

Virtual versus Real: A Pedagogical Nexus in the Backdrop of the Pandemic

Meenu A. Gupta & Kamalpreet Kaur

Abstract

Transformation is the need of the hour and teaching and learning cannot escape the same, given the pandemic. This transformation in education has been brought about with the help of Web-based instructional technologies, once again bringing the debate between real and virtual learning to the fore. An unprecedented disruption in pedagogical ecology was witnessed quite abruptly with the onset of Covid-19, resulting in the switch from the physical to the virtual classroom. Before the beginning of the year 2020, the world was still debating the benefits of e-learning over the traditional face-to-face learning in classrooms. Now after two years of wholly online learning, the debate has once again gained momentum. This paper will focus on aspects relating to learning and teaching in India, both in real and contemporary spaces, pre-and-post 2020.

Keywords: Education; Pandemic; Pedagogy; Traditional classroom; Virtual classroom.

I. Pre-2020 Debate: Traditional vs E-learning

The introduction or rather the penetration of internet connectivity world over resulted in the development of various e-learning models – adjunct, blended and wholly online (Arkorful, 2014) – with the traditional classroom model and its enthusiasts taking a back-seat. This led to an in-depth research on the disadvantages which accompany the traditional model with the senior members of the faculty being adamant against any drastic changes. Teaching and learning environment constitute an important part of the pedagogical ecology – based on the concept of organizational ecology: “The work on *organizational ecology* (Becker and Steele 1995) points to those features of the physical workplace environment that shape both subjective feelings about work and objective patterns of behavior, interac-

tion, and process.” (Jaffee, n.d.). Therefore, according to the pedagogical ecology, a traditional classroom comprises of a set of prohibited social roles and normative expectations which not only mould the behaviour but also bestow a greater power and status on the involved social players. For instance, when a student enters a traditional classroom, the first task undertaken by them is to find a place to sit. This is followed by the act of taking out a pen and a notebook, and then automatically directing their attention to the front of the classroom, towards the instructor without causing any distraction or disruption. The process, in turn inculcates a sense of discipline in the student as well as an understanding of how to present one’s self in a formal setting which helps in overall personality development. In contrast, when an instructor enters the same classroom, they instantly realize that the simple act [of entering] performed by them helps in shifting the focus of the whole class to the front, marking the beginning of the teaching and learning process:

Normative role performance often requires that students assume a posture of civil attention (Karp and Yoels 1976) and they *passively receive* while instructors will assume the role of ‘the sage on the stage’ and *actively deliver*. While there are variations on this theme, depending on the type of course, the student population, and the pedagogical design, these are the modal behavioral tendencies exhibited in most classrooms. Both the physical space and the social roles have been institutionalized in ways that create a taken-for-granted teaching and learning environment along with an associated set of assertive and deferential role behaviours (Gimenez 1989; Woodman, Mulford and Gray 1977; Poskocil 1977; Karp and Yoels 1976; Rau and Baker 1989). (Jaffee, n.d.)

Until the end of 2019, most traditional scholars believed that the physical classroom is the ideal place for imparting instructions to the students; making the physicality of the classroom to be an intrinsic aspect of the behavioural as well as normative social structure. But the introduction of virtual learning environments as an alternative source has in many ways both reinforced and altered these institutionalized pedagogical roles and behaviours.

Over the past decade and a half, educational institutions have become more technologically savvy, both in and beyond the brick-and-mortar classrooms. Some institutional experiments such as wireless campuses, online classrooms, instructor podcasts, network-sharing services and one-to-one computing initiatives have helped provide instructors and students

with a multitude of communication tools that are intended for a better, integrated instruction and learning. This is especially true for third world countries and developing countries like India, thus, bringing into focus the concept of "situated cognition" which assists in looking at the learning environment minutely – a concept highlighted by Brown et al. in their work, 'Situational Cognition and the Culture of Learning'. As a concept, it refers to a socio-psychological approach where the learning process is dependent on the social and physical context in which materials are both presented and applied: "Effective learning is most likely to take place in an environment that allows active practice in authentic discipline-based tasks. This recognition has stimulated the use of greater active learning and problem-solving instructional methods within the classroom" (Jaffee, n.d.). This type of learning has helped in shifting the teacher's burden of memorizing the lecture, while giving way to more productive outcomes which include critical analysis and healthy discussions. The learning capacities of the students have also been impacted and can be said to have improved, as this type of learning engages more than one sense and a student learns to co-ordinate among them. This learning as contrasted to the conventional type can be termed as 'any and all time' learning.

In the traditional method of learning [physical classroom], students are more focused on making notes which means that they keep on saving material without actually reading or understanding them. Most of the time, this leads to a situation in which they are unable to even understand or annotate their own notes when they revisit the same on a later date. With the arrival of the modern digital age, all this changed with the ease of access to digital sound recorders that were able to capture the essence of face-to-face learning experience, and even add to it with the help of the cameras, photographs, visual displays, and demonstrations. Many educators were able to expand the traditional lectures with digital lecture-notes made easily accessible to the students, allowing space for further discussion. This method has not only enhanced the quality of interchange but has allowed even the shy and the reluctant students to participate in the discussions [online] without being restrained either by time or over-talks. The use of e-mails [electronic mails] has also allowed for a change of relationship between the teachers and students; the basic reason being that the medium is not schedule dependent, time dependent, or place dependent and is convenient for all. Even the term papers submitted online are open and can benefit from the comments of the peers as well as the teacher, the latter no longer has to be the sole evaluator. Practice tests and online tutorials have now come to be used for grade determination as well.

A. Access to Internet: Need of the Hour in India

These mediums have already been in use for quite some time and have further helped to augment the traditional teaching scene. However, the advantages of the internet are not limited to only these specific aspects of learning and teaching. Easy access to internet has allowed passionate learners to overcome barriers which could otherwise impede their higher education opportunities [like time, cost, situational barriers, institutional barriers (impediments in admission), and dispositional barriers (which constitute beliefs, attitudes and values)]. In terms of India, the appearance of low-cost internet services by one of the major telecommunication companies, Reliance *Jio* (post-2015) paved the way for easy and all-round access to the internet.

The company commercially launched its services on 5 September 2016. Within the first month of commercial operations, *Jio* announced that it had acquired 16 million subscribers. This is the fastest ramp-up by any mobile network operator anywhere in the world. *Jio* crossed 50 million subscriber mark in 83 days since its launch. *Jio* crossed 100 million subscribers on 22 February 2017. (Muhammed Thayyib, 2018, p. 79)

This move further assisted the government in their attempt to provide inclusive and quality education for all—under the Sustainable Development Goals, 2030. Through the various State sponsored Massive Open Online Courses (MOOCs), like SWAYAM, people at large were able to reap the benefits of education and learn over the internet anywhere and at any time. MOOCs are proving to be a boon to all those eager learners who require an affordable and flexible way to learn new skills in order to advance their careers without being bogged down by financial or time constraints: “Part time and full-time students can actively participate in the online degree courses selected from any location or place, providing people who are traveling or relocated, an easily accessible resource for experience and learning” (Al Rawashdeh et al., 2021, p. 109). Such developments have helped deliver quality educational experiences at a huge scale to people all over India on the click of a button. Simultaneously, teachers and instructors could utilize the liberty to work on their interested topics and make videos at their own pace and volition which would then be available for eternity, courtesy of the internet. Governments, in addition to various telecommunications companies are always working towards freeing internet of its limitation by developing low-cost feature phones with minimal costs and advanced technology to access anything

and everything, not being limited to only social networking sites especially in developing countries like India. According to the Recommendations on Roadmap to Promote Broadband Connectivity and Enhanced Broadband Speed (2021) released by the Telecom Regulatory Authority of India: "Access to secure, reliable, and affordable high-speed broadband services is a clear and urgent priority for every Indian citizen." (TRAI, 2021 p. 1). Furthermore, the report claims that:

Broadband is a basic infrastructure essential for improving the socioeconomic development, job creation, civic engagement, global competitiveness, and a better quality of life. For developing countries in the low- and middle-income brackets, broadband is a key driver of economic growth. *According to a study by the World Bank, every 10- percentage-point increase in broadband penetration provides a boost of 1.38 additional percentage points to GDP growth – higher than any other telecommunication service*"¹. The positive effect of increase in internet subscriptions on GDP is higher in developing countries than in the developed countries as it helps developing countries in leapfrogging the scarcity of physical infrastructure. (TRAI, 2021 p. 1)

This highlights how the government of India is committed to bringing about change and development in the country and has zeroed in on broadband/internet being the mde/vehicle for the upcoming and desirable change.

B. E-learning: A Step forward in the Right Direction

Another boon which has followed easy internet access is the horde of mobile applications which allow a 'means and wants' student to access lectures from top teaching academies without having to bear the cost of the same. However, one should not forget that 'access' to internet does not lead to 'usage' as there is another variable involved: the learner. The difference arises in terms of the actors involved at the different stages of learning. For instance, the general characteristics of the adult learners at the receiver end of communication are different from that of a high-school student. Unlike the school-going learners, adult learners are self-directing, learn out of desire and are intrinsically motivated. They work as 'co-discoverers' of knowledge and enjoy the process involved with this 'discovery' of knowledge. They come equipped with diverse learning styles due to their diverse backgrounds and, unlike high-school students, enjoy a certain set of conditions – like working in a laboratory. They tend to follow in

the Confucian claim: 'What I hear, I forget. What I see, I remember. What I do, I understand'. The underpinned philosophy, here, is of constructivist thinking; the basic principle of which is that: learning is an active process of constructing knowledge that involves supporting construction rather than of communicating knowledge. This is where 'e-learning' has taken the lead over traditional classroom teaching with conventional methods. So, what are the apparent advantages of 'e-learning'?

E-learning plays a major role in making learning more learner-centred, developing a learning culture, building a learning culture, and empowering learners. It makes an effective instructional strategy which aims at the development of skills with the focus at self-directedness [MOOCs]. E. K. Abed defines e-learning as:

The provision of educational content (electronic) through the media based on the computer and its networks to the recipient in such a way that allows the possibility of active interaction with this content and features and with its peers only simultaneous or not synchronized and the possibility of completing this learning in time and place and at the speed that suits Conditions and abilities, as well as the possibility of managing this learning also through these media (2019, p. 1)

In essence, it undertakes the process of 'learning-to-learn' by helping the learner in making them aware of their own thinking patterns. This results in their becoming better planners and self-regulators which help in developing their study habits which includes but is not limited to note-taking. E-learning helps in the development of various meta-skills which are a must for their overall development and include concentration and self-discipline. These meta-skills further help them in finding relevant models and examples, their application to one's own problem, with the development of some self-evaluation skills. Ammarell, who builds upon Jaffee's 'asynchronous learning networks' (Jaffee, 1997), notes that such an environment can enhance collaborative, interactive and integrating assignments. Students are more likely to take risks, communicate and defend their ideas, discuss controversial issues in online groups and create situations where students are both teachers and learners. Again, virtual/e-learning with its peer-review functions makes such activities much easier, which should likely be even more valuable to courses discussing issues such as those in social science courses. 'Learning-to-learn' skills are an important factor that prove to be an impetus in a students' development. It has been discussed elaborately by Deanie French et al. (1999) in

their book, *Internet Based Learning: An Introduction and Framework for Higher Education and Business*, by taking the example of development between two students. The analysis conclusively highlights that more meta-cognition and self-directedness due to virtual learning leads to more development in the student in question. Apart from this study Rajan Yadav, et al. are also of the view that:

Governments around the world are making significant investment in Internet-based learning (IBL) platforms to make teaching-learning process more interactive and ubiquitous to improve the outreach of education. Such platforms are taking an increasing role in people's life especially in institutions of higher education in the form of blended learning. Deeply embedded in students' lives, IBL is transforming the traditional classroom based learning into a collective and networked participation of the teacher-student community. (Yadav, 2017, p. 102)

In essence, this virtual revolution has really empowered the students and improved the proficiency of students to comprehend fully whatever they learn from the internet or the 'World Wide Web'. They are able to utilize the same in their examinations and in some cases even apply the knowledge gained to their daily lives. The visible difference which arises in terms of learning skills is that e-learning or virtual learning has helped change the role of the teacher from being the conveyor of knowledge to that of facilitator who is not a sage but a guide on the side. This has helped students to transform into autonomous learners who are able to create their own meaning, contribute knowledge and become confident learners experiencing "feelings of control, ownership, and competence" (Van Lier, 1996, p. 13). However, this in no way has diminished the importance of the teacher, instead it necessitates them to come up with new ways of thinking which will help augment the Information and Communications Technology (ICT) - enhanced pedagogy.

C. Transition towards E-learning

This transition in the mode of instructional technology has had the most dramatic transformative impact on teaching and learning. Technophobic teachers are fast losing ground in the new world order where it is universally accepted that technology has opened up a profusion of mediums which act as aids in improving proficiency. The various mediums in question include: movies, plays, audio-books, web resources and so on. Furthermore, e-cyclopaedias have successfully replaced books while visual

aids have done the same to black-boards:

This form of instructional technology is variously known as: “the virtual classroom” (Hiltz 1994), asynchronous learning networks (ALNs), virtual learning environments, distributed learning systems, web-based or online courses, e-learning, and online distance learning. The defining feature of this instructional technology is the minimization or absence of synchronous same-time/same-place physical classroom meetings between an instructor and students. (Jaffee, n.d.)

There are still those who believe that the introduction of computers into the world of teaching has led to a kind of dawn to a revolution similar to the invention of the wheel for the human civilization (Longworth, 2003, p. 158). Certainly, creative use of internet has enhanced many courses, positively influenced distance learning (Edwards et al., 2000) and even strengthened the active-learning approach (Longworth, 2003, pp. 108, 158-169). Thus, highlighting various points in the debate between traditional and e-learning, in a pre-2020 scenario. However, everything changed with the advent of the pandemic in 2020 with complete lockdowns and curfews imposed all over the world, resulting in educational institutions [traditional classrooms] being shut down till further orders from the respective governments. In terms of India, a complete lockdown was imposed in March 2020 with educational institutions being forced to shift to the online mode within a few months.

II. Post 2020: Traditional vs E-learning

Before 2020, web-based instructional technologies were believed to be capable of reshaping role behaviours and social relations between students and teachers. Having said and done with all the advantages and disadvantages of internet-supportive learning over traditional classroom learning, one needs to now reflect on the status of the latter, especially since the beginning of the pandemic. For a major part of the year 2020, education suffered massive losses not only as a revenue generating sector but as the basis of human development impacting a whole generation with the resulting damages still unknown. In the opinion of Edeh Michael Onyema et al.:

The disruption caused by COVID-19 in the educational sector may last longer than expected if a more reliable solution for coronavirus is not found on time, and the spread of the disease continues.

UNESCO Director-General, Audrey Azoulay cited by VOA News (2020), warned that “the global scale and speed of the educational disruption due to coronavirus is unparalleled and, if prolonged, could threaten the right to education”. No doubts, unplanned school closures can cause severe problems for students, educators, parents and the society at large. It could negatively affect the academic interest and performance of students. If the students are not engaged productively, it could lead to idleness which might result in youth involvement in crimes, loss of interest in learning, and poor academic performance. (2020, p. 111)

The situation called for putting into practice of the most clichéd proverb: necessity is the mother of all invention. The paucity caused due to shutting down of educational institutions resulted in the forced shift from traditional to virtual classrooms, thus, giving a whole new meaning to e-learning. It put to test all the advantages of e-learning while completely highlighting the result of the wholly online model of learning. The first advantage that has been put across in favour of e-learning has always been related to time saving and money saving [conveyance and miscellaneous]. However, as “access to computers and access to the internet is basic to successful distance teaching. This is not guaranteed for all students in developing countries” (Tadesse and Muluye, 2020, p. 161), India being a case in point. Thus, the money saved before amounted to only a fraction of the money which was spent on putting in place the set up required for virtual learning. Taking into consideration the fact that the parents were also forced to work from home, there was a sharp increase in the demand for fast internet services as well as electronic gadgets to cater to online classrooms. In a typical middle-class family in India, consisting of a set of working parents and a set of children, four individual devices were required to cater to all the family members which means a four-fold increase in data usage. With the sudden increase in demand, there was a shortage in supply [market as well as production driven] for both appliances and internet services, which led to a sudden splurge in the prices of laptops, tablets, mobile phones, earphones, and microphones (Kulkarni, 2020). This deeply impacted the household budget of a middle-class family which suffered lay-offs, pay cuts, delays in terms of salary with the beginning of the pandemic; meaning they had to dive into their savings to survive the new normal. In terms of internet connectivity, it is a well-established fact that there are still many remote areas in India which are awaiting connectivity, as a result students of all ages were forced to roam around the terrain in search of mobile phone signals (Antony, 2021). Another limitation encountered during this period by both the instructors

and students was the access to electricity. Technology can only survive if it is backed by 24-hour supply of electricity which is still a dream in most parts of India. The introduction or shift to virtual classrooms meant a need for a round-the-clock electrical socket to charge the devices in order to access as well as impart education. Thus, each member of the family was forced to glue to a corner of the house to access electricity. The situation became more pathetic in terms of higher educational institutions and international students: "Although higher education institutions were quick to replace face-to-face lectures with online learning, these closures affected learning and examinations as well as the safety and legal status of international students in their host country" (Schleicher, 2020, p. 4). In many instances international students were forced to return to their native places which brought another hurdle to the fore in accessing online classes: time zone difference. While the instructors were delivering morning lectures, international students had to stay awake for the whole night to attend the same. The situation had an adverse effect on both their mental and physical health. The students who had the toughest of time belonged to the field of science, a discipline which is based on practical and experimental knowledge, something impossible to access in a virtual set up which is more theory and visual aid based.

A. E-learning and the Covid-19 Scene

An advantage often associated with e-learning which became ineffective was the utilization of audiovisual media to increase the attention span and interest of the learners. As the instructors were forced to familiarize and learn not only the basics of Information and Communications Technology (ICT), they had to prepare and deliver lectures from their homes; meaning an additional list of household routine awaited them which needed to be navigated along with their lectures. As neither the instructors nor the learners had any prior exposure to the various web applications like Zoom meetings, Google meet or cisco-webex meetings, it was very hard for both to become used to this novel way of imparting education. It is suffice to say that institutions which had begun the process of inculcation of the use of emerging technologies in their systems before the outbreak of COVID-19 had a comparative advantage over those who were yet to begin the process (Oneyma et al., 2020, p. 113). This resulted in a steep drop in the instruction time which further hampered the quality of learning as well as teaching. Before 2020, learners considered audio-visual media aids as an opportunity to break away from their monotonous cycle of learning and looked forward to it. Since then, e-learning has lost its charm as learners were expected to sit in front of their laptops or mobile phones

from morning to evening looking at a screen where only the instructor was speaking and they needed to make notes. However, instead of taking notes, most preferred to take screenshots in order to save time and paper. Even though an unexpected side effect, the shift from offline to online mode in all fields ranging from work to education helped in decreasing the pressure on the environment, allowing mother nature some space to breathe as well. For the first time, the air quality outdoors was better than indoors. Thus, adding a fraction of positive to the already growing list of disadvantages of e-learning post-2020, bringing it closer to the disadvantages often associated with traditional classrooms (pre-2020).

While in a traditional classroom, a learner had the opportunity to interact with friends as well as the instructor by raising their hand or even interrupting the instructor in case they were unable to understand the lesson, the situation became quite different in the virtual scenario. In a virtual classroom, the instructor as the host of the meeting held the ultimate power to either mute or simply remove any student in order to complete their lecture plan in time, further cutting down on the students' time to interact with their friends and classmates. Thus, creating a breeding ground for social anxiety in the future. On one hand, these methods resulted in an increase in the total time devoted to teaching and learning, on the other, a decrease in the efficiency and quality of teaching and learning was experienced. One of the reasons being, reduction in syllabus and the other being online examinations. Another drawback which can be mentioned here relates to the disruptions caused on both ends of a virtual classroom due to poor connectivity. The misuse of filters by learners as well as the uninvited disruption caused by virtual bombers left a lot to be desired. Given the current situation, virtual/e-learning seems to have lost its charm.

Moving on to the disadvantages of e-learning which have surfaced over the years following the covid-19 pandemic, viz, 2020-2022: decline in morals and ethics on the part of the learner, health risks, and mental exhaustion due to a monotonous lifestyle. The decline in morals occurred with the learners making a mockery of the online learning and taking part in online bullying of the instructors. In various compilation videos available on social networking sites, it is quite apparent the number of vulgarities which the instructors had to face in the garb of screen names, display pictures and chat box messages. It only made teachers lose hope in the students and their development. A teacher holds a place next only to parents in the Indian cultural traditions with their importance being summed up in the old Hindu adage, 'guru bin gati nahin' meaning 'there can be no headway without a teacher'. Teachers often strive to create positive learn-

ing environments in the classroom—whether virtual or traditional—, promote engagement with material to help the students understand in a better way. Active teaching involves the use of instructional techniques designed for meaningful student engagement in the discovery of knowledge, something the instructors practiced sincerely in the two years by learning new ICT skills. The students seemed to forget that a teacher’s conscious selection of goals for the classroom and methods for teaching help to create a sense of purpose in the educational process, representing a collaboration – a commitment on the part of instructors and students to enliven the educational environment. Active learning means that students are working together, and with the instructor, to achieve educational objectives. It is the teacher who moves between the two environments – physical and virtual spheres – transferring ideas, strategies, and practices from one to the other. Young emphasizes the role of instructors even in the teaching of ‘learning-to-learn’ skills where they provide scaffolding as they practice these skills. Scaffolding, he says, is a temporary instructional – support structure “designed to bridge the gap between what the student can accomplish independently and what the student can accomplish with guidance” (French et al., 1999, p. 32). Unfortunately, virtual classrooms over the period of 2020-2022 have been unable to inculcate this deep bond between a teacher and student which can be achieved in a physical environment.

B. Major Concerns associated with Virtual/E-learning: 2020-2022

Moving on to the ethical disadvantages of virtual learning, cheating in online examinations as well as the use of the age-old cut-copy-paste technique became rampant which further hampered the trust of teachers in students in general: “As all students’ assignments and examinations are carried out from home, it is challenging for educators to find the authenticity of the work and the actual learning taking place” (Pokhrel and Chhetri, 2021, p. 139). This led to a sharp decline in the quality of learning gained by the individual learners. Another factor for such actions being family and peer pressure to maintain a certain level of percentage or marks even if it meant that nothing was actually grasped. In terms of health risks, the constant use of audio-visual contact aids like webcams, headsets and microphones over a minimum of 6-8 hours a day gave rise to many ailments with regards to vision, strain on the eyes, ear infections, noise induced hearing loss, constant headaches, muscle and joint pain (especially, wrist and back pain). Other than the obvious health risks, isolation for a long period is well known to cause and alleviate mental health problems in youngsters, making them prone to Non-suicidal self-injury (NSSI). NSSI is defined as

“deliberate and direct engagement in behaviours that cause direct tissue damage without conscious suicidal intent (International Society for the Study of Self-Injury, 2018), represents a significant mental health concern for young people and their communities” (Hasking et al., 2020, p. 58). Being imprisoned in their homes became a bane instead of boon for most students. The thought of such dangerous behaviour worked as an outlet “to gain temporary relief from overwhelming or unwanted emotional states” caused by the pandemic and alleviated due to lack of socialization (Hasking et al., 2020, p. 59). Thus, one can say that though e-learning was invaluable in the tough times, it is not a panacea especially if it takes man away from being a social animal. The same boons of technology that make the job of learning easier demand words of precaution and wisdom on the part of the student. The virtual world does allow the freedom to communicate easily with others but one must surely have ‘netiquettes’ to ensure that one is not offensive and wasting the resources as well as time of everyone involved. At the same time, it should not also become a prison for the individual leading to severe stress and mental health problems.

C. Traditional classrooms will always be relevant

One thing the pandemic highlighted is that man indeed is a social animal and is in constant need of interaction and socialization—vital for personality development. With the help of technology man is able to connect with anyone in the world and access as much information as needed yet nothing can replace the human touch. Studies on collaborative and cooperative learning suggest that interaction is the most important part of the classroom; though internet has been in use for a long time now, multimedia and internet are merely tools which need the teacher/learner to work upon them, making them a means instead of an end:

The new technologies make the materials vivid, easy to access, and fun to play with—and they readily address the multiple ways of knowing that humans possess. ...Clearly a marriage of education and technology could be consummated. But it will only be a happy marriage if those charged with education remain clear on what they want to achieve for our children and vigilant that the technology serves these ends. (Gardner, n.d., p. 35)

The pandemic forced everyone to rely on the web-based technologies in order to function in the society. Before 2020, parents could still find time to interact with their children and refresh by going on vacations and dinners. In the light of the pandemic, everyone was forced to be glued in front of the smart screen, with children trying to understand and keep up

with the information provided to them in the virtual classrooms. 'Home' which was supposed to be a safe space where one used to return to relax and refresh, suddenly became a solitary confinement both of the physical and mental kind. Parents as well as children pined for freedom from this forced confinement and called for reopening of educational institutions. Even the teachers wanted a respite from their monotonous lives and craved to share the physical space with the students—adding back the vitality to teaching and learning. Thus, highlighting the power of a traditional classroom over any and all improvements and advantages made by web-based technologies. At the end of the day, nothing can replace the human touch. However, one cannot overlook the gains experienced and can only learn from the past. Though online and face-to-face methodologies are often seen and studied as two separate worlds, forever competing with each other—a concept which is innately flawed—, the social field of the teacher has to include both. And as the teacher moves – either simultaneously or serially – from one environment to the other, the course being taught also goes through several transformations. It is pertinent that both teachers and learners adapt to the new style of teaching and learning to meet any future requirements. If the articulation problem is solved by posting queries, responses, ideas and reactions to the text in the learning community, face-to-face communication gets immediate feedback. Blending traditional teaching and technology is definitely the educational practice for the new world order without giving unnecessary advantage to either. The comfort of technology and teacher certainly motivates the students in exploring learning in a more convivial ambience. By appropriating technology, the world of learning, as is the world out there in cyberspace, can be a place of discovery and excitement.

III. Conclusion

E-learning has many benefits which need to be worked out and tailored for an individual's best output. Machines were successful in replacing the physical labour of man but have been a failure in its attempt to replace human intelligence and emotion—wonderfully depicted in the fictionalized serial of *Small Wonder*. Thus, even though machines enhance and aid human minds and together work towards creating wonders, they cannot replace the 'social animal' aspect of man. The pandemic has been a learning experience for everyone involved in the process of teaching and learning, those who were against the use of technology were forced to embrace it and have begun to enjoy its benefits. However, nothing can replace the pedagogical ecology of a traditional classroom consisting of 'n' students, but with 'n+1' brains working towards enhancing the learning experience.

A virtual classroom, is more like a setting of a movie theatre with each individual responsible for their own enjoyment and learning. The need of the hour is to blend the two ecologies in such a way that it includes and savours the human touch without favouring either side: "By adopting these technology tools, our education will move from a teacher-centric approach to a student-centric approach in the future. These online tools will help teachers and students to enhance their skills and develop their knowledge. Now we can say that this crisis is not only teaching us how to fight this pandemic but also teaching us, how to make our future" (Pareek and Soni, 2020, p. 50). The current strategy should focus on recovering lost learning and preparing students, parents, and teachers to smoothly shift back to the pre-2020 teaching and learning environments with precautions in place, while working towards scaling accessibility of distance learning in the immediate future:

There is inequality among urban and rural students; students from low-income or high-income and literate or illiterate parents. So that the education system should design and implement some evidence-based actions that aim to facilitate the recovery of the lost portion when schools are reopened. Because of the lack of required support during the school closures, it could take a very long time for children from illiterate and low-income parents to recover their missed portion when they return to school. (Tadesse and Muluye, 2020, p. 167).

This is true for all levels of education, not just school children as many undergraduates have graduated with a lower level of knowledge than those before them and after them. The loss, thus encountered by them needs to be overcome without causing harm to their future prospects and efforts need to be made in that direction by governments as well as educational institutions.

Works Cited:

- Abed, E. K. (2019). Electronic Learning and its Benefits in Education. *EURASIA Journal of Mathematics, Science and Technology Education*, 15(3), 1-8.
- Al Rawashdeh, A. Z., Mohammed, E. Y., Al Arab, A. R., Alara, M. & Al-Rawashdeh, B. (2021). Advantages and Disadvantages of Us-

ing e-Learning in University Education: Analyzing Students' Perspectives. *The Electronic Journal of e-Learning*, 19(2), 107-17.

- Antony, K. (2021, July 24). *Connectivity Crunch Debilitates Learning for Tribal Children on Pachamalai Hills*. The Hindu: <https://www.thehindu.com/news/cities/Tiruchirapalli/connectivity-crunch-debilitates-learning-for-tribal-children-on-pachamalai-hills/article35511198.ece>
- Appanna, S. (2008). A Review of Benefits and Limitations of Online Learning in the Context of the Student, the Instructor and the Tenured Faculty. *International Journal on E-Learning*, 7(1), 5-22.
- Arkorful, V. (2014). The Role of E-learning, Advantages and Disadvantages of its Adoption in Higher Education. *International Journal of Education and Research*, 2(12), 397-10.
- Baniya, S., & Weech, S. (2019). Data and experience design: Negotiating community-oriented digital research with service-learning. *Purdue Journal of Service-Learning and International Engagement*, 6(1), 11-16. <https://doi.org/10.5703/1288284316979>
- Bills, D. B. & Stanley, A. Q. (2001). Social Science Computer Labs as Sites for Teaching and Learning: Challenges and Solutions to Their Design and Maintenance. *Teaching Sociology*, 29, 153-62.
- Brown, J. S., Collins, A. & Duguid, P. (1989). Situational Cognition and the Culture of Learning. *Educational Researcher*, 18(1), 32-42.
- Edwards, M. E., Cordray, S. & Dorbolo, J. (2000). Unindented Benefits of Distance-Education Technology for Traditional Classroom Teaching'. *Teaching Sociology*, Vol. 28, pp. 386-91.
- French, D., Hale, C., Johnson, C. & Farr, G. (Eds.). (1999). *Internet Based Learning: An Introduction and Framework for Higher Education and Business*. Sterling, VA: Stylus Publishing, LLC.
- Gardner, H. (n.d.). *Can Technology Exploit Our Many Ways of Knowing?* <https://howardgardner01.files.wordpress.com/2012/06/can-technology-exploit-our-many-ways-of-knowing1.pdf>.
- Hasking, P., Lewis, S. P., Bloom, E., Brausch, A., Kaess, M. & Robinson, K. (2021). Impact of the COVID-19 Pandemic on Students at Elevated Risk of Self-injury: The Importance of Virtual and On-

line Resources. *School Psychology International*, 42(1), 57–78. Doi: 10.1177/0143034320974414

Jaffee, D. (n.d.). *Virtual Transformation: Web-Based Technology and Pedagogical Change*. <https://www.unf.edu/~djaffee/virtualtran.htm>

Jaffee, D. (1997). Asynchronous Learning Technology and Pedagogical Strategy in a Distance Learning Course. *Teaching Sociology*, 25, 262-77.

Kulkarni, M. (2020, July 6). *Covid-19 Effect: Work from Home, online learning push up laptop prices by 30%*. Deccan Herald. <https://www.deccanherald.com/business/covid-19-effect-work-from-home-online-learning-push-up-laptop-prices-by-30-857955.html>

Longworth, N. (2003). *Lifelong Learning in Action: Transforming Education for the 21st Century*. London: Routledge.

Muhammed Thayyib. K. (2018). The Impact of Jio on Indian Telecom Industry. *International Journal of Research in Management, Economics and Commerce*, 8(4), 78-82.

Onyema, E. M., Eucheria, N. C., Obafemi, F. A., Sen, S., Atonye, F. G., Sharma, A. & Alsayed, A. O. (2020). Impact of Coronavirus Pandemic on Education. *Journal of Education and Practice*, 11(13), 108-121. Doi:10.7176/JEP/11-13-12

Pareek, T. & Soni, K. (2020). A Comprehensive Study on Covid-19 Pandemic: An Impact on School Education in India. *Amity Journal of Management*, 8(2), 49-57.

Pokhrel, S. & Chhetri, R. (2021). A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future*, 8(1), 133–41. Doi: 10.1177/2347631120983481

Prensky, M. (2004). Proposal for Educational Software Development Sites: An Open Source Tool to Create the Learning Software We Need. *On the Horizon*, 12, 41-44.

Schleicher, A. (2020). *The Impact of Covid-19 on Education Insights from Education at a Glance 2020*. <https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf>

- Tadesse, S. & Muluye, W. (2020). The Impact of COVID-19 Pandemic on Education System in Developing Countries: A Review. *Open Journal of Social Sciences*, 8, 159-170. Doi:10.4236/jss.2020.810011
- Telecom Regulatory Authority of India (TRAI). (2021). *Recommendations on Roadmap to Promote Broadband Connectivity and Enhanced Broadband Speed*.
- Van Lier, L. (2013). *Interaction in the Language Curriculum: Awareness, Autonomy and Authenticity*. Routledge.
- Yadav, R., Tiruwa, A., & Suri, P. K. (2017). *Internet based learning (IBL) in higher education: a literature review*. *Journal of International Education in Business*, 10(2), 102–129. doi:10.1108/jieb-10-2016-0035