Wang, D., Xu, W., Holmes, E. C., Gao, G.F., Wu, G., Chen, W., Shi, W., Tan, W. (2020). Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. *Lancet*, 395(10224), 565-574.
- Ludeman, R., Osfield, K., Hidalgo, E. I., Oste, D., & Wang, H. (2009). Student Affairs and Services in Higher Education: Global Foundations, Issues and Best Practices. United Nations Educational, Scientific and Cultural Organization, France. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000183221>.
- Mahase E. 2020. China coronavirus: WHO declares international emergency as death toll exceeds 200. *BMJ*, 368:m408. DOI: 10.1136/bmj.m408
- Marquis, E., Puri, V. Wan., S. Ahmad., A. Goff., L. Knorr., K. Vassileva., I., & Woo., J. (2016). Navigating the threshold of student-staff partnerships: A case study from an ontario teaching and learning institute. *International Journal for Academic Development*, 21(1), 4-15.
- Matthews, K., Marquis, E., & Healey, M. (2016). International collaborative writing groups as communities of practice. In *Implementing Communities of Practice in Higher Education*, edited by J. McDonald and A. Cater-Steel, 597-617. Singapore: Springer.
- McDonald, J. (2010). Charting pathways into the field of educational development. *New Directions for Teaching and Learning*, 122, 37-45.
- McDonald, J., & Stockley, D. (2008). Pathways to the profession of educational development: An international perspective. *International Journal for Academic Development*, 13(3), 213-218.
- Meng, L., Hua, F., & Bian, Z. (2020). Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. *Journal of Dental Research*. <https://doi.org/10.1177/0022034520914246>.
- Mertler, C.A. (2009). *Action research: teachers as researchers in the classroom* (2nd edition). Thousand Oaks: Sage Publications, Inc.
- Naciri, A., Baba, M.A., Achbani, A., & Kharbach, A. (2020). Mobile Learning in Higher Education: Unavoidable Alternative during COVID-19. *Aquademia*, 4(1), 1-2. DOI: 10.29333/aquademia/8227.
- National Academies of Sciences, Engineering, and Medicine. (2020). Social isolation and loneliness in older adults: Opportunities for the health care system. The National Academies Press.
- Organisation for Economic Co-operation and Development OECD. (2020). Education responses to COVID-19: Embracing digital learning and online collaboration. <http://www.oecd.org/coronavirus/policy-responses/education-responses-to-covid-19-embracing-digital-learning-and-online-collaboration-d75eb0e8/>.
- Puchner, L.D., & Taylor, A.R. (2006). Lesson study, collaboration and teacher efficacy: stories from two school-based math lesson study groups. *Teaching and Teacher Education*, 22(7), 922-934.
- Reimann, P., Bull, S., Kickmeir-Rust, M., Vatrappu, R., & Wasson, B. (Eds.) (2016). *Measuring and visualising competence development in the information-rich classroom*. London: Routledge
- Sha, L., Looi, C.K., Chen, W., & Zhang, B.H. (2012). Understanding mobile learning from the perspective of self regulated learning. *Journal of Computer Assisted Learning*, 28(4), 366-378. <https://doi.org/10.1111/j.1365-2729.2011.00461.x>.
- Siedlecki, K.L., Salthouse, T.A., Oishi, S., & Jeswani, S. (2014). The relationship between social support and subjective well-being across age. *Social Indicators Research*, 117(2), 581-576.
- Siminerio, L., Ruppert, K, Huber, K., & Toledo, F.G. (2014). Telemedicine for Reach, Education, Access, and Treatment (TREAT): linking telemedicine with diabetes self-management education to improve care in rural communities. *Diabetes Education*, 40,797-805.
- Singh V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, 33(4), 289-306.
- Sintema, E.J. (2020). Effect of COVID-19 on the Performance of Grade 12 Students: Implications for STEM Education. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(7), em1851. <https://doi.org/10.29333/ejmste/7893>.

- Tang, T.S, Funnell, M.M., & Oh, M . (2012). Lasting effects of a 2-year diabetes self-management support intervention: outcomes at 1-year follow-up. *Preventing Chronic Disease*, 9, E109.
- Thorpe, C.T., Fahey, L.E., Johnson, H., Deshpande, M., Thorpe, J.M., & Fisher., E.B. (2013). Facilitating healthy coping in patients with diabetes: a systematic review. *Diabetes Education*, 39, 33-52.
- Toobert D.J., Strycker L.A., King D.K., Barrera, M.J.r., Osuna D., & Glasgow R.E. (2011). Long-term outcomes from a multiple-risk-factor diabetes trial for Latinas: ¡Viva Bien!. *Transl Behav Med*, 1, 416-426.
- Toquero, C.M. (2020). Challenges and Opportunities for Higher Education amid the COVID-19 Pandemic: The Philippine Context. *Pedagogical Research*, 5(4), em0063. <https://doi.org/10.29333/pr/7947>.
- Trump, D.J. (2020). So last year 37,000 Americans died from the common Flu. It averages between 27,000 and 70,000 per year. Nothing is shut down, life & the economy go on. At this moment there are 546 confirmed cases of CoronaVirus, with 22 deaths. Think about that! [Tweet]. Retrieved from <https://twitter.com/realDonaldTrump/status/1237027356314869761>.
- UAE Ministry of Cabinet Affairs and The Future (2020). Successful “Distance Learning” for 1.2 Million Students Leveraging UAE’s Futuristic Vision, Flexibility and Advanced Infrastructure. <https://www.mocaf.gov.ae/en/media/news/successful-distance-learning-for-1.2-million-students-leveraging-uae-s-futuristic-vision-flexibility-and-advanced-infrastructure>.
- United Nations Educational, Scientific and Cultural Organization UNESCO. (2020). Global Monitoring of School Closures caused by COVID-19. Retrieved from <https://en.unesco.org/covid19/educationresponse>.
- Wasson, B., & Hansen, C. (2016). Data literacy and use for teaching. In P. Reimann, S. Bull, M. Kickmeir-Rust, R. Vatrappu & B. Wasson (Eds.). *Measuring and visualising competence development in the information-rich classroom*. London: Routledge, 56-73.
- World Health Organization WHO. (2020a). Coronavirus disease (COVID-19) advice for the public. Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>.
- World Health Organization WHO. (2020b). Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV).
- Wise, T., Zbozinek, T., Michelini, G., Hagan, C. C., & Mobbs, D. (2020). Changes in risk perception and protective behavior during the first week of the COVID-19 pandemic in the United States. *PsyArXiv Preprints*. <https://doi.org/10.31234/osf.io/dz428>.
- Witman, Paul D., & Richlin, L. (2007). The Status of the scholarship of teaching and learning in the disciplines. *International Journal for the Scholarship of Teaching and Learning*, 1(1). [http://academics.georgiasouthern.edu/ijsotl/v1n1/essays/witman/IJ\\_witman.pdf](http://academics.georgiasouthern.edu/ijsotl/v1n1/essays/witman/IJ_witman.pdf).
- World Bank. (2020). The Global Economic Outlook During the COVID-19 Pandemic: A Changed World. <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>.
- Wu, Z. (2020). How a top Chinese university is responding to coronavirus. Retrieved from World Economic Forum: <https://www.weforum.org/agenda/2020/03/coronavirus-china-the-challenges-of-online-learning-for-universities/>
- Zhou, X., Snoswell, C.L., Harding, L.E., Bambling, M., Edirippulige, S., Bai, X., & Smith, A.C. (2020). The Role of Telehealth in Reducing the Mental Health Burden from COVID-19. <https://www.liebertpub.com/doi/full/10.1089/tmj.2020.0068>.