

Post-Pandemic Impact on Higher Education

Nabanita Mitra

Assistant Professor, Department of History, Women's Christian College, Kolkata, West Bengal, India.

Mail Id: | Orcid - [0000-0002-3777-1832](https://orcid.org/0000-0002-3777-1832)

Abstract

The Covid 19 Pandemic has perhaps been a mixed bag for the higher education sector, both in India and elsewhere. While some have alleged that the pandemic had ushered in unforeseen changes in the pedagogical system the world over, almost leading to an acute academic slump of sorts, there have been others who have hailed the new normal as the harbinger of academic flexibility and technological sustainability. This article attempts to show how the higher education sector, especially in India, has had to negotiate the adverse effects of the pandemic through an unprecedented academic resilience and genuine stakeholder-empathy.

Keywords: Covid 19 Pandemic, Online Learning, HEIs, Digital Platforms, Academic flexibility.

Introduction

The Covid-19 Pandemic has been one of the single-most catastrophes to have hit humankind in recent times. In May 2022, the World Bank, UNESCO and UNICEF labelled the pandemic as the 'worst education crisis on record.' From its onset from end March 2020, the pandemic has changed our lives almost irrevocably. Amidst the trail of trauma, deaths, disabilities, retrenchments and school/college dropouts, which the disease has left behind, the health, employment and educational sectors have perhaps been the worst hit. According to sociologists, the fact that higher education had irretrievably been disrupted for more than two years at a stretch have had a devastating impact on the academic community worldwide.ⁱ

Following the guidelines issued by the WHO, countries across the world were compelled to shut down all institutions of mass gatherings, ranging from primary schools to universities, accompanied by the indefinite postponement of all academic year end exams cum competitive and entrance tests. This step was taken in order to slow down and contain the spread of the airborne virus across the globe, by segregating those infected with the disease. The fate of the final year students and those appearing for entrance exams was therefore particularly grim as the month of March happened to be the time when board exams in schools and semester exams, (at least in India and elsewhere), in both colleges and universities are generally held. The closure of educational institutions disrupted the structure of learning, assessment and examination which made the entire education system worldwide go through an unforeseen teaching - learning crisis, even as regular classes remained suspended, citing threat to the lives of learners and teachers alike. According to a UNESCO report, more than 90% of the total student population in the world was affected due to the pandemic during the initial phase of its outbreak, (affecting more than 285 million young learners in India alone).ⁱⁱ

Since then, the educational sector has been fighting hard to survive the crises. In fact, not only has the teaching/learning cum evaluation methodologies been completely altered by this pandemic, the almost overnight shift from classroom teaching to an online mode, have impacted the lives of students, teachers and even administrative/office personnel, in ways more than one. This paper thus seeks to explore how the

pandemic has impacted the higher educational sector worldwide as well as the opportunities and challenges that it has also thrown up in the process.

I would also like to harp on how the Higher Educational Institutes (henceforth HEIs) across the globe have already, and are still trying to figure out ways and means to forge ahead despite the changing times, even as they try their level best to comply with the new normal that has by now become permanent fixtures in their daily academic routines.

Opportunities

The most obvious change in higher education institutions is the realization of digital transformation and online curriculum delivery. Hence, adverse effects notwithstanding, the pandemic has undoubtedly enhanced digital literacy manifold. People, of all age groups, across the globe, started learning and using digital technology, almost compulsively. By sharing instantaneous information worldwide, electronic media helped make the world stay connected. Students have in fact started preferring Open and Distance Learning (ODL) modes that border on self-learning. In fact, the post-COVID scenario has seen undergraduate and postgraduate pupils along with research scholars turn into student-consumers, almost spoilt for choice, having a plethora of educational options, digital tools and other technological wherewithal before them, that did not exist so widely prior to the pandemic. ⁱⁱⁱ There are in fact reports indicating that universities in the West have already started utilizing Metaverse as a platform to enhance the learning experiences of students. Amid such global trends, digital universities and virtual laboratories are being encouraged in the Indian higher education system too to promote digital education as envisaged by the National Education Policy (2020). The push towards digital education exemplifies the advantages over space and time as phrases with suffixes 'e', 'online', 'smart', 'digital', and 'virtual' are believed to be the new panacea.

Interestingly however, while 'online' education started in 1989 with the University of Phoenix establishing a fully online collegiate institution providing undergraduate and postgraduate degrees, the 'online' mode remained supplementary to the regular mode of service delivery. The Massive Open Online Courses (MOOCs) too had begun to appear from 2008 onwards, followed by skill enhancement courses of various kinds.^{iv} Be that as it may, the widespread digital transformation following the Pandemic, understandably enough, improved sustainable digital development in higher education, even as it encouraged new learning approaches, (distance learning and blended learning included), to create sustainable values and 'digital resilience.' The sudden transition to the online mode moreover, opened umpteen opportunities before HEIs for innovation in virtual mobility as well as international collaborative researches. Virtual modalities thus gained space to create international environments for the dissemination and co-creation of knowledge, even while it stimulated interest in new digital technology. ^v

Faced with almost existential crises, HEIs across the globe began exploring the digital space to fight the academic impasse. In a bid to encourage students to learn digitally, HEIs in India in particular, sought to make E learning accessible for all, especially for those coming from marginalised, underprivileged and remote sections of society. The UGC, MHRD made teaching/ learning materials freely and widely available for all stakeholders through learner -centric online platforms like E-Gyankosh, Gyandhara, E-Adhyayan and MOOCs especially conducted by Swayam. Particularly significant was DISHTAVO, the Goan Government initiative wherein students could directly watch lecture videos and download reading material related to it from the online portal. Such digital innovations thus encouraged personalized learning considerably. ^{vi}

Many have thus come to view the pandemic as a trigger that helped legitimize online, blended and hybrid courses in tertiary education. Scholars suggest that online learning helps boost retention of information and even take less time. One in fact foresees sophisticated forms of hybrid campuses for the near future, with education becoming more flexible, creative, innovative, and prepared with alternatives. ^{vii}

Intriguingly enough, the pandemic has been hailed as a great leveller of sorts in the academic world by some. Though the hitherto poor quality of education in the emerging countries has for long made universities in the global north more attractive for students, with their major destinations being France, Canada, the US and the UK, yet with the pandemic affecting face-to-face teaching, following government bans on non-mandatory journeys and closed borders, HEIs in emerging countries, started imparting quality education online for home students, who would have otherwise studied abroad. Alongside this however, international branch campuses of some of the leading HEIs were also being opened in many emerging countries to attract prospective students. ^{viii}

Flexibility in higher education has therefore, not unnaturally perhaps, become the new mantra for HEIs as it now encompasses flexible teaching, flexible delivery, distributed learning, networked learning, open learning, online learning and of course, e-learning. Besides, while blended learning for students can provide them with additional learning time and positively impact their self-efficacy and better academic performance, they would also be granted more autonomy in developing their creative thinking and innovation skills in their learning process.

Challenges

While there are opportunities galore for HEIs to thrive in the post-pandemic scenario, there are indeed several challenges before them as well, in the form of transforming to a new curriculum, pedagogy, and educational management, which have been much more problematic than merely changing the instructional delivery systems. ^{ix} For one, although HEIs across the world are facing similar problems due to the pandemic, but those hailing from emerging countries with scarce resources and poor infrastructural capital, are faced with more acute problems of having to adapt and transit to online learning, compared to their counterparts belonging to the developed countries of the world.

The fact remains that one of the most challenging developments in education over the last few years, has undoubtedly been its accelerated digital shift. The digitalisation of education became a necessity in order to provide seamless education during the lockdown. And yet, digital learning has unfortunately been detrimental to the interests of those HEIs situated at remote places equipped with abysmal E connectivity and inadequate infrastructural setups.

With the Covid-19 pandemic accelerating the implementation of online education across all stages, debates over the suitability, accessibility, and feasibility of online education garnered the attention of people in general and academia in particular. While the acceleration of online education provides impetus to the growth of EdTech companies, the online mode itself seems to change from being a substitute for the regular or traditional system, to a competitor ^x

Additionally, most HEIs operate in adverse conditions thanks to overcrowding and deteriorating physical facilities such as laboratories, lecture theatres and student accommodation. The financial implication of using the internet is accentuated with many having to buy more data to engage with teaching and learning. Also, the power supply in emerging countries possesses a challenge which invariably affects the overall teaching/learning processes. In fact, the lack of access to electricity and the unreliability of electricity supply,

is a factor inhibiting their progress and development in this part of the world. The unbundling of HEIs' services and costs have therefore already become an integral part of COVID-19's higher education legacy.

Many developed countries too have students hailing from various disadvantaged backgrounds, including cultural minority groups, low income, migrant and indigenous families who have hardly benefited from the use of new online platforms. The impact of the home literacy environment on student engagement, parental educational level, socio-cultural and economic conditions of these countries also poses additional challenges. The pandemic has therefore exposed multiple levels of inequalities which in higher education include differential treatment of students based on their background, closed access to knowledge and research results, unevenness in global patterns of research collaboration, and lack of access to the basic requirements of digitalized higher education such as devices, internet access, and electricity.

Besides, since students of particular HEIs hail from diverse socio-economic backgrounds, the inability to avail the facilities of digital technology on the part of a substantial disadvantaged section from amongst them, has given rise to a sense of discomfiture, shame, frustration and apathy in them, causing them to feel segregated from the mainstream, creating thus an unbridgeable digital divide between them and their more fortunate counterparts. Thus, higher education which had hitherto otherwise been a leveller of sorts, had after the pandemic become an yawning divider. ^{xi}

The pandemic witnessed a surge in mobile applications followed by virtual meeting platforms like Zoom, Google Meet and Google Classroom, all of which became the new venues for conducting virtual teaching. By directing teachers to engage classes through these online platforms, the HEIs ushered in a further set of woes. The new teaching methodologies required considerable time and effort on the part of teachers to master. While teachers, already overburdened by household chores, (as helping hands seemed unavailable throughout the lockdown) tried their best to elicit the waning interests of a bored and nonchalant faceless mass of students, the latter too found it difficult to remain attentive given their limited mobile data and the remoteness of the entire exercise.

Student stakeholders were in fact faced with an unforeseen 'educational emergency.' While the lack of student involvement during the online classes, followed by their absenteeism (several students joined online classes simply to mark themselves present!) and poor performance, made online teaching/ learning effete, the fact that several entrance tests and job recruitment interviews got cancelled or indefinitely postponed, made students face the growing crisis of unemployment, which reduced their academic interests even further.

In addition to this, research shows that even the mental ill-health of students had risen since the beginning of the pandemic. In fact, several surveys report increased clinical depression, an increase in generalised and social anxiety, eating disorders and an increase in alcohol consumption among youngsters during the pandemic. Student polls likewise reveal that students began considering their well-being their most significant challenge, post-pandemic. Besides, there also existed an affirmative connection between the fear of COVID-19 and generalised anxiety among foreign students studying in China in particular. In fact, the isolation, disruption and insecurity that was part of students' lives during the pandemic restrictions, laid bare, perhaps, mental and emotional issues that had already existed but were either not addressed or treated before the pandemic struck.

Research, one of the cornerstones of a country's development prospects, was also widely affected by the pandemic. In fact, although access to knowledge did widen, yet resources were mostly geared towards COVID-19, even as fieldwork remained disrupted. Female academics, early career researchers and PhD students were the most vulnerable regarding job placements and stability. The major impact on internationalization was on physical academic mobility, with international student mobility been disrupted irrevocably. Students faced multiple challenges related to visa issues and repatriation in particular. Some even became soft targets of xenophobia and mindless discrimination. The fact remains that millions of students

across the globe, were forced to abandon their higher education goals because of the uncertainties the pandemic created.

The fact that the pandemic resulted in disturbing trends in the academic scenario vis-a-vis students' lived realities thus goes without saying. Several studies in fact indicate that the greater impact of the pandemic on diverse student groups across the world, stemmed from their increased fear of a possible impact on themselves and/or relevant people in their immediate environment, on a physical, psychopathological and emotional level, vis-a-vis psychological inflexibility, personal or family economic-labour uncertainty, transfer of their place of residence, or social distance caused by the pandemic - factors which perhaps could not be sufficiently compensated by the social support received in the face of severe stress. In terms of work-life balance, results revealed that the pandemic had greater negative emotional effects on students, caused particularly by a possible delay in completing their studies and the loss of relationships that often resulted from a lack of physical, interpersonal communication. The impact of the pandemic upon basic lifestyle processes also resulted in eating and sleeping disorders, noticeable specially in women, that crept from their changes in lifestyle, unstable economic resources, social distancing and most importantly, having to work from home and for home 24X7.

Thus while overall services, the quality of instruction and institutional finances were considerably impacted, (with people lacking previous experience of teaching and learning in virtual environments), especially as virtual delivery remained dependent on the availability of infrastructure, the mental health of students, faculty and staff became a major concern for all.

The uncertainty and unknown environment brought by the pandemic presented new challenges, particularly in terms of teaching practices and stakeholder engagement. While many non-tech-savvy academics found it difficult adjusting, others were simply forced to accept the new academic environment, where boundaries between work and family life remained increasingly blurred and inconsistent, rather than synergistic. In several HEIs in fact, the concept of space has thus shifted from one that had been physically open to society and students, to one that is now controlled, closed, and empty, with little intellectual engagement.

The Way Forward

With HEIs in general remaining unprepared for the COVID-19 disruption, it was left to good management practices, based on flexibility, strong communication, crisis team creation, digitalization and remote work to repair the damages that the pandemic had unleashed. Although the unknown possible outcomes brought by the pandemic posed such a rapid challenge that higher education leaders had little time to assess, evaluate, and make informed decisions, yet the pandemic provided a unique opportunity for educators and policymakers to rethink education systems and reimagine what was important, necessary, and desirable for future generations. In short, the HEIs were faced with little alternative other than chalk out the best possible way forward for themselves.

Before the emergence of COVID-19, the education industry was known as a global service delivered by quasi-companies in an increasingly complex and competitive knowledge marketplace. Yet, the challenges thrown up by the pandemic necessitated numerous calls for strategy research in higher education institutions. In fact, the diffusion of digitalization that happened during the pandemic, opened up new opportunities before HEIs to adapt digital transformation to produce a new roadmap for online modes of teaching and learning. ^{xiii} For

one, it became increasingly challenging for HEIs to have a smooth continuation of curriculum delivery, ensure quality education and create pedagogies to build students' sustainability consciousness during the pandemic and even after. Several HEIs are in fact still working untiringly to develop a resilient recovery model to improve their ability to adapt to threats posed by the pandemic, as that alone would enable them to survive, cope, and thrive in the future. HEIs have now felt the need to interact with individual students, their families, and the environment, while empathizing with the underlying stressful experiences of students, faculty, researchers, and other stakeholders.

With 150 country-wide closures of educational institutions in India alone, several HEIs both within and without, adopted learning via a virtual platform and continuously adapted to new and innovative educational management, curriculum, and pedagogy during this 2-year pandemic. For example, changes have been observed in teaching, learning and assessment experiences, mobility, mental well-being, graduate employment, and even the meaning of education. Online education is no longer just an optional appendage of the learning process; it has now become the mainstay of education. ^{xiii}

The impact of the pandemic on campus and the need to ensure the safety and health of teachers and students are thus causing most countries to shift their teaching methods from face-to-face to online. Lecture classes were delivered primarily using pre-recorded lecture video clips or live online lectures. Regular live online discussion sessions were arranged to guide the students in self-directed learning. The 'new normal' of online and blended learning approaches thus promoted learner-oriented and self-directed learning. More importantly, it has become as effective as conventional classroom learning. Students' academic performance did not vary significantly in most courses compared to the results before the curriculum change due to COVID-19.

HEIs have therefore had to face multiple challenges of sorts. They need to invest significantly in their digital infrastructure to match the requirements of a modern education experience. Lessons learnt during the period of forced adoption of distance education will inevitably be used by HEIs to enhance and expand online learning provisions. This shift to a hybrid mode will be driven by the investments the HEIs have made in distance education and the increased familiarity of the students, staff and institutions with e-learning. Following on from new digital developments, the new model of education delivery thus involves a blended online and in-person experience. Several HEIs had been compelled to make the necessary changes to their teaching and learning delivery system as a result of the pandemic, by making the necessary technological investments by way of implementing software that supports long-term hybrid or blended education delivery, that definitely looks set to stay.

Besides, HEIs, need to take into reckoning several factors. E-learning infrastructure and cognitive competence of individuals in using technology in the online learning process are important. For one, educators and students must be self-trained, effective, and committed to using technological applications and devices. HEIs must therefore combine the usage of technology, optimize human interactions, and personalize instruction to future-proof themselves to stay relevant and provide the education needed in the coming days. Furthermore, advanced technology can also replace much of the monotony of administration as it can energise staff and free them up to spend more time with students and colleagues, while making their jobs more effective through big data, artificial intelligence, statistical analysis, and trend forecasting, all of which will revolutionize the role of the HEIs as repositories of knowledge.

Moreover, while the financial implications of the pandemic on HEIs across the world needs to be reckoned with, the urgency of addressing inequities must be equally prioritised as HEIs begin to create a more equitable post-pandemic world and plans for regular, holistic interventions so as to foster greater inclusivity, and

connectivity. Moreover, internationalization for the higher education industry may no longer be what we used to imagine before the pandemic. In fact, more institutional and national efforts are now needed to introduce diverse strands of internationalization both within and without. Besides, access to international learning experiences need to be further expanded through incorporating virtual student mobility into the learning process.

According to Global Research Study and Trends, “the impact of the pandemic is keenly felt across the globe, especially by students.... COVID-19 has negatively impacted student engagement.... it has affected the work/career readiness of students and that more students are falling behind in their studies.” Besides, since the pandemic has constrained the accessibility and feasibility for lecturers and pupils to execute conventional physical laboratory sessions, virtual laboratories have been proposed instead, equipped as they are with simulation software, Augmented Reality and Virtual Reality capabilities (which had already been widely employed in practical training for high-end technology and hazardous environments even before the pandemic), to complement face-to-face interaction between students and lecturers, as they are still the best option to enrich the students’ hands-on experience in the axis of cyber-physical extent.

Collaborative online international learning has in fact been adopted as an innovative and cost-effective pedagogical approach to provide students with global learning opportunities ‘at home,’ even as they interact with peers from international universities in developing intercultural competencies and digital skills while co-learning together. Besides, internationalization through flexible online teaching delivery approaches encourage diversity and global learning among co-learners through inbound and outbound virtual mobility and student exchange, which again encourages talent development and global citizenship competency, besides honing personal and soft skills especially in communication and problem solving.

In the post-pandemic era in particular, the mental health and emotional needs of students have also moved to the forefront of HEIs’ concerns. New centres are in fact cropping up within several university campuses, dedicated to studying depression among community college students, funded by the National Institutes of Mental Health on a global basis. The pandemic thus presents a wakeup call for HEIs to invest in their infrastructural cum technological facilities, enhance student experiences, reevaluate their pedagogical practises and online teaching resources. Teachers should be provided with the skills and knowledge to undertake online lectures and innovate student engagement practices. Specialised programs such as tourism, travel, technology, Artificial Intelligence, Machine Learning and Data Analytics should also be prioritised.

Design practitioners have long-shaped campuses on the belief that the built “environment is the third teacher” and that architecture fosters learning and shapes collective experience. Educators recognize that a multiplicity of formal and informal interactions occur frequently and naturally across campus, supporting cognitive and social development, collegiality and well-being. Even today's digital-native-students perceive the inherent value of real interpersonal engagement for meaningful experiences.^{xiv}

For all practical purpose, the COVID-19 outbreak has facilitated a unique opportunity for curriculum change in higher education even as it became more flexible and learner-specific. Traditionally - valued knowledge and skills became less important, with repetition and memorization of knowledge or skills relevant to gathering, storing, and retrieving information becoming redundant. Instead, outcome-based education, based on skills connected to critical thinking, creativity, curiosity, collaboration, entrepreneurship, growth mindset, and global competence are becoming the new academic mantras.

Finally, the long-term target for HEIs is to ensure that the sustainability of operation and performance are in place for which they need to understand the impact of current global socio-economic and environmental demands and learn how to bridge the sustainability gap through rewiring the economy and good leadership

to achieve positive change. They also need to develop action plans for integrating sustainability to ensure long-term value creation as well as skills and knowledge to apply design, innovation, and leadership competencies within the university ecosystem. Building 'The Campus of the Future' thus requires repurposing and adapting existing infrastructure to online requirements as well as focusing on the digital tools and technologies needed to improve the students' journeys. These new developments however bring additional challenges especially around cybersecurity that HEIs need to prioritise too, given the fact that students have been spending increasingly less time on-campus.

Student mobility patterns over the past two years also reveals that student-consumers will henceforth get themselves enrolled in HEIs that offer hybrid forms of curriculum delivery, i.e. both online and in person. HEIs equipped with robust digital capabilities would henceforth become their chief catchment areas so as to obtain concrete returns on their educational investments. Student-consumers have by now become solely interested in how the HEIs can be of assistance to them vis-a vis their future employment opportunities. As Michael Huseby, (CEO of the online book-store Barnes and Noble) has contended that 'higher education students, post-pandemic, want an academic experience that is both flexible and personalised,' almost an uncomplicated value-oriented educational experience.^{xv}

In fact, the three major changes that crept into our education system following the pandemic were - developmental, personalized, and an evolving curriculum; pedagogy that was student-centred, inquiry-based, authentic, and purposeful; and instruction delivery that capitalized on the strengths of both synchronous and asynchronous learning. There is indeed a growing need to explore how to be flexible in developing personalized and alternative learning (such as a flip classroom), future assessment modes (including authentic assessment), and teaching practices that foster 'uncertainty tolerance' to create a more holistic education system for the future. The pandemic has in fact presented us with several opportunities to proactively implement changes to create inclusivity and strengthen institutional resilience for the betterment of the education industry. Sustainability, has presently become the new mantra for all HEIs, as it concerns transformative learning that promotes attitudinal, behavioural, and societal change. Long-term educational sustainability includes environmental and international networking, which in turn can future-proof HEIs from possible pandemics and socio-economic disruptions in the coming days.

Conclusion

By way of conclusion it can therefore be said that from Wuhan to our very own doorsteps, the Covid 19 pandemic has hit us all, badly indeed. The outbreak has resulted in unprecedented measures taken by most countries in the form of travel restrictions, ban on social gatherings, working from home and social distancing. The socio-economic cum psychological well being of people in general has gone haywire, even while the fate of students have hung in balance. With life itself coming to an abrupt halt, the educational sector in particular has suffered irretrievably for almost two years at a stretch. The digital divide has posited education, especially higher education beyond the reach of the fiscally marginalised, who are in the majority across all developing and underdeveloped nations. The pandemic has turned the lives of school, college and university students topsy-turvy, wreaking havoc in the careers of many among them. And yet, although the pursuit of educational goals for many has definitely taken a backseat with HEIs having to cope with a series of endless challenges, yet the brighter side of the lockdown cannot be completely overlooked.

There are in fact several benefits from the pandemic as one moves from homogeneity to heterogeneity to create value-based co-creation activities for all stakeholders concerned. In fact, the impact of the pandemic on higher education has indeed been diverse, profound and different for each institution and country, most of whom

have mostly been resilient and readily adaptable to changes. Additionally, two important factors stand out to show that the ill-effects of the pandemic on higher education are but ephemeral in nature. Firstly, the rapid return to in-person teaching and learning and the stabilization of enrolment patterns suggest that the changes between 2020 - 2021 have not led to a fundamental transformation in higher education. Secondly, the resumption of academic-related travel also points to the re-emergence of pre-pandemic era trends when it comes to the internationalization of higher education. Hence, inter-university global collaboration is a definite positive outcome of the pandemic. If inter-university activities focused on the franchising and joint degree program models in the past, COVID-19 has resulted in a more personalized form of collaboration from joint teaching to joint research involving various universities globally.

The impact of COVID-19 on higher education cannot therefore be overemphasised. The changes coronavirus has caused, are in fact here to stay. Just as there is no denying the fact that the pandemic has drastically altered the educational system, with online distance learning and emergency remote teaching becoming the norm, and physical in-class teaching and learning becoming the exception, so too has it opened before all stakeholders, new pedagogical vistas to explore and innovate. In other words, the pandemic has changed not only the utilization of technology in education but also the pedagogical strategies for the future. Moreover, whether or not the pandemic has led higher education to emerge as a leveller or a divider in the academic fraternity are questions that need to be addressed forthwith. In a world of digital transformation, disruptive technological innovations, and accelerated change, the university system must strive to overcome the situation to remain competitive, relevant and capable of providing high-quality education.

All said, the impact of the global pandemic has changed our once familiar world which perhaps will never be the same again. The pandemic has especially impacted HEIs belonging to the developing and emerging economies of the world, saddled as they are with underlying economic challenges, poor infrastructural set ups, scarce government support and low literacy rates. There is in fact no denying the fact that the pandemic has resulted in a radical transformation of our entire education sector, necessitating new strategies for HEIs to adapt, accommodate and re-position their programs and courses in keeping with the changing times.

Endnotes

- 1 ⁱ (<https://coed.dypvp.edu.in/educational-resurgence-journal/documents/jan-2021/22-27.pdf>) (Accessed on 20.03.2023)
- 1 ⁱⁱ *ibid*
- 2 ⁱⁱⁱ *ibid*
- 3 ^{iv} https://www.researchgate.net/profile/Gurumurthy-Kasinathan/publication/365823123_Shiksha_Vimarsh_Special_Issue_on_Education_and_Technology_-_Digantar_and_ITfC/links/6385b94c48124c2bc67f971b/Shiksha-Vimarsh-Special-Issue-on-Education-and-Technology-Digantar-and-ITfC.pdf#page=33 (Accessed on 24.03.2023)
- 4 ^v *ibid*
- 5 ^{vi} *ibid*
- 6 ^{vii} <https://journals.sagepub.com/doi/abs/10.1177/23476311211007261> (Accessed on 14.02.2023, 23.46 pm)
- 7 ^{viii} *ibid*
- 8 ^{ix} <https://www.frontiersin.org/articles/10.3389/feduc.2022.992063/full> (Accessed on 14.02.2023, 23.51 p.m.)
- 9 ^x *ibid*
- 10 ^{xi} *ibid*
- 11 ^{xii} *ibid*



- 12 ^{xiii} [*ibid*](#)
13 ^{xiv} <https://www.emerald.com/insight/content/doi/10.1108/ARCH-10-2020-0245/full/html> (Accessed on 25.3.2023)
14 ^{xv} *ibid*