

The Face of Education and the Faceless Teacher Post COVID-19

Naginder Kaur¹ and Manroshan Singh Bhatt²

¹Universiti Teknologi MARA Malaysia¹, Academy of Language Studies, Perlis Branch, 02600 Arau, Perlis, Malaysia

²KPMG Malaysia, KPMG Tower, 8 First Avenue, Bandar Utama, 47800 Petaling Jaya, Selangor, Malaysia.

ARTICLE INFO

Article history

RECEIVED: 09-Apr-20

REVISED: 13-May-20

ACCEPTED: 01-Jun-20

PUBLISHED: 15-Jun-20

*Corresponding Author

Naginder Kaur

E-mail: ninder@uitm.edu.my

Co-Author(s)

Author 2: manroshan.bhatt@gmail.com

ABSTRACT

With the outbreak of COVID-19, strong winds of change have blown into all spheres and strata of global society. On the education front, a forcible shift in the medium of teaching and learning is inevitable. The stark reality in the face has prompted urgent and immediate change (willing and unwilling) in the way lessons are delivered. Post COVID-19 period is projected to place greater emphasis on virtual learning (the faceless teacher), in which the role of the teacher and learners will significantly transform. This paper forecasts six ways post COVID-19 era will evolve education more than ever, with the faceless teacher becoming the new normal. Further, challenges confronting institutional heads, educators and students are put forth in view of the various forms of transformation likely to unfold in the months and years to come, where the teaching and learning landscape will acclimatise to the domination of a virtual medium.

Keywords: education, faceless teacher, online learning, post COVID-19, remote learning, virtual learning.

Introduction

Within merely 100 days, since the fateful date of December 31, 2019, when the first case of novel coronavirus disease (COVID-19) was reported to the World Health Organisation (WHO) by China Country Office (WHO, 2019), the menacing pandemic has engulfed every sphere of human existence. We are now living in unprecedented times, the likes of which have not been seen since the end of World War 2. The hard hitting reality is that every sector of the economy has been punctured by this worldwide public health emergency (Lederer, 2020). Between January 1 to April 1, 2020, a staggering 874,081 cases of COVID-19 were recorded worldwide, with the virus hampering human lives in 180 countries (Linnane, 2020). The statistics have since multiplied drastically, wherein less than two months, as at 22 May 2020, there were a whopping 5, 246,347 COVID-19 positive cases, taking 336,215 precious lives all over the world (worldometer, 2020). With the virus now dictating our life in every possible sphere, change is inevitable, even mandatory, as businesses and consumers alike have had to make difficult decisions to adapt and embrace change in the way

service offerings are made available to the market where social distancing is at the forefront, underpinning every transaction and encounter.

Like every other sector, the education landscape has been wholly impacted in all nations and at all levels of academic institutions, as ingenuity of educators has been forcibly stretched as a coping mechanism in the face of crisis. Up to March 31, 2020, the impact of COVID-19 has been so enormous, resulting in over 1.5 billion learners getting displaced out of academic institutions worldwide, as the continents of Africa, Europe and Asia experienced full closure of schools and universities, while countries like the United States of America, Brazil and Australia enforced localised closure of their educational institutions (UNESCO, 2020a). In Malaysia, eight million students have been affected due to school closures (Azahar, 2020). Many hope the pandemic will subside and ease out, where routine daily tasks will resume and normalise post-quarantine. Although some countries have begun to loosen up their lockdown restrictions, recent report by WHO has firmly warned humanity that COVID-19 may never go away, and that

we would just have to learn to cope and live with it (New Straits Times, 2020). With this dismal scenario hovering and looming over us, it seems almost certain that the face of education may not normalise for a long time to come. Regardless of the timeline to curb or control the spread of the virus, one thing remains certain - the face of education is bound to undergo a seismic shift. In view of this inevitable change, this paper serves to explore the dynamics of education which will transform the way teaching and learning is carried out henceforth. The arguments and foreseeable changes suggested by the authors are both theoretical and practical (managerial), based on review of literature on the topic and currently transpiring evidence-based updates. The discussion encompasses six broad areas which are set to change the face of education in the 21st century, both for short-term and in the long run, together with ensuing implications of these changes. It is imperative that educators be ready to embrace the new normal of faceless teaching in the face of this pandemic.

Literature Review

Incorporation of Technology in the Past

Before delving into the highly anticipated transformations in future, a cursory look at how teaching and learning is primarily conducted pre COVID-19 is pertinent. There has been a gradual increase in the adoption of technological tools in classrooms around the world in an attempt to support and gradually realise the virtual classroom construct. Several models of supplementary online pedagogy have been adopted under the umbrella of blended learning (Horn & Staker, 2014), namely rotation model, enriched virtual classroom, ala carte, and flex virtual classroom. In carrying out a meta analysis on 142 studies on blended learning, Nora Listiana and Jaharadak (2019, p. 4–6) classify the various topics of blended learning research into six broad characteristics or categories, namely, motivation (Vanslambrouck, Zhu, Lombaerts, Philipsen, & Tondeur, 2016; Zainuddin, 2018, as cited in Nor Listiana & Jaharadak, 2019, p. 4), satisfaction (Alshehri, 2017; Rahman, Hussein, & Aluwi, 2015, as cited in Nor Listiana & Jaharadak, 2019, p. 4) effectiveness (Compe`re, 2017; Lau, et al., 2018, as cited in Nor Listiana & Jaharadak, 2019, p. 5). interaction (Plekhanova & Prohorets, 2015; Shu & Gu, 2018, as cited in Nor Listiana & Jaharadak, 2019, p. 5), communication (Boelens De Wever, & Voet, 2017; Shorey, Kowitlawakul, Devi, Chen, Soong, & Ang, 2018, as cited in Nor Listiana & Jaharadak, 2019, p. 5) and challenges (Kaur, 2013; Lau, et al., 2018, as cited in Nor Listiana & Jaharadak, 2019, p. 6).

However, the age-old teaching approach of instructivism has been applied throughout the years and decades, where lessons are instructor-centred and students learn based on a structured schedule in a synchronous or asynchronous online classroom. Fadini and Finardi (2015) describe the interaction and communication on the Internet to be possible due to the availability of synchronous or asynchronous resources, anytime, anywhere, in many forms, and with unlimited participation.

Some of the tools introduced in academic institutions include virtual reality (VR), cloud computing, learning management systems (LMS) and social media which slowly gave classrooms a new look and breathed new life into lessons. VR allows students to learn by interacting with a 3D world while cloud computing enables the upload of educational resources on a school's cloud terminal, thus allowing students access anytime and anywhere (The AME Group, n. d.). While all these platforms may be contended to be of a lot of benefit, they served mainly as supplementary and complementary teaching and learning tools, while the teacher/instructor variable remained fundamental in the entire pre COVID-19 process of education and classroom learning. As Szabo (2019) contends, "multiple studies have shown that the relationship between human teacher and student is a major driver of the motivation that drives the learning process" (p. 19), for example, Zhao, et a. (2005), as cited in Szabo, 2019).

Technology in education has also been almost exclusively reserved for schools and institutions with privileged students who can afford the purchase of advanced tools. Investments in technology has been made, albeit with a dose of caution and hesitance on the part of school administration in making a sizeable investment in technology as there is skepticism as to how much more effective classroom lessons will be with them. In status quo, online presence in classrooms is limited, often in a supplementary role and is only ever applied by educators if necessary, such as to meet requirements/KPIs set by administration.

Visceral Response to Virtual Learning by Educators and Students

Within days of being termed a pandemic by the WHO (Ducharme, 2020), academic institutions were temporarily closed in an attempt to limit close physical contact and this led to further uncertainty as to how classes and examinations would be conducted. The familiar routine of teachers and students was given an awkward jolt, resulting in their flocking to various forms of online

learning platforms and instant messaging apps (Menon, 2020), mass migration, as it were. Open and distance learning (ODL), virtual learning and remote teaching became the instant talk of town and the new normal in the world of academia, consequently exerting heightened mental and psychological anxiety on both educators and their clients, the students. The visceral response was of resistance by both groups, (arguably more by teachers), to the full adoption of technological tools to facilitate classroom teaching, lectures and tutorials. This has been particularly difficult for baby boomer generation of educators that have long adopted the chalk and talk teaching method, thus, any mention of utilising full technology in carrying out classes seemed unfamiliar, almost unfathomable to some.

Lack of information literacy (IL) or digital literacy is another source among a certain subset of instructors (Saunders, 2012), and some students (Loksha & Adithya, 2019; Manthiramoorathi, Saravanakumar, & Thirumagal, 2019, as cited in Neogi & Partap, 2019), hence, may be unconvinced of the efficacy of virtual classrooms. Teachers resist the inconvenience of delivering lessons and navigating the Internet by adjusting to the technicalities of conducting classes mediated by a screen and a microphone (Iwai, 2020). For so long, teachers have always been at the forefront in leading a classroom lesson (Wright, 2013), but with the spread of COVID-19, national lockdowns (partial and full) suddenly made face-to-face learning a thing of the past, non-relatable, irrelevant and no longer viable. Without physical proximity with students, teachers now struggle to re-establish their role from a primary input provider to a facilitator of learning - no longer a woolly idea in the clouds, but a stark reality to embrace for all. Additionally, mental block among teachers in accepting this new reality is realistically real, possibly alluded to lack of interest in exploring technology, deemed to be troublesome and time-consuming. Having established their comfort zone, many do not want to rock the boat drastically, as opposed to students, often millennials or Generation Z individuals, who willingly welcome implementation of technology sooner (Fisher, 2018).

From the students' perspective, though they seemingly display readiness for virtual learning (see Hung, Chou, Chen, & Own, 2010), concerns of their own are equally grave. The notion of attending classes through videoconferencing and completing assignments remotely without physical guidance of teachers also did not initially appeal to students (Goldstein, Popescu, Hannah-Jones, 2020) who often lack the discipline and autonomous learning skills (see Kaur, 2017; Kaur, 2013) to effectively manage

their study plan. Owing to inevitable shutdown of educational institutions and the fluid nature of virtual learning, a substantial amount of responsibility has now been shifted to students in planning, monitoring and evaluating their studies and syllabus content in the medium of a faceless teacher. This shift has placed students in uncharted waters, especially those who continuously shun autonomous and self-directed learning; technological competence have to be brushed up and time management skills are of utmost importance in facilitating fruitful virtual classroom lessons. Proponents of virtual learning like Vaccani, Javidnia and Humphrey-Murto (2014) have posited that webcast lectures are comparable to live lectures as a teaching tool, particularly in medical schools as students benefit immensely from the ability to re-watch lectures at their convenience. However, the reality of the situation is that some subjects, for example courses in the Creative Arts discipline such as music, dance and creative writing are much more challenging to transfer online as human-to-human interaction is essential in delivery of content. In virtual learning, the screen creates a divide that makes it challenging to have back-and-forth dialogue between educators and students, as well as making it difficult to provide thoughtful feedback tailored to the needs of each student (Iwai, 2020). The only question that remains: are we ready to accept change? As change is imminent, change we must, we must change, must we change? Indeed, we must, as resilience is the name of the game. The discussion that ensues is based on literature on teaching and learning in the past (pre COVID-19), and how the pandemic has and will throw educators into the throes of a faceless teaching and learning environment of the future (post COVID-19). The foreseeable changes and transformation postulate the impact of the pandemic will exert on education, both at global and local scenes.

Foreseeable Changes in Education Post-COVID-19

In the aftermath of this disease, the world of academia is poised to see significant forms of transformation and innovations at all levels of education. While most of these changes might have been involuntary initially as a direct response to the shutdown of institutions, it is postulated that the world is bound to witness a cascading fundamental shift in the manner in which teaching and learning is conducted (Luthra & Mackenzie, 2020). How will the face of education look like in the immediate, and foreseeable future? Given the advancements we have seen thus far, the following are developments in education that are reasonably certain as the world bounces back post-COVID-19.

Virtual Learning as a Predominant Force in Teaching and Learning

When the (COVID-19) dust (eventually) settles, the Internet and virtual learning may invariably become the predominant force in delivery of syllabus content. Weeks and months of constant indoctrination of social distancing, avoidance of handshakes, hugs, social events will linger on in the hearts and minds of the populace, living in the new reality, with a degree of fear and skepticism at the back of every mind, of another wave or a relapse of the virus. As cautioned by Dr. Anthony Fauci, the director of the American National Institute of Allergy and Infectious Diseases, “we will gradually come back to where we can function as a society again, but, even with a vaccine, the virus will be a looming threat” (DeMarche, 2020, para. 2). Hence, for a good period of time, it is predicted and contended that virtual or remote learning will occupy a big fraction of the pedagogical enterprise, while open and distance learning (ODL) courses will become more appealing to the masses. Once the COVID-19 pandemic scare settles, virtual learning and the integration of the Internet in learning and teaching should become the norm in most institutions worldwide. Even in the early stages of the pandemic, educational institutions quickly responded by adapting as needed, notably in February 2020, where students in Hong Kong started to learn from home through interactive apps while 120 million students in China had access to learning materials via live television broadcasts (Tam & El-Azar, 2020). Moving forward, teachers are likely to resort to videoconferencing through applications such as Microsoft Teams, Google Hangouts, Google Meet, Webex and Zoom that foster the ability to work and socialise almost seamlessly. For example, Google offers a comprehensive ecosystem whereby teachers can carry out a video conference call through Google Hangouts or Google Meet, upload reading materials and assignments on Google Classroom, track attendance through Google Forms, schedule online classes on Google Calendar and have all these updated in the Gmail accounts of students, offering unmatched integration. Another benefit of videoconferencing is that students are able to record lessons for later review at a time and place convenient to them, thus truly embodying the idea of autonomous learning. Additionally, teachers and educators across different institutions will be allowed to cross-collaborate by virtually attending in-service teacher training courses, academic conferences and online education webinars through high-definition live streaming (Hutt, 2017). An increased presence of the Internet also promises a surge in social media usage in education as educators and learners can interact through Facebook groups, Facebook pages, Instagram accounts or

YouTube channels maintained by teachers (Ahern, Feller, and Nagle, 2016), instead of the secondary role it plays in classrooms now, where physical books are the primary reference sources.

Role, Function and Expectation of Educators

COVID-19 is likely to throw educators into the throes of transformation of role, function and expectation. With or without technology, teachers will remain inherently indispensable (Wright, 2013), but will endure qualitative evolution in the education of a student. The long-standing role assigned to teachers has always been of an input provider and the primary source of information and reference (Kuehn, 2019; Luthra & Mackenzie, 2020). Understandably, the very notion of a teacher being the knowledge transmitter who solely prepares lesson plans and delivers them in class is no longer representative of the demands of 21st century education intertwined with technology (Luthra & Mackenzie, 2020). As students will gradually obtain greater access to knowledge, or even learn a technical skill, through a few clicks on their smartphone or tablets, the responsibility of the educator in classroom and lecture theatre warrants re-evaluation. In the digital age, where virtual lessons are likely to see a rise in educational institutions worldwide, students will find themselves remotely attending classes without having their teachers or peers physically nearby for quick reference or enquiry. This places a greater emphasis on educators to take up the role of a facilitator and effectively guide, monitor and motivate their students through a screen (Luthra & Mackenzie, 2020). As access to information would no longer be the primary concern, being able to keep them engaged, interested and invested in their education will be the next greatest challenge for teachers and instructors across the globe. As highlighted by Goldstein, Popescu, and Hannah-Jones (2020):

Chronic absenteeism is a problem in American education during the best of times, but now, with the vast majority of the nation’s school buildings closed and lessons being conducted remotely, more students than ever are missing class — not logging on, not checking in or not completing assignments (para.1).

Healthy student attendance to learning platforms requires teachers to invent and innovate teaching with a personal touch, with a sympathetic ear for the needs of students, hence, need to equip themselves with excellent interpersonal skills to best manage their entire class throughout the academic year. The integration of the 4Cs of 21st century learning (communication, collaboration,

critical thinking, creativity) cannot go unaccounted too, hence, effective means and avenues need to be sought to incorporate and embed these into teaching and learning.

Learners Shouldering Greater Responsibility in Learning

With virtual learning gaining prominence, especially after COVID-19, the learner's role in the learning process will become paramount, more than ever before. Hung, Chou, Chen, and Own (2010) found that students' levels of readiness were high in computer/Internet self-efficacy, motivation for learning, and online communication self-efficacy but were found to be low in learner control and self-directed learning. This will have to change as no matter how much effort the teacher puts in preparing the course materials, how many learning platforms are utilised and no matter how creatively the instruction is presented, it is not going to yield results without fundamental attitude shift among learners. Planning, monitoring and evaluating learning, making learning decisions and seeking out self-help measures to ensure autonomous learning behavior is vital, particularly so in asynchronous learning mode, where discipline and diligence are true testaments to a learner's commitment. As pointed out by Zimmerman (2002, as cited in Oates, 2019, Self-Regulated Learning section, para. 2), self-regulated learners are more inclined to succeed and will be more optimistic about their future, thus, highlighting the importance of lifelong learning. In the end, the teacher is a navigator who steers the boat but the energy that propels it must be provided by the learners. Whether learners from the different strata and dynamics can rise to the occasion to practise self-regulated learning in a virtual or in an open and distance learning environment, is to be seen.

The Restructuring of Teacher Preparation

With anticipation of transformation in the way teaching is carried out post COVID-19, the structure of pre-service teacher training will also change in tandem. Currently, there is already sufficient focus on equipping pre service teachers with adequate information technology (IT) skills to allow for a more interactive classroom ambience. For example, pre-service teachers in Malaysia undergo a well-structured teacher training course that incorporates the teaching of IT skills which subsequently leaves them prepared to integrate online media in their classrooms (Chan, Sidhu, Mohammad Shah & Abdul Aziz, 2011). Post-COVID-19, as the medium through which learners obtain

knowledge moves to a predominantly digital sphere, the role expected of educators will move beyond IT savvy skills. Having a repertoire of pedagogical approaches will become irrelevant as teaching training programmes would need to (re) design courses to equip pre-service teachers with managerial and emotional skills to discern and address the emotional and psychological needs of learners in a glaringly faceless teaching and learning environment, where face-to-face interaction is largely reduced (diminished). For example, in the virtual platform of Trello application, individual student's progress can be monitored, but where and how the teacher needs to step in to provide feedback, and support or reinforcement in an emotionally uplifting way cannot be compromised, thus, a training mechanism for teachers to build on students' emotional well-being, alongside academic development is crucial.

Institutional Investment on Infrastructure

To what extent, type and how will institutions be spending their annual allocation/ budgets on infrastructure will also be a subject in focus in the not-so-distant future. Higher education institutions in the United States already face substantial financial pressure as university budgets have been steadily declining since the 2008 world financial crisis (Mitchell, Leachman, & Saenz, 2019). As institutions worldwide navigate around a weakened global economy shrouded with uncertainty, theoretically, this will likely impact decision-making in infrastructure investment as well. In status quo, learning institutions portion out a bigger percentage for face-to-face teaching while online medium complements face-to-face instruction, but this ratio may very likely flip moving forward in the 21st century post-COVID-19. Face-to-face interaction could possibly be limited to assessments and examinations that are still paper-based or project based, while syllabus content can be delivered online. This necessitates institutions making more calculated decisions in investing larger funds in supporting a digital infrastructure that can effectively facilitate virtual learning and online classrooms. This has been highlighted by Ibrahim (2020) that as an important revenue generator, higher education in Malaysia will invariably go digital, but will require greater government support to set up a strong digital infrastructure base. One significant aspect that would require investment is Learning Management System (LMS), with sufficient bandwidth, which represents a comprehensive software application that allows teachers to deliver syllabus content, track student progress and post assignment and examination grades. Examples of LMS applications include Blackboard, Moodle and Canvas that offer

learners the freedom to access content at their own pace, jot down notes online and keep them informed of pending tasks (Mansfield, 2019). The initial installation and subsequent ongoing maintenance on an LMS will require considerable investment and commitment from school and university administrations, that would have otherwise been allocated to physical amenities and infrastructure. With the rise of digitalised education, it is vital that funds be directed to worthwhile investments to help teachers and learners champion virtual learning.

Teacher-Student Ratio

Additionally, we can expect the teacher to student ratio to increase with higher technology adoption, especially at institutions of higher education. For example, the existing average nationwide teacher to student ratio in the United States stands at 1:16 (Public School Review, 2020) and this is bound to widen as more will be expected of teachers given the digitalisation of syllabus content and classrooms. An increase in class size and a proportionate increase in workload of teachers is likely once the online medium becomes the predominant teaching method, replacing the need for weekly lectures and tutorials. Directing a virtual class is an easier task for a teacher (Lederman, 2020) as opposed to managing a mortar-and-brick classroom that requires more time, effort and energy in delivering face-to-face lessons. Besides, research has shown that big student teacher ratio in a physical classroom is negatively correlated with student achievement (e.g., Koc & Çelik, 2015). If class size increases with the advent of technology in teaching and learning, most notably through LMSs, this would allow teachers to seamlessly monitor the learning development of each student through one integrated application. Will student achievements improve?

Implications of Changes to Education Post-COVID-19

While the abovementioned changes and transformations may loom over academia in the immediate months and years post COVID-19, challenges will confront both teachers and students alike in their quest to move forward and make up for the unquantifiable educational losses they have had to endure in the recent months.

Digital Divide and Inequity in Education

Fundamentally, inequity in accessing online education may profoundly widen the digital divide among students

in developed and developing nations. According to Global 2020 Global Digital Overview report, only 60% of the world population is connected to the Internet, the majority of which hail from nations with advanced economies (Kemp, 2020). In Peru, for example, only 35% of teachers have access to a computer and the Internet while only 20% of households in South West Asia and sub-Saharan Africa have Internet connectivity at home (UNESCO, 2020b). This problem is non-exclusive to developing nations as approximately 15% of the US households with school going children do not enjoy the privilege of Internet access (Anderson & Perrin, 2018). This study argues that the divide is deeply rooted in income inequality, as students from lower income families are disproportionately affected by the transition to virtual learning that requires a technological device, Internet connection as well as a conducive learning environment at home. According to Reilly (2020), to cope, students would resort to frequenting public areas that offer free Wi-Fi connection, but connection of this sort is often spotty and makes it difficult to stream videos and high-graphic content. Failure to provide equitable Internet access to all teachers and students would represent a failure on the side of governments and a violation of the social contract. Beyond this, this uneven playing field is likely to further the deep-rooted socioeconomic inequality we see in many parts of the world today (Tam & El-Azar, 2020).

Education for Special Needs and At Risk Children

The shift to heightened reliance on online medium would have a negative impact on the learning development of special needs students and those who are academically weaker. While learning from home allows students flexibility (Vacani, Javidnia & Humphrey-Murto, 2014), this also means that learning progress is almost solely reliant on students' own initiative and discipline. For many households, this places a great deal of stress on parents to constantly supervise, guide and keep track of their children to ensure they are focused on online lectures and honour their assignment deadlines (Reilly, 2020). For example, how do parents instil and monitor dyslexic or autistic children with skills of autonomous learning/self-regulated learning behavior, whilst dealing with other daily commitments of their own, which is bound to compromise the quality of education children receive, if not properly guided. Likewise, for academically weaker students, learning through a screen may hamper their learning curve as their ability to quickly seek guidance and tips from teachers and classmates will be constrained, as compared to the more frequent personalised attention they were to receive in a physical classroom. Adapting to

the digital medium would require a great deal of investment on their end; failing to keep pace with syllabus content delivered online and failing to seek help immediately, would result in disinterestedness in their entire educational journey, further tarnishing future prospects.

Wholesome Educational Experience

In a broader sense, teachers and students worldwide will be challenged into buying the idea of online learning, mainly because social interaction with peers, the very essence in building a healthy and wholesome educational experience will be substantially robbed off students. Limiting face-to-face interactions could have detrimental impact on students' emotional development and emotional intelligence (Hurst, Wallace, & Nixon, 2013), consequently impacting growth of emotional quotient, inter-personal persona and soft skills. Wright (2013, para. 2) aptly describes that "teachers do not simply impart information and knowledge; teaching is not merely about systems, facts, figures and certainly does not exist to promote insularity and lack of social interaction." This is exceptionally pertinent in character building in young children, as schools are hubs of social activity in which students treasure the experience of learning in a classroom with their peers, in sync with the ideas of Aristotle, the great philosopher, who described man as a political animal with an innate desire to socialise, interact with, and learn from one another (Wright, 2013). Nevertheless, on a more positive perspective, in terms of critical thinking skills, Carmichael and Farrell (2012), argue that high-quality online resources are also capable in honing critical thinking skills among students, who will benefit from the ability to critically analyse reading materials at their own pace. However, nurturing and flourishing these skills through a largely virtual medium may be a tall order for many a teacher to fulfil.

Education Management Key Decisions

Moreover, the extent of the implementation of online learning in educational institutions is crucial in determining future acceptance of this new learning method. The forced closure of schools and universities as a result of the COVID-19 pandemic has presented an opportunity for disruptive innovation to take shape in the field of education. However, given that the pandemic spread so swiftly worldwide, this left institutions scrambling to move all courses fully online in a matter of days. Unfortunately, most schools and universities did not have in place a robust business continuity plan and lack the considerable

resources needed to develop good online courses rapidly, hence, this will likely lead to adverse reactions from students and teachers alike to the poor transition to and implementation of online learning, consequently causing acceptance of virtual learning as lukewarm if the initial implementation is not executed satisfactorily (Lederman, 2020).

Conclusion

The COVID-19 pandemic has been a wholly transformative and landmark event in modern human history, as all sectors of the economy and human life have been affected by its repercussions. Dr Anthony Fauci grimly reminds that "if you want to get back to pre-coronavirus, that might not ever happen in the sense that the threat is there" (DeMarche, 2020, para. 3). With the impact experienced by the world of academia, we are invariably heading in the way of long-lasting changes (Luthra & Mackenzie, 2020) as a result of this watershed moment. This paper has explored six broad areas in which academic institutions, administrators, instructors and students will be impacted by the new normal, at all levels of education, be it k-12 or tertiary level. The paper has also discussed the four implications which will be resulted from the inevitable changes we are beginning to witness from this global pandemic. Moving forward, there will be an air of caution that will guide the actions of all humans as the fear of close human contact could linger on for an indefinite period of time. In this instance, it is critical to protect the well-being and mental health of everyone, including educators and learners. In embracing the new normal and the advancements in education that come with it, it is crucial that all institutional heads and decision-makers stay co-operated to ensure learning continuity, guided by principles of equity and inclusion for all. The rapid spread of COVID-19 has exhibited the significance of building resilience to face various threats, from pandemic disease to extremist violence to climate insecurity and even technological change (Tam & El-Azar, 2020). The pandemic is also an opportunity to remind ourselves of the skills institutional heads, educators, and students need in navigating this unpredictable world, namely informed decision-making, creative problem-solving and adaptability. Resilience to proactively adapt to change will keep educationists, educators, and the educated afloat, as exiting is not an option. Before we take the plunge and decide on the extent that virtual learning will drive the teaching and learning landscape of the future, it is imperative that we enquire and probe institutional and student readiness for digitalised learning. Empirical investigations of digital infrastructure, the development and learning support capacity of LMS,

redesigning of syllabus, assessment weightage and procedures, and class enrolments aligned with online and distance learning (ODL) / virtual learning need to be carried out in different regions of the world. With adequate data on readiness at different levels, we can forge ahead with effective and efficient digital learning post COVID-19, and redesign delivery of input with appropriate weightage on and balance between virtual and face-to-face instruction.

Competing Interests

The authors have declared that no competing interest exists.

Acknowledgement

The authors would like to thank the reviewers and editors of this manuscript, and wish to extend their gratitude to Prof. Dr. Nayan Kanwal, University of Texas, Dallas, USA for the impetus and support lent in writing this paper.

References

- Ahern, L., Feller, J. & Nagle, T. (2016). Social media as a support for learning in universities: An empirical study of Facebook Groups. *Journal of Decision Systems*, 25(1), 35–49. doi: [10.1080/12460125.2016.1187421](https://doi.org/10.1080/12460125.2016.1187421)
- Anderson, M., & Perrin, A. (2018, October 26). Nearly one-in-five teens can't always finish their homework because of the digital divide. *Pew Research Center*. Retrieved April 6, 2020, from <https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-homework-because-of-the-digital-divide/>
- Azahar, N. S. H. (2020, April 14). Distance learning a new normal in education. *New Straits Times*. Retrieved May 15, 2020, from <https://www.nst.com.my/opinion/letters/2020/04/584165/distant-learning-new-normal-education>
- Carmichael, E., & Farrell, H. (2012). Evaluation of the effectiveness of online resources in developing student critical thinking: Review of literature and case study of a critical thinking online site. *Journal of University Teaching and Learning Practice*, 9(1), 4. Retrieved April 5, 2020, from <https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1246&context=jutlp>
- Chan, Y. F., Sidhu, G. K., Mohammad Shah, N. K. & Abdul Aziz, N. (2011). Pre-service teachers' training in information communication and technology for the ESL classrooms in Malaysia. *Turkish Online Journal of Distance Education*, 12(3), 97–108. Retrieved April 6, 2020, from https://www.researchgate.net/publication/292923453_Pre-service_teachers_training_in_information_communication_and_technology_for_the_ESL_classrooms_in_Malaysia
- DeMarche, E. (2020, April 7). Fauci says world may never return back to normal after coronavirus outbreak. *Fox News*. Retrieved April 11, 2020, from <https://www.foxnews.com/health/fauci-says-world-may-never-return-back-to-normal-after-coronavirus-outbreak>
- Ducharme, J. (2020, March). World Health Organization declares COVID-19 a 'pandemic.' Here's what that means. *TIME*. Retrieved April 6, 2020, from <https://time.com/5791661/who-coronavirus-pandemic-declaration/>
- Fadini, K., & Finardi, K. (2015). *Affordances of web 2.0 interfaces for the teaching/learning of L2 in the flipped classroom*. In International Conference of Education, Research and Innovation. p. 1052–1058.
- Fisher, A. (2018, September 21). Millennials vs boomers: How flexible learning is bridging the technology gap. *Fortune*. Retrieved April 4, 2020, from <https://fortune.com/2018/09/20/baby-boomers-millennials-technology-learning/>
- Goldstein, D., Popescu, A., & Hannah-Jones, N. (2020). As schools move online, many students stay logged out. *The New York Times*. Retrieved April 10, 2020, from <https://www.nytimes.com/2020/04/06/us/coronavirus-schools-attendance-absent.html?smid=fb-nytimes&smtyp=cur>
- Horn, M. B., & Staker, H. (2014). *Blended: Using disruptive innovation to improve schools*. San Francisco: Jossey-Bass, 2014.
- Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers and Education*, 55(3), 1080–1090. Retrieved April 8, 2020, from <https://doi.org/10.1016/j.compedu.2010.05.004>
- Hurst, B., Wallace, R., & Nixon, S. B. (2013). The Impact of Social Interaction on student learning. *Reading Horizons: A Journal of Literacy and Language Arts*, 52(4). Retrieved April 4, 2020, from https://scholarworks.wmich.edu/reading_horizons/vol52/iss4/5
- Hutt, M. (2017, May 10). Main advantages and disadvantages of video conferencing in education. *ezTalks*. Retrieved April 6, 2020, from <https://www.eztalks.com/video-conference/advantages-and-disadvantages-of-video-conferencing-in-education.html>
- Ibrahim, A. (2020, April 10). Bigger boost for education post Covid-19. *The Star*. Retrieved May 20, 2020, from <https://www.thestar.com.my/opinion/letters/2020/04/10/bigger-boost-for-education-post-covid-19>
- Iwai, Y. (2020, March 13). Online learning during the COVID-19 pandemic. *Scientific American*. Retrieved April 4, 2020, from <https://blogs.scientificamerican.com/observations/online-learning-during-the-covid-19-pandemic/>
- Kaur, N. (2017). The role of peers and cultural tools in supporting autonomous learning behaviour among Malay tertiary learners. *Pertanika Journal of Social Sciences and Humanities*, 25(1), 61–80. Retrieved April 5, 2020, from [http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2025%20\(1\)%20Mar.%202017/05%20](http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2025%20(1)%20Mar.%202017/05%20)

- [JSSH%20Vol%2025%20\(1\)%20Mar%202017_1198-2014_pg61-80.pdf](#)
- Kaur, N. (2013). The need for autonomous vocabulary learners in the Malaysian ESL classroom. *GEMA Online® Journal of Language Studies*, 13(3), 7–16. Retrieved April 4, 2020, from <http://ejournal.ukm.my/gema/article/view/4216/233>.
- Kemp, S. (2020, January 30). Digital trends 2020: Every single stat you need to know about the internet. *The Next Web*. Retrieved April 6, 2020, from <https://thenextweb.com/growth-quarters/2020/01/30/digital-trends-2020-every-single-stat-you-need-to-know-about-the-internet/>
- Koc, N., & Çelik, B. (2015). The impact of number of students per teacher on student achievement. *Procedia - Social and Behavioral Sciences* 177, 65–70. doi: [10.1016/j.sbspro.2015.02.335](https://doi.org/10.1016/j.sbspro.2015.02.335)
- Kuehn, P. R. (2019, October 26). Responsibility of a teacher: Developing the moral values of students. *Soapboxie*. Retrieved April 11, 2020, from <https://soapboxie.com/social-issues/Responsibility-of-a-Teacher-Developing-The-Desirable-Characteristics-of-Students>
- Lederer, E. M. (2020, March 31). UN chief says COVID-19 is worst crisis since World War II. *ABC News*. Retrieved April 6, 2020, from <https://abcnews.go.com/US/wireStory/chief-covid-19-worst-crisis-world-war-ii-69905340>
- Lederman, D. (2020, March 18). Will shift to remote teaching be boon or bane for online learning? *Inside Higher Ed*. Retrieved April 11, 2020, from <https://www.insidehighered.com/digital-learning/article/2020/03/18/most-teaching-going-remote-will-help-or-hurt-online-learning>
- Linnane, C. (2020, April 1). UPDATE: COVID-19 case tally: 874,081 cases, 43,291 deaths. *Market Watch*. Retrieved April 10, 2020, from <https://www.marketwatch.com/story/covid-19-case-tally-862234-cases-42404-deaths-2020-04-01>
- Luthra, P. & Mackenzie, S. (2020, March 30). 4 ways COVID-19 could change how we educate future generations. *World Economic Forum*. Retrieved April 5, 2020, from <https://www.weforum.org/agenda/2020/03/4-ways-covid-19-education-future-generations/>
- Mansfield, M. (2019, September 12). The best learning management systems in higher education. *Pagely*. Retrieved April 3, 2020, from <https://pagely.com/blog/learning-management-systems-in-higher-education/>
- Menon, S. (2020, April 1). Drawbacks to online learning. *The Star*. Retrieved May 16, 2020, from <https://www.thestar.com.my/news/nation/2020/04/01/drawbacks-to-online-learning>
- Mitchell, M., Leachman, M. & Saenz, M. (2019, October 24). State higher education funding cuts have pushed costs to students, worsened inequality. *Center on Budget and Policy Priorities*. Retrieved April 6, 2020, from <https://www.cbpp.org/research/state-budget-and-tax/state-higher-education-funding-cuts-have-pushed-costs-to-students>
- Neogi, P., & Partap, B. (2019). *Role of information literacy skills on the use of information resources by the future teachers: A case study of Uttarakhand College of Education, Cooch Behar (WB)*. Paper presented at the 12th International CALIBER-2019 KIIT, Bhubaneswar, Odisha, India, 28–30 November, 2019.
- New Straits Times (2020, May 14). *Coronavirus may never go away – WHO*. Retrieved May 18, 2020, from <https://www.nst.com.my/world/world/2020/05/592348/coronavirus-may-never-go-away-who>
- Nora Listiana, & Jaharadak, A. A. (2019). Blended learning as instructional media: Literature review. *Journal of Physics*, Conference Series 1167 012066. doi: [10.1088/1742-6596/1167/1/012066](https://doi.org/10.1088/1742-6596/1167/1/012066)
- Oates, S. (2019). *The importance of autonomous, self-regulated learning in primary initial teacher training*. Retrieved April 10, 2020, from <https://www.frontiersin.org/articles/10.3389/feduc.2019.00102/full>
- Public School Review (2020). *Average public school student:teacher ratio*. Retrieved April 2, 2020, from <https://www.publicschoolreview.com/average-student-teacher-ratio-stats/national-data>
- Reilly, K. (2020, March). As schools close amid coronavirus concerns, the digital divide leaves some students behind. *TIME*. Retrieved April 4, 2020, from <https://time.com/5803355/schools-coronavirus-internet-access/>
- Sandhya, M. (2020, April, 5). UM lessons and exams going online. *The Star*. Retrieved April 10, 2020, from <https://www.thestar.com.my/news/nation/2020/04/05/um-lessons-and-exams-going-online>
- Saunders, L. (2012). Faculty perspectives on information literacy as a student learning outcome. *Journal of Academic Librarianship*, 38(4), 226–236.
- Szabó, R. (2019). From the digital coalface: Building a range of blended English-language communicative competence courses in partnership with corporate learning and development stakeholders. *Horizon Journal of Humanities and Social Sciences*, 1(1), 19- 22. Retrieved May 18, 2020, from <https://doi.org/10.37534/bp.jhssr.2019.v1.n1.id1008.p19>
- Tam, G. & El-Azar, D. (2020, March 13). 3 ways the coronavirus pandemic could reshape education. *World Economic Forum*. Retrieved April 5, 2020, from <https://www.weforum.org/agenda/2020/03/3-ways-coronavirus-is-reshaping-education-and-what-changes-might-be-here-to-stay/>
- The AME Group (n.d.). *The Top 6 technology innovations for education*. Retrieved April 11, 2020, from <https://www.theamegroup.com/top-6-technology-innovations-education/>
- UNESCO (2020a). *COVID-19 Educational disruption and response*. Retrieved April 3, 2020, from <https://en.unesco.org/covid19/educationresponse>
- UNESCO (2020b). *COVID-19 Webinar: A new world for teachers, education's frontline workers*. Retrieved April 6, 2020, from <https://en.unesco.org/news/covid-19-webinar-new-world-teachers-educations-frontline-workers>

Vaccani, J.-P., Javidnia, H. & Humphrey-Murto, S. (2014). The effectiveness of webcast compared to live lectures as a teaching tool in medical school. *Medical Teacher*, 38(1), 59–63. doi: [10.3109/0142159X.2014.970990](https://doi.org/10.3109/0142159X.2014.970990)

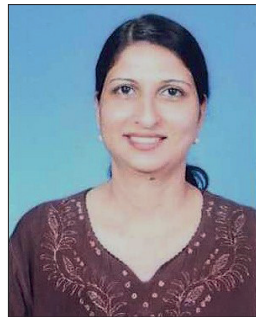
World Health Organisation (2020). *Rolling updates on coronavirus disease (COVID-19)*. Retrieved April 2, 2020, from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>

worldometer (2020). *COVID-9 Coronavirus pandemic*. Retrieved May 20, 2020, from https://www.worldometers.info/coronavirus/?utm_campaign=homeAdUOA?Si

Wright, S. (2013, June 20). Why new technologies could never replace great teaching. *The Guardian*. Retrieved April 8, 2020, from <https://www.theguardian.com/teacher-network/teacher-blog/2013/jun/20/technology-not-replace-teaching-learning>.

Biographical Statements of Authors

Dr. Naginder Kaur is a Senior Lecturer at the Academy of Language Studies, Universiti Teknologi MARA Malaysia. She has about 30 years of teaching experience at secondary school and tertiary level in Malaysia.



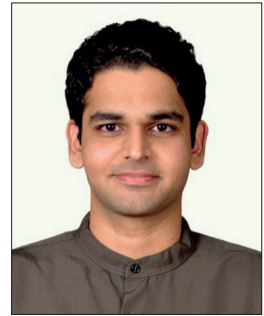
She is an avid writer and her research interest includes learner autonomy, writing and vocabulary instruction.

Dr. Naginder Kaur

Academy of Language Studies
Universiti Teknologi MARA
Malaysia

E-mail: naginder.kaur@gmail.com

Manroshan Singh Bhatt is a Bachelor of Accounting (BACC) graduate from Universiti Malaya, Kuala Lumpur, Malaysia. He represented the university at international debating competitions, and takes a deep interest in educational developments worldwide. He also won the New Straits Times Young Writers' Award, 2012.



He is a keen writer and has contributed articles in international publications.

Mr. Manroshan Singh Bhatt

KPMG Malaysia, KPMG Tower
8 First Avenue, Bandar Utama
47800 Petaling Jaya, Selangor
Malaysia

E-mail: manroshan.bhatt@gmail.com