Explore the efficacy of post-pandemic blended education skill

Paliwal Sushil* | Deshmukh Pooja*

*Institute of Management & Research, MGM University, Aurangabad, Maharashtra, India.

Abstract A global pandemic and scientific emergency have been caused by COVID-19. An existential threat appears to be faced by humanity. The concept of world order, which examines human nature and goals in the context of international affairs, is being addressed. Themes such as conflict, aggressiveness, inequality in access to and knowledge of material resources, social inequity, ecological discord, and feelings of isolation from oneself, society, and humanity are explored. Education worldwide has been greatly impacted by this pandemic. The entire education industry has undergone changes in its system, manner, and more. Initially, no solid infrastructure for online education was available. Eventually, the process of learning and adapting to make it more effective has been ongoing. Exploratory research was conducted to investigate the effectiveness of online teaching and learning. By consulting with teaching staff and students regarding their expectations, learning and adapting to make it more effective has been ongoing. Initially, no solid infrastructure for online education was available. Eventually, the process of learning and adapting to make it more effective has been ongoing. Exploratory research was conducted to investigate the effectiveness of online teaching and learning. By consulting with teaching staff and students regarding their expectations, learning and adapting to make it more effective has been ongoing.

Keywords: world order, post pandemic, education skill, online education, offline education

1. Introduction

Increased competition in the higher education industry has led to the proliferation of both open gaps and instructional models. Factors such as Brexit and shifting demographics have already posed challenges to colleges, potentially resulting in a drop in revenue and heightened competition among students pursuing higher education. The recent Covid19 pandemic further exacerbates these concerns, particularly with regards to the financial stability of educational institutions if there is a sudden decrease in the number of overseas students. Maintaining high levels of student satisfaction is crucial, especially in the aftermath of the epidemic, as student recruitment and retention play a vital role in upholding a university's academic reputation and competitiveness. The university has an obligation to address students' concerns and incorporate lessons learned from remote delivery experiences during the pandemic to shape future expectations, teaching methods, and assessments. This is essential to stand out in a crowded industry (Beatty 2019).

The pandemic has presented significant challenges to normal classroom operations, resulting in the temporary closure of schools and institutions throughout the past academic year. However, this does not impede education and training. Instead, alternative measures such as online backup plans have been implemented to ensure continuous instruction and assessment via digital platforms (Braun and Clarke 2006). During times of crisis, such as a pandemic or conflict, schools must swiftly adapt by transitioning instruction and evaluation to the digital realm, known as “Emergency Distance Learning” (EDL). Blended and online courses serve as examples of how EDL can modify traditional face-to-face instruction (Brightwell et al 2004).

To better cater to their students’ needs, many schools have made adaptations to their educational programs, embracing a more flexible and convenient approach. Blended learning, which combines elements of online and in-person instruction, requires all students to engage in both modes of learning. The HYPERFLEX concept allows for learning to take place in both traditional classroom settings and online platforms. Students have the freedom to choose the most convenient mode of participation, but each session and learning activity is delivered live, synchronously, and asynchronously online. While the HYFLEX approach offers flexibility, it may pose challenges if some students opt for remote learning while others attend in-person classes (Carter et al 2016). Aston University utilizes blended learning to some extent. Prior to the pandemic, students had access to the Virtual Learning Environment (VLE) for reading course materials, submitting assignments, and interacting with instructors online. Additionally, the university encourages the use of 4,444 multiple-choice questions provided during revision sessions and employs Panopto courses for online delivery of lectures and additional assessment methods. Academic
Science Learning Tools, another online resource, enhances students’ understanding of laboratory techniques through accurate simulations. Timed tests in the classroom have been replaced by open-book exams administered through digital platforms during the pandemic. Originally designed to last for 12 hours, these assessments now take the form of open book reviews with the same duration. Assessments may consist of multiple-choice/short answer questions or essays (Casagrande et al 2020).

2. Literature review


As a result of the Covid19 pandemic, universities were forced to close, leading to a shift from in-person to online training and assessment, thereby causing challenges and disruptions within the higher education sector. The lessons learned from the experiences of students can guide us in creating a more inclusive future for those pursuing biological sciences. A recent research project focused on the academic experiences of biological science majors at Aston University. An online survey was administered to 151 students in August 2020, investigating the impact of homeschooling and the course on their mental health and quality of life. It is imperative that future lesson plans consider the emotional well-being of students affected by the epidemic. Many colleges and universities, including our own, have started offering blended courses to ensure that biological science majors have ample opportunities for laboratory work and field study. This approach aims to keep students motivated and engaged, utilizing on-campus resources and support while also providing some of the flexibility that distance learning offers. Considering student demographics and digital equity is crucial in today’s highly competitive higher education market, where student retention is a top priority, to ensure that all students are adequately served (Bashir et al 2021).

2.2. Kacper Nijakowski et al (2021)

Special attention should be given to addressing the emotional well-being of children affected by the epidemic in future school curricula. Blended learning, which combines the flexibility of distance learning with access to on-campus services and support, is widely implemented in universities, including our own, to ensure that students majoring in the biological sciences gain essential laboratory and field experience. In today’s competitive higher education market, it is crucial to consider student demographics and digital equity to ensure equitable access for all students. The feedback from responders indicated that they received sufficient personal protection equipment, and our students have expressed enthusiasm for the continued use of blended learning even after the pandemic ends. They appreciate the enhanced efficiency and speed of individual learning, although they acknowledge the limited opportunities for interpersonal interaction. Proper utilization of modern technology has the potential to revolutionize the dental education system (Nijakowski et al 2021).

2.3. Anchal Sharma (2021)

The COVID19 pandemic has had a global impact, leading to significant changes in the field of education across various disciplines. One notable consequence of school closures in India was the emergence of substantial learning gaps among students. In this context, blended learning has emerged as a pivotal approach for the future of education, particularly as schools aim to reopen and ensure a secure return for students to the classroom. Blended learning combines the strengths of traditional and modern educational approaches by incorporating online resources and tools.

The key advantage of blended learning lies in its ability to enhance the educational process for both teachers and students. Despite the ongoing efforts of governments and non-profit organizations, achieving universal access to education remains a complex and challenging endeavor. However, this situation has spurred the innovative spirit, hard work, and resourcefulness of numerous educators, parents, and students in the region, resulting in the creation of exceptional educational opportunities in local schools. Furthermore, it has shed light on various loopholes and weaknesses within the system that hinder the realization of India’s digital education aspirations (Sharma and Alvi 2021).

2.4. Sharma and Alvi (2021)

According to medical professionals, social isolation has been recommended as a measure to slow down the spread of the COVID19 pandemic and save lives. As a result, traditional methods of education have proven ineffective, impacting over 90% of the global student population. Educational institutions have taken steps to minimize disease transmission within the community by implementing a combination of in-person classes and online learning resources.

In light of the COVID19 situation, educators and policymakers have recognized the need to shift towards a more technology-driven approach to teaching and learning. This research paper utilizes the Statistical Package for the Social Sciences (SPSS) software version 23.0 and JASP 0.14.1 for descriptive statistics and analysis, including mean, minimum, maximum, combined, and correlation tests. The study examines and evaluates student perceptions in a higher education institution in India, comparing the views of the same students before and after the 19 COVID cycles.

The findings of this study reveal significant differences in student perceptions of pre- and post-pandemic learning methods. Pre-pandemic blended learning was more favored by students compared to post-pandemic web-assisted learning.
These results provide valuable insights into the changing dynamics of student experiences and preferences amidst the COVID19 pandemic (Sharma and Alvi 2021).

2.5. Saavedra (2021)

The global COVID19 epidemic is the worst public health emergency of the past century. Because of this, our entire way of life has been turned upside down, with never-before-seen effects on how we earn a living and acquire knowledge. The International Labor Organization (ILO) reports that between the fourth quarter of 2019 and the second quarter of 2020, working hours were cut globally by 14 percent (ILO 2020a). This is equivalent to the elimination of 480 million full-time jobs1, a statistic that reflects the widespread upheaval of the global labour market (ibid.). Goal 8 of the SDGs, "Promote an economy of sustainable, inclusive, and sustainable growth, full employment, efficiency results, and good work for everyone," and its target of 8.5, required by 2030, of "full and productive work and decent work for all," are threatened by the current situation. Countries with completely closed workplaces (excluding critical workers countries) and another 42% of workers in countries with partially closed workplaces (ILO 2020a). To keep a business afloat, you need a sizable staff who, ideally, can all adjust their methods to the changing needs of the company. One of the most common adjustments is working from afar, provided that the nature of the profession permits it (Saavedra 2021).

The COVID19 pandemic has emerged as the most severe public health crisis of the past century, leading to profound transformations in our daily lives and unprecedented consequences for employment and knowledge acquisition. According to the International Labor Organization (ILO) (ILO 2020a), global working hours were reduced by 14 percent between the fourth quarter of 2019 and the second quarter of 2020, resulting in the elimination of approximately 480 million full-time jobs. This statistic reflects the extensive disruption experienced in the global labor market (ibid.).

The current situation poses a threat to Goal 8 of the Sustainable Development Goals (SDGs), which aims to promote sustainable and inclusive economic growth, full employment, and decent work for all individuals by 2030. The COVID19 pandemic has led to complete workplace closures in certain countries, excluding critical workers, while partially closed workplaces have impacted 42% of workers in other countries (ILO 2020a).

Maintaining business continuity during these challenging times requires a well-equipped workforce capable of adapting to evolving demands. One common adjustment adopted by organizations is remote work, provided it aligns with the nature of the profession (Saavedra 2021).


This study aims to investigate the current landscape of undergraduate architectural education in India in the context of the ongoing epidemic. It seeks to explore effective evaluation methods for enhancing classroom improvisation and identify innovative approaches to teaching, learning, communication, and assignment strategies (4044). The perspectives of educators on the feasibility of online courses for the field of architecture in India were gathered, based on their experiences during the pandemic. To address the existing knowledge gap, an online survey was conducted among teachers, specifically designed to gather structured data on various aspects such as the success of online courses, instructor performance, the evolution of blended education, and other aspects of the transition process.

Environmental disasters, including earthquakes, hurricanes, tornadoes, as well as chemical incidents like gas or oil leaks, and even the potential of nuclear war, can have profound and widespread impacts on people's daily lives, prompting significant social changes. In light of such challenges, it is imperative to identify the most effective course of action (Varma and Jafri et al 2021).

2.7. Susilawati and Supriyatno (2020)

This research aims to investigate the evolution of online education prior to, during, and after the spread of the Covarian flu pandemic. This research used a pretest group design. Students enrolled in the Ministry of Planning and Investment programme at the Islamic State University of Maulana Malik Ibrahim Malang during the even semester of the 2019/2020 school year will serve as the study's subjects. Thirty students made up the sample for this research. A questionnaire was used to collect the data. A 5% margin of error was used in the paired t-test used for the data analysis. The results of the WhatsApp-based e-learning experiment indicated a correlation of 0.776 between the two variables, indicating the presence of a correlation between the pretest and the actual exam; at the 0.05 level of significance, this means that the null hypothesis (H0) can be rejected. The results show that compared to before WhatsApp was introduced, student learning outcomes improved dramatically. Analysis and discussion of the findings lead to the conclusion that learning has improved in the age and after the Covid19 epidemic thanks to the use of WhatsApp to boost learning motivation (Susilawati and Supriyatno 2020).

2.8. Singh et al (2021)

The 2019 coronavirus pandemic (COVID19) has altered the structure of higher education. Online, hybrid, and hybrid learning approaches must be considered as traditional educational institutions around the world continue to suffer a worldwide
health issue. Since early 2020, educators have been working to navigate the COVID19 situation, and this descriptive study provides a deep dive into the evolution of associative learning, the rise of blended instruction, the training of faculty with limited online teaching experience, and the lessons learned along the way. The challenges encountered by professors during the epidemic were presented using a herringbone analysis, imaging, and structural analysis technique to pinpoint the root of the issue. What are your strengths and what are your weaknesses? The advantages and disadvantages of a mixed/matched approach to education have been outlined. A research-based strategy for bridging the gap between offline and online teaching to create exciting educational opportunities for students (Figure 1) (Singh et al 2021).

2.9. Kundu DK (2021)

The 2019 coronavirus pandemic (COVID19) has altered the structure of higher education. Because of the ongoing global health problem, universities and colleges around the world must rethink traditional teaching techniques and explore alternatives like online and hybrid education. Since early 2020, instructors have been navigating the COVID19 situation, and this descriptive study provides an in-depth examination of the background of associative learning, the development of blended instruction, the preparation of faculty with little or no online teaching experience, and lessons learned. The challenges encountered by professors during the epidemic were presented using a herringbone analysis, imaging, and structural analysis technique to pinpoint the root of the issue. The gap between the haves and have-nots will widen considerably as educational inequalities breed more inequalities in economic and social aspects and as structural inequality intensifies (Kundu 2021).

2.10. Zeng et al (2020)

During the peak of the COVID19 pandemic, China implemented online academic English instruction to ensure continuity in education. However, it is acknowledged that a new online teaching paradigm for academic English is required to enhance teaching efficiency in the post-pandemic era, as online learning cannot completely replace offline instruction when schools reopen. This article concludes by discussing the advantages and disadvantages of online education and presents a survey of student opinions on its effectiveness. The findings indicate that students recognize the benefits and limitations of online learning and anticipate a hybrid approach to education. Based on these conclusions, the paper advocates for a more balanced online education approach that emphasizes language proficiency, independent study, technological proficiency, critical thinking, and cultural competence. Since the outbreak of COVID-19, people’s daily routines, including work and education, have been severely disrupted. During the height of the pandemic, students throughout China were unable to attend classes in person. However, China implemented a solution to address the challenge of remote learning by establishing online classrooms accessible to students from their homes (Zeng et al 2020).

3. Methodology

Teachers in India who are currently working with college-level students were polled using a standardised online survey. Online media was used because of its flexibility in gathering the required information and its widespread reach at a time when in-person gatherings were discouraged owing to the pandemic. In order to achieve these targets, we are conducting an online poll (Unicef office of Research 2021):

1) Collecting and organising information on how the COVID-19 virus outbreak has affected more conventional forms of face-to-face instruction and study.
2) Explore how adaptable the leading IT companies and organisations are, and how they leverage digital tools and resources (Phillips et al 2016).
3) Investigate the effectiveness of online teaching and learning from the standpoint of a classroom instructor.
4) Consult with teaching staff about their hopes for online/hybrid courses in education.

4. Results and discussion

The results and discussion section of this study involved gathering information from respondents in four distinct phases. The first phase focused on capturing individual and group experiences, while the second phase examined the successful transition to online learning following the pandemic. The third phase delved into the respondents’ perspectives on blended learning, including its convenience and effectiveness in online instruction. To accomplish this, a set of 23 multiple-choice questions, most of which were mandatory, was used to organize and analyze the data. After collecting a total of 4,444 responses from both individuals and organizations, the survey was refined to exclude incomplete responses and ensure that all suggested answers were presented only in the post-test phase (Phillips et al 2016).

The survey was administered to 410 instructors from 152 educational institutions, and a total of 130 individuals responded, representing 82 institutions across 20 states in India. Among the respondents, there were 16 deans and 50% were associate professors (16 full-time faculty members). In terms of teaching experience, respondents generally had between five and ten years of experience. The surveyed institutions offered a range of undergraduate architecture programs, varying in
duration from less than five years to over twenty-five years, and approximately one-third of these institutions also offered graduate-level education (Nijakowski et al 2021).

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Online Education</th>
<th>Offline Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of Teaching</td>
<td>Digitalized tools and methods of teaching</td>
<td>Traditional tools and methods of teaching</td>
</tr>
<tr>
<td>Cost and Time</td>
<td>Cost-effective and time-saving</td>
<td>More expensive than online education and consumes more time</td>
</tr>
<tr>
<td>Location</td>
<td>Virtual classrooms</td>
<td>Physical classrooms</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Online classes to have a flexible schedule</td>
<td>Offline classes have a fixed &amp; strict schedule</td>
</tr>
<tr>
<td>Communication</td>
<td>Communication and collaboration happens digitally</td>
<td>Communications and collaborations happen face-to-face</td>
</tr>
<tr>
<td>Type of Approach</td>
<td>Facilitation and asynchronous approach</td>
<td>Instructional and synchronous approach</td>
</tr>
<tr>
<td>Pace of Learning</td>
<td>Students largely determine the pace of learning</td>
<td>Teachers largely determine the pace of learning</td>
</tr>
<tr>
<td>Level of Commitment</td>
<td>Students are less likely to remain serious and committed to their studies</td>
<td>Students remain more serious and committed to their studies</td>
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</tbody>
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![Figure 1 Efficacy of Online and Offline Education (Source – Google Images).](https://www.malque.pub/ojs/index.php/msj)

4.1. Data analysis

4.1.1. Opportunity for collaboration

Collaboration in a blended learning environment is actively encouraged and nurtured. Digital game-based learning, facilitated through peer-to-peer interactions, has been found to elicit a positive response from students. When students collaborate to foster a sense of community and create a vibrant learning atmosphere, their chances of success are enhanced. The availability of digital tools has made it easier than ever to engage in meaningful conversations with individuals from anywhere in the world. Projects like PenPal provide virtual platforms for students across the globe to exchange ideas and knowledge. In light of the pandemic’s impact on society, promoting the use of digital tools among children for teamwork and collaboration can contribute to their development as empathetic and cooperative individuals, enabling effective communication among peers. Furthermore, when teachers and students share responsibilities, it leads to the formation of stronger relationships and enhances students’ receptiveness to criticism, consequently facilitating their learning and retention (Qutieshat et al 2020).

4.1.2. Tracking Learning Levels

It is conceivable that, post-epidemic, there will be an even greater disparity in students’ initial learning levels. Rapid and straightforward assessment of students’ learning levels is essential to tailor remedial measures to their specific needs. Diagnostic tools such as ASER and the UNICEF MICS learning module can be utilized to identify students’ strengths and weaknesses in foundational skills like numeracy and literacy, establishing a solid foundation for future success across all subject areas. Students who are underperforming will greatly benefit from such follow-up interventions as they enable personalized instruction. The data collected can facilitate the provision of tutoring services by volunteers and non-profit organizations, ensuring that each child receives instruction at their individual level. The overall dropout rate, particularly among girls, can be reduced through the use of affordable technological software that monitors students’ school attendance and identifies potential dropouts (Al-Fodeh et al 2021).

4.1.3. Increased Access to Learning

Blended learning enhances educational opportunities for students, increasing their chances of obtaining an education. In essence, a greater number of individuals in various locations can benefit from this expanded access to education. Blended learning, particularly in the form of distance education, is particularly valuable in extending access to higher education across the globe. Mainstream software incorporating features such as text-to-speech and other accessibility tools enables students with disabilities to access educational opportunities on par with their peers. It empowers educators by providing them with additional resources for professional development, enabling them to take a more proactive role in delivering instructional materials in diverse settings. The availability of online materials allows educators to allocate more class time to addressing the individual needs of their students. By embracing these options, learning can be accelerated, and students can take ownership
of their education. Engaging students in projects that foster experiential learning outside the confines of the classroom is an effective way for teachers to cultivate student involvement. The paper "Using ICTs to Foster New Models of Growth and Development in India" represents the latest addition to the CSD Working Paper Series (Hattar et al 2021).

4.1.4. Better Communication

Disparate falsehoods and generalized dread have been propagated as a consequence of the pandemic. The potential for the utilization of digital media such as radio and television to facilitate children’s continued learning during school closures is recognized. These media platforms serve as a stark reminder of the significant gap in children’s access to media and information resulting from the prevalent availability of online spaces. In the future, more schools can benefit from the implementation of these cost-effective resources, fostering open lines of communication between educators and families. Parents and guardians should be duly informed about the importance of educational continuity and provided guidance on accessing new learning programs as they are developed. The utilization of online forums and communities for learning, such as Microsoft Teams, Google Classroom, Canvas, and Blackboard, is encouraged (Touil et al 2021).

4.1.5. Preparing Students for a Tech-Oriented World

Almost every facet of our existence has been changed by technology. As the world constantly evolves, it is imperative that our pupils undergo the same transformation. If technology is incorporated into the classroom, teachers can better prepare children for success in the workforce. Through blended learning, students can acquire the essential skills necessary for the future. Additionally, it enables them to adeptly navigate the virtual realm of knowledge by employing various digital approaches (Figure 2). Blended learning allows students to gain hands-on experience with cutting-edge tools like 3D printers and VR headsets, thereby enhancing their understanding of how these tools can be utilized in upcoming assignments. The integration of technology in classrooms benefits students significantly as it prepares them for a world where they must continuously adapt to new circumstances.

![Figure 2 Digital approaches that motivate students to learn (Source: Skool Beep).](https://www.malque.pub/ojs/index.php/msj)
Insufficient technological literacy among teachers and students also hinders instruction. Consequently, teachers must receive training on the use of new technology in the classroom, in addition to being flexible and adaptive. When these components are combined, hybrid education reaches new heights of customization, interactivity, and collaboration (Jum‘ah et al 2021).

5. Conclusion

Finally, it can be concluded that the effectiveness of online and offline education is mixed. Both ONLINE and OFFLINE education has its pros and cons. The type of education depends on many factors like a student’s financial background, a course that he/she has opted for, and many more. Combining these two formats will make education more effective, efficient, and interesting.

Ethical considerations

The study correctly followed the ethical policies, the consent of all the respondents involved was taken.

Conflict of Interest

The authors declare that they have no conflict of interest.

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