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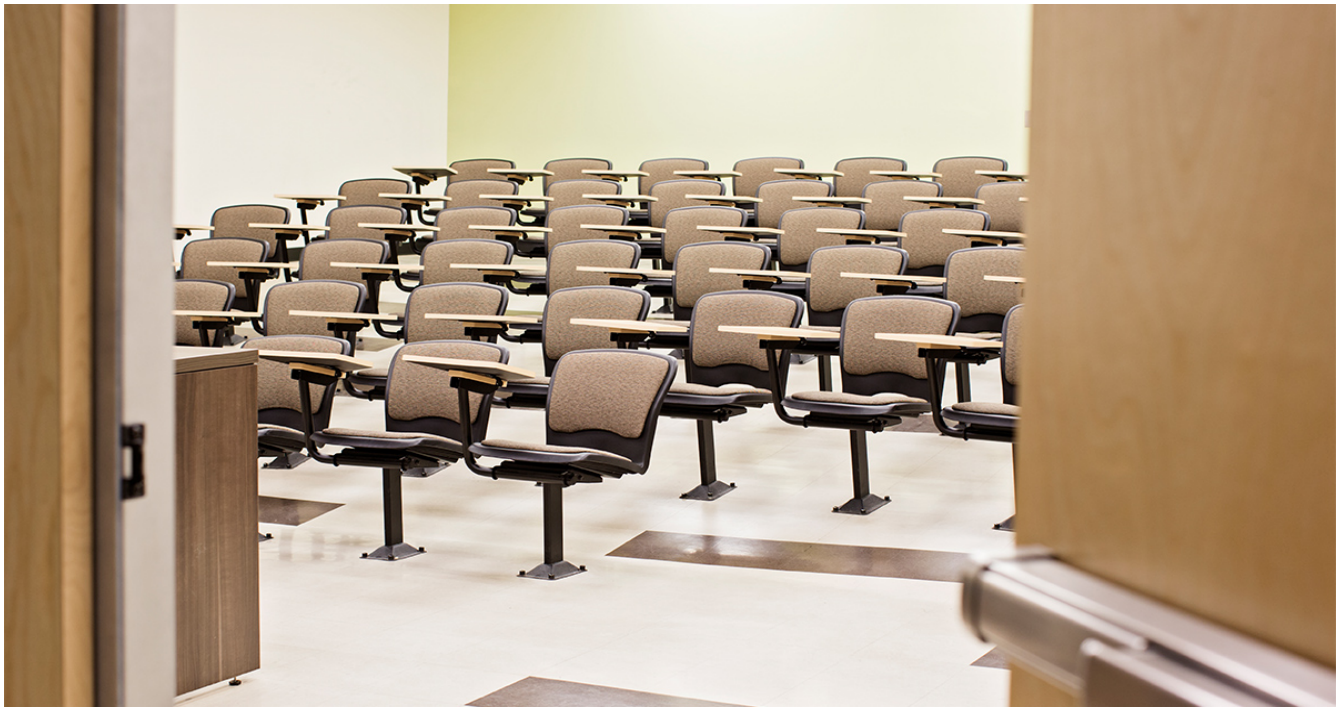


COVID 19 LEARNING LOSS IN HIGHER EDUCATION

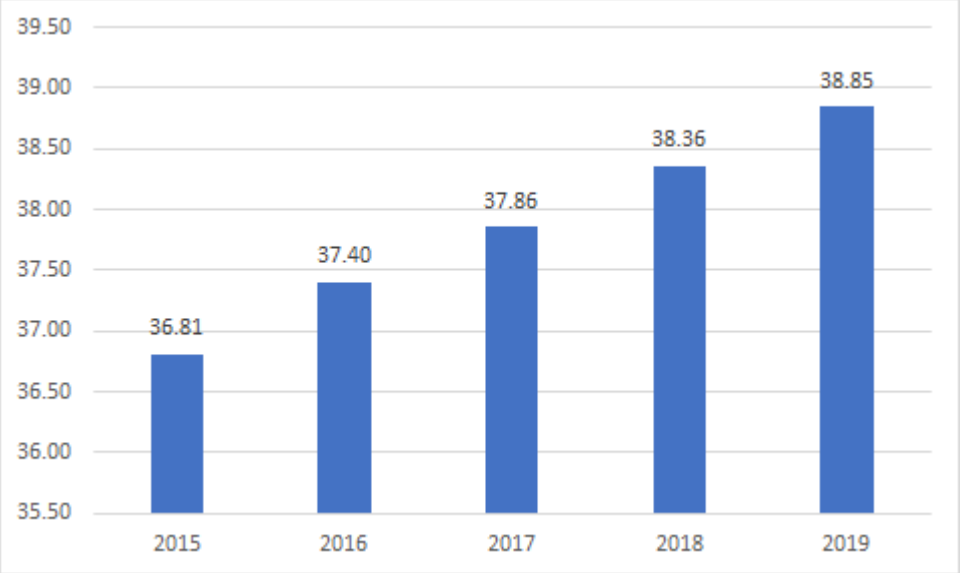
A report by
TeamLease Edtech

July 2021

LEARNING LOSS IN HIGHER EDUCATION

The COVID 19 pandemic has had a severe impact on 220 million students as universities in 175 countries closed their premises and countries shut their borders. Although higher education institutions were quick to adopt lectures with online learning, these closures affected learning and examinations. Perhaps most importantly, the crisis raises questions about the value offered by a university education. Looking at the enrolment in the sector, the global gross enrolment ratio at higher education sector represents 38.85% (Estimation based on the data from World Bank).

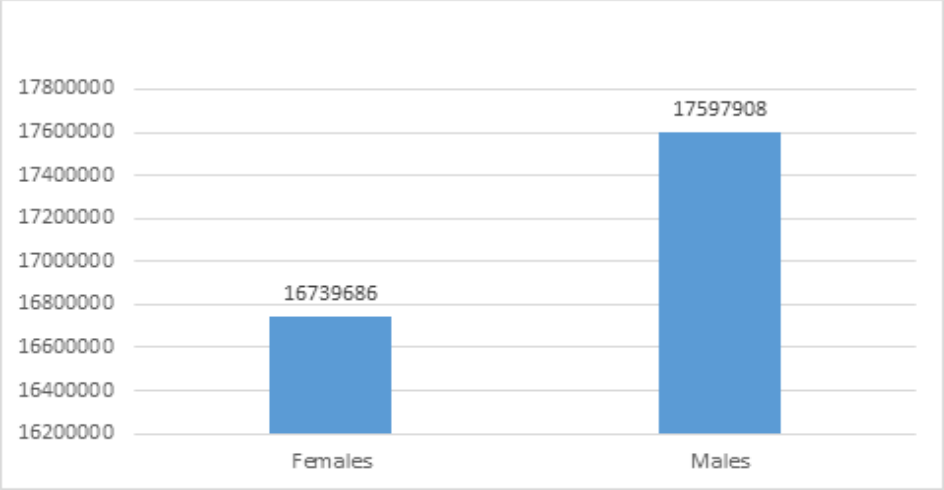
Fig 1: Global GER of Higher Education



Source: World Bank, 2020

The closed institutions which led to online education posed challenges in remote delivery in terms of equity, broadband capacity, pedagogic capacity, infrastructure etc. Other forms of learning (can it be called as learning?!) from email delivery of contents, assignments, TV, radio and mobiles for independent study experimented globally with off-site learning potential. Disruptions caused by the pandemic and the deficiencies from the education institutions affected 23.8 million Children and youth (from pre-primary to higher education) dropped out from the system and witnessed the learning poverty of 63%.

Fig 2: Global affected learners of Higher Education



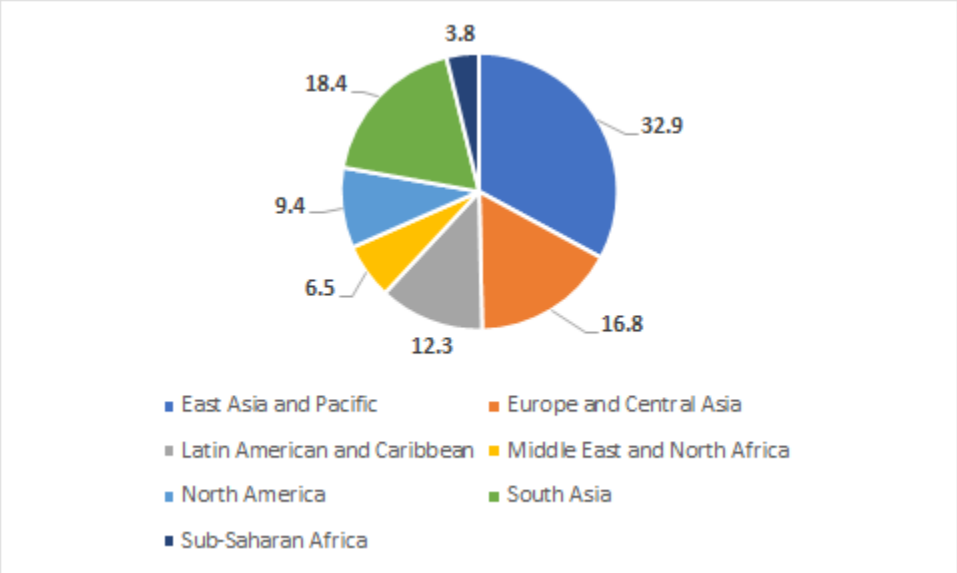
Source: Global monitoring of school closures, UNESCO, 2020

Table 1: Total No. of out of higher education students (in millions)

Region	Out-of-school higher education students	Total higher education students
East Asia and Pacific	72391442	73538139
Europe and Central Asia	36948326	38030033
Latin American and Caribbean	27007997	27111868
Middle East and North Africa	14282666	14282666
North America	20640820	20640820
South Asia	40468782	40468782
Sub-Saharan Africa	8399127	8533188
Grand Total	**220139160**	**222605496**

Source: The COVID-19 Crisis Response: Supporting tertiary education for continuity, adaptation and innovation, World Bank Group, 2020

Fig 3: Out of school higher education students (in %)



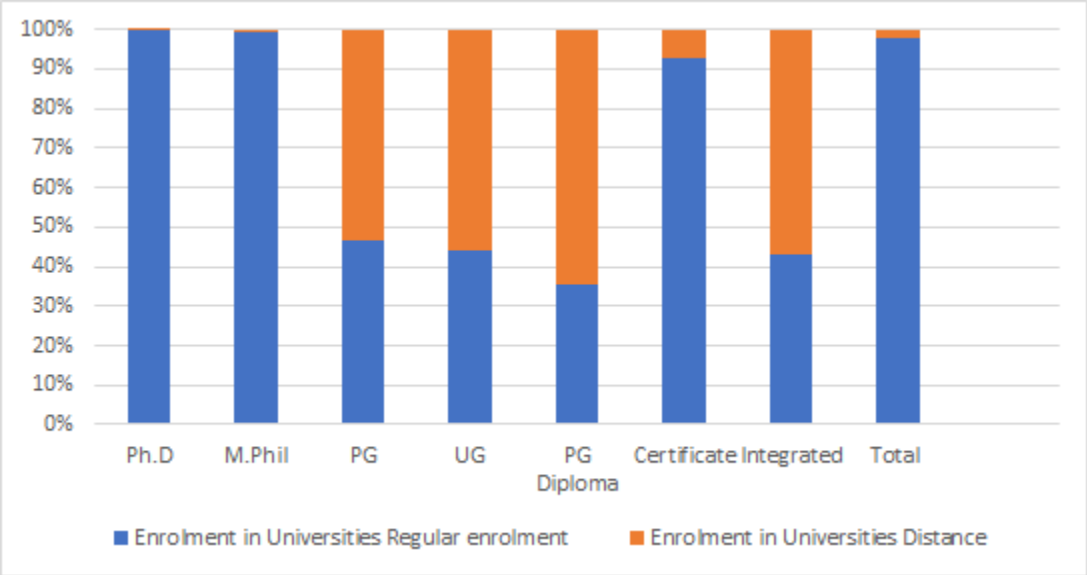
A rapid assessment of the experiences of COVID-19 disruption to higher education globally exposed many significant short- and long-term challenges facing higher education systems and institutions, including: diminished resources for institutions, personal and academic challenges for institutions and students, demand for improved infrastructure to support continued distance and blended learning models, reduced mobility placing pressures to improve regional and local higher education institutions, and much more. The rapid assessment of COVID-19 disruption to higher education globally exposed many challenges such as academic challenges for institutions, teachers, students, demand for improved infrastructure to support continued distance and blended learning etc. In technical and vocational education and training systems, vulnerabilities including low levels of digitization and long-standing structural weaknesses have been brought to light by the crisis. In higher education, an overall learning was generally taken place through recorded lectures and online platforms and some of the educational institutions postponed the learning/teaching due to the lack of IT infrastructure.

According to the UNESCO GEM Report 2020, 40% of the poorest countries fail to support learners at risk during the crisis. The most vulnerable learners, especially girls, refugees and forcibly displaced children are among those who have poor digital skills and least access to the hardware and connectivity required for the distance learning. The research team from Canada estimated that socio-economic skills gap increased by more than 30% due to COVID-19.

LEARNING HIT IN INDIA

As per the All India Survey on Higher Education (AISHE), 2019-20 released in June 2021, the student enrolment has grown by 11.4% and female enrolment by 18.2% from 2015-16 to 2019-20. According to the report the total enrolment in higher education stands at 3.85 crores in 2019-20. The gross enrolment ratio is 27.1%.

Fig 4: Enrolment in Universities



Source: AISHE, 2019-20

The highest number of students are enroled at Under Graduate level across India. Similar situations could be observed in States/UTs. Out of the total enrolment of 3,85,36,359 students, a vast majority of 3.06 crore students are enroled in Under Graduate that is an approx. 79.5% of the total enrolment. On the other hand, second to Under Graduate, 11.2% students are enroled in Post Graduation which is approximately 43.1 lakh students.

The rapid spread of COVID-19, Government of India finally showed alarm and began shutting the entire country, 998 Higher education institutions were not the exception. These campus closures certainly helped prevent the spread of the virus, but forced the colleges and universities to operate in unfamiliar ways, spend significant sums to rapidly shift to online instructions and suspend other academic activities including research. To assess the extent and kind of academic regression among students, we conducted a research survey with 700+ students from across the country. The survey covered the very two important aspects – loss of learning as estimated by higher education students and another as estimated by educators and higher education administrators. A rigorous assessment depicts that the learning loss is

between 40-60% which is double the learning poverty estimated by World Bank and learning loss of G7 countries. Accordingly, to bridge the learning gap, the Higher education sector may approximately take 3 years. The conclusions of the survey are unsurprisingly alarming.

Table 2: Comparative analysis of learning loss between G7 and India

Countries	No. of Universities*	No. of higher education Students (in millions)*	Total duration of Institutions closures (in Weeks)**	Estimated learning loss (%)
Canada	370	1.6	51	-
France	631	2.6	12	**9.84*** **
Germany	464	3.1	38	**25#**
Italy	240	1.8	38	**31.16**** **
Japan	1014	3.8	11	-
United Kingdom	282	2.4	27	**20-31#**
United States	3254	18.9	58	**13.8#**
India	988	35.1	60	**40-60^**

*Source: * World Bank, 2020*
*** UNESCO*
 # - Obtained from the research
**** - Weekly learning loss 0.82 X Total duration of school closures – 12 weeks*
***** - Weekly learning loss 0.82 X Total duration of school closures – 38 weeks*
^ estimated by the survey of TeamLease Edtech

Data on learning loss during the lockdown are emerging slowly. Some of the countries assessed weekly loss to introduce remedial measures. In this direction, the United States is working on the 'Global Learning Loss Assessment Act of 2021'. The bill helps in identifying the scope of global education loss, one of the most significant factors in assessing the global education scenario. The act is emphasizing the need for USAID and its partners to promote inclusive education and to support education systems and safe reopening efforts. The bill would require an authentic and better reporting on the impacts of the COVID-19 pandemic on global

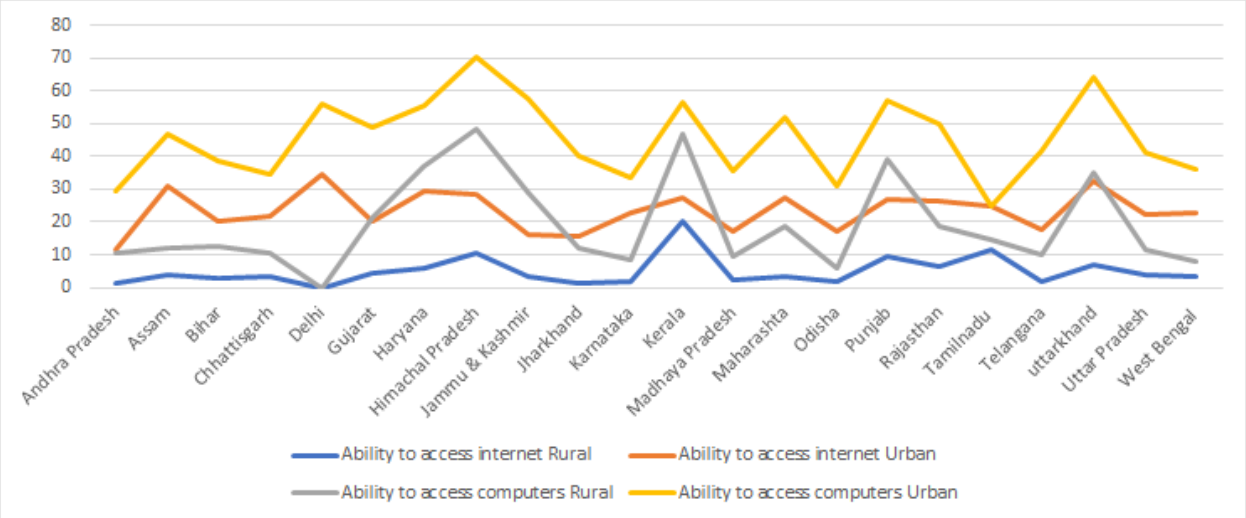
education. The outcome would help in conducting more research on assessment of the impact of COVID-19 by the respective countries.

FACTORS INDUCING THE LEARNING LOSS

1. DIGITAL DIVIDE HAMPERING THE LEARNING ACCESS

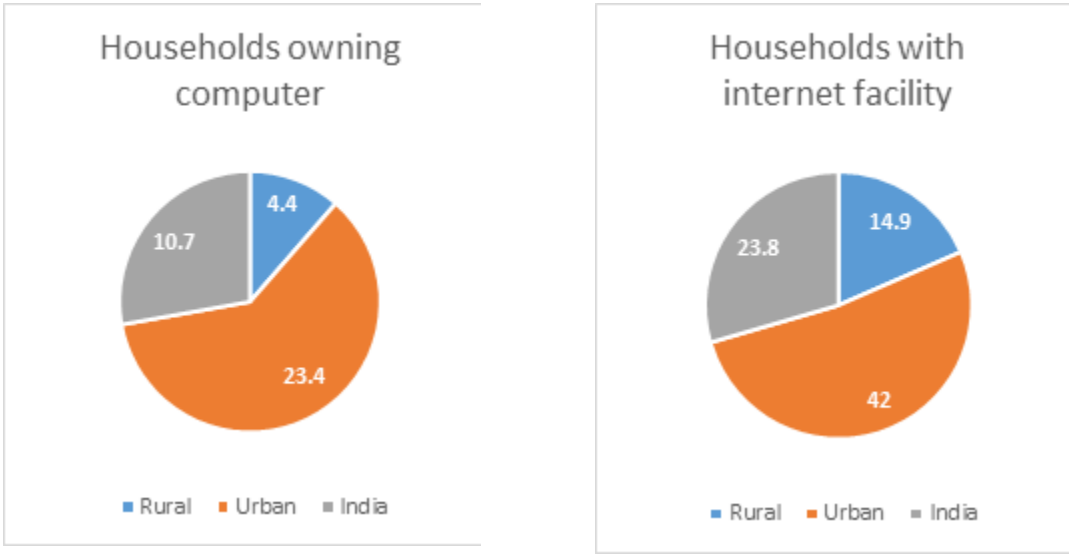
Universities require high-speed internet and education delivery platforms or learning management systems, besides stable IT infrastructure and faculty members who are comfortable teaching online. Students also need high-speed internet and computers/mobiles to attend these sessions or watch pre-recorded classes. In India, while this transition has been smooth for most private universities, the public ones are still adapting. While faculty grapples with new ways of managing this sudden transition to online education, students are left clinging on to their mobile phones and computer screens. However, while technology is enabling, it can also be limiting, especially in India, where basic access is a challenge. Not every student has a computer or fast-streaming internet at home. This leads to issues with attendance and participation in online sessions.

Fig 5: Ability to access internet and computers



Source: 75th round of NSS, 2017-18

Fig 6 and 7: Households owning and computer and Households with Internet facility



The 2017-18 NSS survey reported that only 23.8% of Indian households had internet access. Only half of the households (47%) have any access to the internet and a computing device. Only 12.5% of the households of students in India have internet access at home. Around 85% of students who belong to urban households and study in universities have access to the internet, only 41% are likely to have access at home and 28% from rural households are having internet access. 55% of children studying in universities are from rural households. Almost 5 million students constituting 15% of university level students stay in hostels. Due to lockdown, these students who are prospective recipients of online teaching have been asked to go back to their home, but almost 48% of them do not have internet access at home. This is the country's digital divide – a gap between those with the means and knowledge to benefit from the internet.

2. DELAYED RESPONSE BY THE REGULATORS AND POLICY MAKERS

Uncertainty around board exams has left the HEIs in a blur with regard to assessment and their admission processes. Most of the education institutes are yet to start their admissions. At present, higher education is regulated by the UGC and more than 10 professional councils. Centralize and hasten decision making by the regulatory bodies at most essential. Delayed decision making process by the regulatory authorities created uncertainties in the sector especially assessment and admission process for the next academic year. Almost immediately after moving to online teaching and learning, HEIs decisions about assessment, examinations etc. Many have struggled to decide how to

assess student learning, cancellation of final exams and on admission criteria in selection of students for the next academic year. A big concern has been to avoid increased cheating and plagiarism during online examinations. A timely decision making by the regulatory bodies would have given clarity to HEIs to address and implement the above in a rightful manner.

3. PRE-EXISTING HEALTH DEFICITS IN INDIAN UNIVERSITIES

- The lockdown in the country led to suspension of regular classes and cancellation of academic activities. However the effort of extending an online education by some of the universities was enabled. The sudden shift from classroom learning to digital learning did not come without challenges, the main one being access to technical infrastructure, competencies and pedagogies. While higher education institutions developed countries have managed to implement digital learning, India faced many challenges before shifting completely to digital modes of learning. The access to technical gadgets and infrastructure are some major reasons behind access to higher education. According to the survey conducted by QS-ERA in 2020, only few HEIs are using Moodle, Blackboard, MS Teams and Google meet for teaching but most of them depend on open-source platforms – WhatsApp, YouTube, Skype, Google Hangout, Zoom etc. However technology is enabling, but limiting access is a challenge. A survey by IIT Kanpur revealed that 9.3% of its 2,789 students were not able to download material sent by the institute or study online. Only 34.1% of them had an internet connection well enough for streaming real-time lectures.

- Almost immediately moving towards online teaching and learning, higher education institutions had to make decisions about assessment and examinations. India debated on how to assess student learning remotely, whether to postpone or cancel final exams and how to admit students for the next academic year. UGC released guidelines and advisories on COVID appropriate behaviour that educational institutions need to adhere to but they have not been provided with any financial aid. Online mode of learning is not only limited to lectures on video calling. In most webinars or lectures, teachers are facing connectivity issues due to lack of sufficient bandwidth and some teachers did not even have dedicated laptops. Furthermore, teachers face several barriers that affect online teaching in-home environment settings such as technical difficulties, lack of training, lack of institutional support, lack of technical support, lack of clarity and direction from their respective institutions, difficulty in course integration with technology, lack of basic facilities etc. Teachers are not having sufficient infrastructure like configured laptops, internet, microphones, etc. to efficiently impart education. Many teachers face connectivity issues, system

failure, and bandwidth issues while conducting online sessions and due to lack of technical assistance, they are unable to resolve problems.

- The higher education sector has been underdeveloped and underfunded, the stress is related to increasing investment and ensuring investments on solid outputs. The budget of 2021 allocated Rs. 93224.31 crore to the education sector which is 6086.89 crore less than the previous year. Despite initiatives from the governments, there has not been enough expenditure on improving the digital infrastructure for remote learning. In fact, in 2020-21, the budget for digital e-learning was reduced to Rs. 469 crore from Rs. 604 crore in 2019-20. NEP proposed an increase of public spending on education to 6% of GDP.

- In the fight of the pandemic, India's universities have lagged behind and are still not on the frontlines. Many of the world's universities are in the frontline in building epidemiological models of the spread of the virus and involve themselves in the research models/activities while distancing themselves, but there have been no comparable breakthroughs from Indian universities and studies on India have been extensively carried out by foreign universities. The apathy towards higher education institutions has inevitably resulted in lower research output compared to other countries like China. Lack of funding or financial help from UGC during COVID, Indian Universities underline lack of digital infrastructure, lagging behind in learning, lack of digital training to teachers, undertaking of research activities, COVID management etc

- The higher education sector has been hit by substantial income loss. The rapid transition from traditional learning to online education has caused unplanned expenditures and additional spending on prevention measures. Altogether the outlook for the 2020-21 academic year is highly worrisome and long-term viability. In all, it has revealed structural weaknesses in the financing models of higher education systems and institutions. Private higher education institutions depend fully on tuition fee, international students, alumni funding etc. Many students with limited resources could drop out of higher education altogether or at least shift to more affordable public universities. It is realistic to expect a wave of mergers in the public and private sectors, and many private institutions may close their doors for good. Reduced public budgets, combined with the diminished likelihood of increased private funding, could mean that many students opt out of higher education, undermining institutions' ability to sustain the quality of teaching and research. Due to the high unemployment rate, the economy cannot absorb the growing number of university graduates, the situation will be even worse.

- Universities continue to operate online, research activities by these HEIs are lagging behind because of lab closures, field investigations due to travel restrictions. Data on research production shows that women academics were affected more seriously than men, reflecting the skewed division of labour.

STRATEGIC APPROACH TO MITIGATE THE LEARNING LOSS IN HIGHER EDUCATION SECTOR

1. A KPMG and Google study, done before the COVID-19 outbreak, estimated that the online education market in India was set to grow to $1.96 billion (Rs 14,836 crore), with 9.6 million users by 2021, up from $247 million (Rs 1,870 crore) and 1.6 million users in 2016. As per the estimations the online higher education market in India is USD 33 million in 2016 with approximately 55 million paid users. The coronavirus-induced lockdown further propelled the market demand for EduTech players. India has now emerged as the second biggest market for massive open online courses (MOOC) in the world after the US. COVID-19 has accelerated adoption of digital technologies to deliver education and encouraged the educational institutions to move towards blended mode of learning. The traditional face to face mode with post COVID-19 technology mode will lead the education towards a blended mode of teaching learning and transform the structure of the education system. The learning loss of 40-60% must be addressed by introducing blended learning. Since learning is not confined to classes or any specific boundaries students/virtual learners with one teacher leading dozens of students in the new age and the learning modules to be modified keeping in view of addressing the learning loss. To reduce the digital divide in India, expand broadband connectivity (inclusion of private players) and increase funding for existing programs such as Digital India.

2. The Higher education sector to be financially supported in terms of funds to help colleges and universities to support the cost of shifting classes to online, training of teachers and to strengthen the broadband capacity and reinforce campus network infrastructure. Student aid is at risk especially when it is in the form of loans rather than grants and scholarships because of the high unemployment rate for graduates.

3. Keeping in view the implementation of the NEP recommendations, specific guidelines with appropriate measures against COVID-19 to open the Universities to be issued. To achieve the time frames of several provisions of the NEP 2020, which were designed in a pre-pandemic, opening of Universities with appropriate measures are a dire necessity to accelerate the NEP implementation timeline from 15 years to 5 years.

4. The educators and learners of higher education sector to be trained to utilise the online teaching learning process. To increase connectivity for higher education institutions and their students, while helping universities to build their capacity to effectively deliver online

education. Teachers will continue to play a crucial role for the foreseeable future, and that teachers remain at the heart of the learning process. For teachers to facilitate learning effectively, they need to have sufficient subject content knowledge and mastery of core pedagogical practices, which many teachers currently lack. In addition to cultivating an ability to teach effectively using information and communication technologies, it is critical to develop teachers' digital pedagogical skills so they can critically assess when and how to incorporate digital tools. Introducing professional development programs prepares teachers for the future of learning to help them to cultivate socioemotional competencies in students and other skill sets and also provide personalized instruction and support for continuous and differentiated learning.

5. Teaching online does not mean simply recording a traditional lecture and posting it to the web or using a videoconference platform to deliver the same lecture online as the instructor would give on campus. Effective online education requires teaching and learning methods that engage students dynamically in an enjoyable and stimulating education experience. The pandemic has presented a great opportunity to scale up innovations that enable many active, interactive, and experiential modes of education delivery. Among these student-focused approaches are problem-based learning, self-learning, peer learning, team learning, the flipped classroom, and the use of simulations all of which can be used separately or in combination.

6. A flexible, competency-based curriculum is to be placed to prioritize skills and nurture learning to learn. Learning with purpose should be programmatically embedded in the curriculum. In successful systems, curricula are aligned to the needs of students and to ambitious but achievable expectations of what all students should master. Effective curricula also include flexible, competency-based approaches that nurture higher-order skills such as creativity and critical thinking and provide students with the means and channels to demonstrate achievement in acquiring cognitive, socioemotional, and digital skills. Student progress should be measured in terms of competencies acquired and knowledge mastered, rather than time spent in a given course.

7. Learners and teachers should have access to a wide range of high-quality, multimodal resources that support the shift to better pedagogical practices. The development of open-source education software with high-quality content has facilitated the process of identifying and sharing relevant learning materials. Interactive, adaptive digital resources can enable the shift to personalized learning by providing relevant content based on learners' level and progression. Technology could support better teaching, for example by allowing teachers to continuously assess student's learning and deliver individualized instruction. Big data and machine learning tools can help assess each student's level, map competencies, and track progress in open learning systems to provide personalized, high-quality digital content, facilitating the use of student-centered pedagogical practices that support learning in the school and beyond.

8. University heads must leverage technology and management information systems to manage more efficiently, support teachers effectively, and engage in data-driven decision-making.Familiarity with technology will become increasingly important for principals, because they will be required to make informed decisions about investing in, maintaining, and upgrading technology in their institutions.

9. To recover the learning loss of 40-60%, recovery programs to be introduced to receive the support that the students need to catch up to expected learning targets. Assessment of the needs to measure the extent of learning losses and to identify the students who have fallen behind to be addressed from these programs, helps in fine tuning the tutoring recovery programs to address the learning gap.

10. To ensure a resilient recovery, it is essential that the education budget be protected and the need for financing the most are supported. Funding and resources to support education institutions delivering remote instruction to be at most priority. To encourage students to remain in the education system, incentives such as scholarships can also be introduced.

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