Teaching Experiences of University Faculty during the COVID-19 Pandemic: Content for Teacher Upskilling and Perceptions on Career Progression

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Abstract

The COVID-19 pandemic has brought widespread disruption to the education system all over the world. While the policy advisory papers from international agencies recommend teacher upskilling, they have provided very little detail as to the content of such training. We report a survey of teachers in a university in north-eastern India that helps fill this gap in the literature. This survey was conducted to document their teaching experiences during the pandemic, their opinion of the skill sets they would need and their perceptions of the post-Covid future of the teaching profession. An online questionnaire was circulated to all the 86 teachers on Google Forms, of whom 51 (59%) responded. In spite of difficulties with internet connectivity, 70% of students attended 85-100% of their online classes, and 74% submitted their assignments and tests 85-100% of the time. About two-thirds of the teachers (66%) were satisfied with the ability of the students to manage their learning experience.

The respondents recognized and agreed with Covid-influenced trends that will shape the Higher Education sector will include increased use of Information and Communication Technology (ICT), blended learning, and more sharing of power between teacher and student. However, one-third of teachers (34.7%) felt that lectures would no longer be at the centre of learning though there was a large spread in the responses. Teachers indicated the need for a broad range of academic and other skills, most urgently in the use of ICT for course delivery, instructional design and pedagogy. Apart from these must-haves, the respondents expressed the need for personal psychological, emotional and social support and adaptations. While there was a mixed response about the future attractiveness of a teaching career, more respondents agreed that potential teachers would not be discouraged from entering the profession, while strongly agreeing that teacher roles would be enhanced. The results of the survey provide strategies and content for teacher upskilling programmes and teacher careers so as to meet the challenges of higher education teaching-learning.

Keywords: COVID-19 and teachers, faculty development, upskilling, ICT skills, online education, teaching career

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Introduction

The COVID-19 pandemic has affected education all over the world. Almost overnight, conventional education has yielded to hastily contrived models. The agility of institutional administrators and the ability of teachers to improvise has never been more challenging. These unprecedented changes in the education landscape have had wide-reaching effects. In certain parts of the world, education systems have almost collapsed, and even reputed schools and universities have struggled to adapt.

Any discussion about teacher careers in the aftermath of COVID-19 would necessitate a consideration of their teaching experiences during this time. This paper reports the teaching experiences of university teachers in a private university during April-October 2020, the first seven months of the COVID-19 pandemic. Their experiences reveal needs for upskilling, and have influenced teachers' perceptions about future teaching careers. The paper sets out the cataclysmic cascading effect of the pandemic on education, so as to provide the wider social and economic context in which education and teacher careers in the post-Covid era will be situated. The cumulative losses to education have been termed as "aggregate shock"[1] by UNESCO (Diop & Jain, 2020), with focus on future economic damage. Another UNESCO report details the adverse consequences of school closure such as interrupted learning, poor nutrition, social isolation, teacher stress, parental unpreparedness, rise in violence, and rise in dropout rates (UNESCO, 2021). In addition, Mansouri (2020) describes an ensuing discrimination and racism and reduction of transnational cooperation. Another report underscores the inadequacies and inequities across countries that have been further exposed by the COVID-19 crisis (Organisation for Economic Co-operation and Development, 2020)

Without a doubt, students are the hardest hit. A moving graphic on the UNESCO COVID-19 dashboard plots daily changes in the number of students affected worldwide. The number of students affected reached a peak on April 24, 2020, with 1,480,292,206 affected learners, representing 84.5% of total enrolled learners, across all levels of education. On that day there was a total closure of education in 166 countries (UNESCO, 2020a). A United Nations aggregation of data in mid-April 2020, reported disruption of education in 200 countries, affecting 1.58 billion students, impacting 94% of the world's student population, and up to 99% in lower-middle income countries (United Nations, 2020).

Even as teaching moved on-line, a large proportion of students did not have smart phones or internet connections. Live sessions, graphics, and large text downloads require high bandwidth. Zoom classes ideally needed a laptop or desktop. Moreover, there may have been, for example, three children in one home, each of whom needs their own device as online classes are concurrent. But these are problems of middle-class homes. Poor and rural students, who were a majority of learners, were further marginalised. According to one survey, only 20% of poor children, worldwide, have online access in any form, and only 60% among the lower middle class (Reimers, 2020). In India, a survey by the National Council of Educational Research and Training (NCERT) found that 82-87% of children were using mobile phones for their school online programs. Even most teachers were using mobile phones (71-88%). Textbooks were in short supply, 35-38% for students and 28-47% for teachers (NCERT, 2020). In Northeast India, the research site for the current study, the hilly and mountainous regions additionally meant the challenge of poor connectivity with many students walking long distances, over several hours, to catch a signal (Karmakar, 2020), despite the much-publicised Shillong Declaration (Press Information Bureau, 2019), to improve the quality of delivery of e-services in the North East.

Moreover, reduced funding and school-going restrictions hurt at-risk learners such as girl students disproportionately (Byrne, 2020). An estimated 40% of the poorest countries failed to support at risk learners during the COVID-19 crisis. Domestic chores, especially for girls, and the work required to run households or farms, are expected to prevent children from getting sufficient learning time. The most vulnerable learners are among those who have poor digital skills and the least access to the hardware and connectivity required for distance learning solutions implemented during school closures. By one estimate, without remediation, children who have suffered a loss of learning in Grade 3, may not be able to make up the cumulated backlog of learning, and this may result in a 72% drop out by Grade10 (United Nations, 2020).

The learning location has changed from school to home. In a survey in India, 78% of students expressed dissatisfaction with the non-conducive learning environment at home. Time-use data showed a high proportion of girls reported being engaged in chores and care work (71%) as against boys (38%). The study concluded that 37% of girls from poor households may not return to school when schools reopen (Ghatak, Yareseeme & Jha, 2020). In addition, survey data from the southern Indian state of Andhra Pradesh shows that 'the poorest girls and those living in rural areas have much less access to technology than boys (Moore & Marshall, 2020). According to this survey, "boys are much more likely than their female peers to use a computer and the internet (as well as other forms of technology, such as a smartphone) regularly." Four in five (80%) girls have never accessed the internet and more than three in five (62%) have never used a computer.

Teachers and the COVID-19 Response

There is less systematic data about teachers. Apart from having to instantly adapt to an online pedagogy, many teachers have had difficulties with devices, internet access, electricity supply, and the new logistics and processes. Across the globe approximately three-fourths of teachers were required to continue teaching, albeit by distance learning (United Nations, 2020). Without sufficient guidance, training or resources, teacher development did not kept apace. Hastily contrived teacher development had to be delivered online, sometimes through social media messaging platforms. A joint survey by UNESCO-UNICEF-World Bank (2020a) showed that more than half of secondary school teachers and students were using mobile phones for teaching-learning within the first month after school closures.

Teachers were also burdened with hastily introduced policy and procedural rules from education boards, government and school administrators. Most traumatic of all was been job insecurity, with many teachers, especially in private institutions being laid off, or having to continue work with lower salaries, and an uncertain future career. A survey by Education International revealed that, among 93 teacher unions from 67 countries, nearly two-thirds reported that education workers in private institutions were significantly affected, with teachers on temporary contracts and support personnel most affected by layoffs (United Nations, 2020).

The COVID-19 crisis and the unparalleled disruption to education is far from over. A study covering 191 countries between February-September 2020, on the reopening of schools shows inconsistent experiences (Insights for Educations, 2020). In all countries that reopened schools, COVID-19 prevalence was higher at the time of reopening than at initial closure. In 31 countries, schools were closed a second time in response to a new wave of Covid infections. Over a 100 countries are currently implementing nationwide full or partial school closures due to COVID-19, affecting over 60% of the world's enrolled students, almost all of them in low or low-middle income countries. At this point in time, it is difficult to make predictions about reopening of schools, as the situation varies from

country to country depending on the severity of the pandemic, rollout of vaccinations, and other factors. In developing countries, for example, there is more contact between the elderly and children (Lagakos & Yam, 2020). In India, most children (98%) wish to return to school, but only about half (56%) are hopeful of returning, mainly because of the uncertain economic situation at home (Ghatak, 2020).

Given these uncertainties, it is likely that the current education scenario will persist in 2021. The call for teacher upskilling is unanimous, and the pandemic persists, this upskilling needs to be provided and completed urgently. In an OECD survey of teachers, for example, 78% said that professional support to teachers was critical/very critical (Reimers, 2020). A landmark systematic review of 52 meta-analyses has shown the benefit of blended education and stressed the importance of teacher training and professional development for this model (Bernard et al., 2018). While this study was published before the COVID-19 pandemic, its findings are relevant considering that during the pandemic period, lecture-centric education is no longer feasible. Instead, ICT skills, new pedagogical approaches needed for online and blended learning, differentiated learning and assessment models and a supportive learning environment are recommended (e.g., The Guild, 2020: United Nations 2020).

Even with COVID-19 unpredictability, it seems apparent that teachers will continue to be in demand. In a study of employer opinions of the post-Covid scene in Saudi Arabia, job retention and hiring were predicted to be highest for the health and teaching professions. However, the importance of reskilling was felt to be most needed for teachers (Al-Youbi et al., 2020). According to the International Labour Organisation (ILO) COVID-19 bulletin (2nd and 4th edition), the sectors least at risk of unemployment are education and health (ILO, 2020). A UNESCO-UNICEF-World Bank Joint Survey (2020a), echo these trends: 23% of countries plan to recruit

more teachers; 23% will increase class time; 64% will introduce remedial programmes, and 32% will introduce accelerated learning programmes.

In summary, the continued closure of educational institutions, the likely prolonged need for distance education, and the need for concomitant skills for teachers to provide effective online education, requires an assessment of teacher experiences during the pandemic, with a view to ascertain their upskilling requirements and their perceptions of the future of teaching as a career. Against this background, we report findings from a survey conducted in the Martin Luther Christian University (MLCU), located in Shillong, Meghalaya. The university's mission mandates a focus on the development of the Northeast region of India, inhabited largely by tribal groups. It prioritises skill-based courses, an experiential pedagogy, continuous formative assessment, and offers career guidance to all students. The university offers 14 undergraduate and 19 postgraduate courses. Also of relevance to this writing is the physical infrastructure available in the survey site. The university has subscribed to Google Suite for educational institutions and Microsoft 365. The streaming facility in Google Classroom provides a platform for interaction between students and teachers. Recorded lectures using the audio recording application of Microsoft office power point were also uploaded in Google classroom.

Methods

An online survey of the teachers was conducted in November 2020, seven months after the starting of online teaching due to the COVID-19 pandemic. The survey tool was a 53-items questionnaire comprising closed-ended questions in the multiple choice format and open-ended questions (see Appendix 1). The questions were divided into the following themes: about yourself, about your Covid teaching experience, general and personal issues, student response, emerging trends, and faculty development. The questions for the

first four sections were framed by the authors, and material for the last two sections were drawn from three sources: United Nations, 2020, Teachonline, 2020 and Lau & Dasgupta, 2020. The questionnaire was administered online using Google Forms.

All 86 teacher-members of the University were invited to take the survey. The expressed purpose of the survey was stated as: "The results of the survey will enable us to consider new academic policies and to conduct upskilling and professional development for MLCU teachers. This survey is not to evaluate teacher performance, so your responses will remain anonymous and confidential." The survey was designed, conducted and the responses analyzed expeditiously so as to enable the university administration to take up upskilling of teachers and make the recommended changes in time for the Spring Semester 2021. The responses to the questionnaire were analysed using MS Excel after data was transferred from Google Forms. Unless otherwise indicated, all data are from closed-ended questions for a fixed set of trigger items.

Results

Teacher characteristics

Of the 51/86 (59%) teachers who responded, 26 (52%) have PhDs, and the remaining 25 (48%) have master's degrees. The mean age of the respondents was 36 (SD +/-6) years. About 57% of the teachers have more than five years, and 18% less than two years of teaching experience at the university level. Almost all the teachers (98%) took classes from home.

Report on devices used

For the online classes, laptops, desktops and mobile phones were used. The most commonly used devices by teachers were laptops (94%), although many used mobile phones (74%) as well for their classes. Among students, the most commonly used devices were mobile phones (98%) and laptops (80%).

Reported modes of instruction

The modes of instruction used by the teachers are shown in Figure 1. These modes vary from individual attention to group discussion. The use of different modes was reported by all teachers irrespective of their qualification or years of teaching experience.

Figure 1
*Reported modes of instruction during the pandemic- prompted online classes*
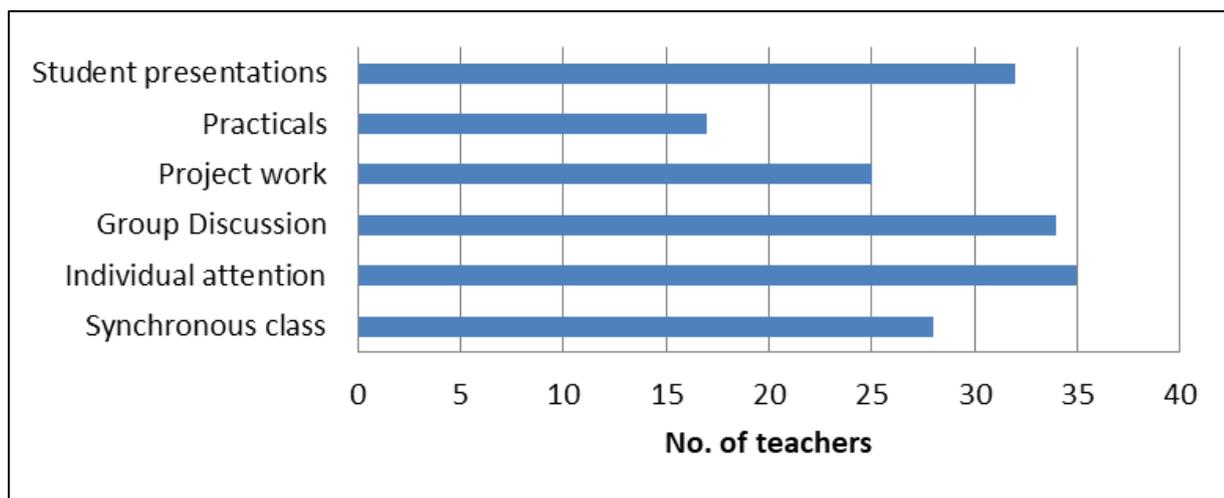
Note: All teachers reported use of more than one mode of instruction

The sudden shift to online teaching necessitated immediate adaptations and experimentation with online pedagogies. Initially many teachers used Whatsapp and email. However, the importance of interaction was also noted early by all teachers. Hence various online platforms were used. Among the teachers, 88% used Google Meet, 43% used Zoom, and 60% used other platforms such as Webex, GoToWebiner, and Microsoft Teams. Teachers also reported use of other devices such as e-whiteboard, YouTube, chatroom features of online platforms, PPT recordings and video recordings. The interaction platforms, pedagogies, and sources of internet materials are shown in Figure 2.

Figure 2
Reported usage patterns desegregated by types of interaction platforms, pedagogies, and sources of internet materials
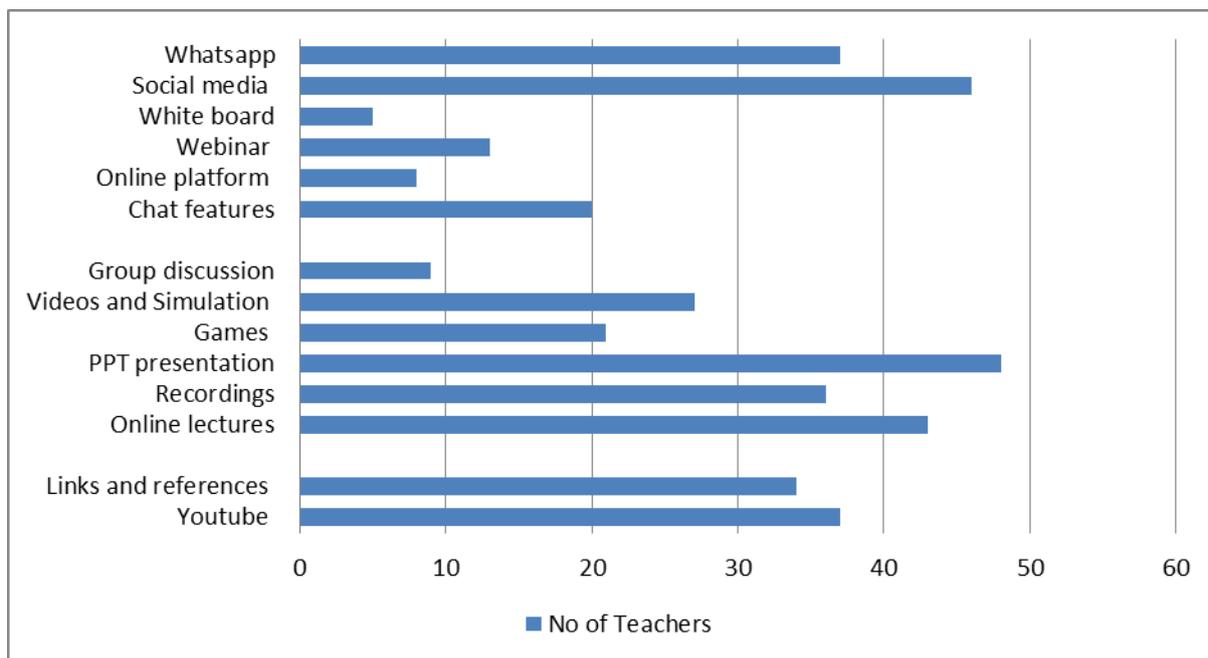
Note: All teachers used more than one mode

Perception of student response

As reported by 36% of teachers, more than 50% of the students had difficulties with internet connectivity or electricity supply; however, 70% of students attended 85-100% of their online classes, and 74% submitted their assignments and tests 85-100% of the time. Most teachers (82%) were satisfied with student attendance, and 68% felt that the level of engagement of the students was satisfactory. About two-thirds of the teachers (66%) responded 'satisfactory' to the ability of the students to manage their learning experience during the online teaching and 80% percent of teachers rated students' ability to access, evaluate and synthesize online information and knowledge as satisfactory.

All the teachers reported maintaining personal interaction with their students. Most of the teachers (91%) reported they had individual interaction with more than 50% of their students. Although 97% of the contacts were related to learning, these interactions were also related to financial (80%), personal (74%), psychological (57%) and career (59%) related topics. Personal interaction with one student contracting COVID-19 was also reported by one teacher.

Reported professional development

Although 74% of the teachers attended a webinar conducted by the university, and other webinars, in the early part of the pandemic, on using ICT for teaching-learning, all respondents reported self-learning of new skills. Some of the new platforms and repositories reported by the teachers allow for an inference of the areas in which skill development was likely to have occurred. These were:

1. Platforms for teaching: Zoom, Google Meet, Microsoft Teams.
2. Learning management systems: Google Classroom, Presentation Tube.
3. Sources of online resource material: YouTube, Wikipedia Videos.
4. Digital content repositories: SWAYAM, ePathshala.
5. Social networks, whatsapps and email for teaching-learning.
6. Strategies: Recorded lectures, streaming, creation of online content, and sharing of PPTs, gamification.

Almost all teachers (90%) reported attaining satisfactory skills in managing online course implementation and classroom management. Most of these teachers (90%) used Google Classroom, and reported finding that pre-supplied tools as helpful for time management, content uploading, lesson planning and assessment. Responses suggests that the uploading of material on Google Classroom and other learning management systems enabled students to have anytime access to learning material. This platform also enabled teachers to provide feedback and notifications and tracking of assignments and tests. Some of the teachers (33%) reported skill attainment in using other online interactive platforms such as Screencastify, Kahoot, Powtoon, Animoto, Google Slides, Open Broadcaster Software, Jamboard and LibreOffice Impress.

All teachers reported the acquiring of better online learning management skills. A few teachers also reported the enhancement in their listening and communication skills, with colleagues to share practices, and 'patience'.

Teacher perception of post-COVID trends in Education

The respondents' opinions on anticipated trends in education because of COVID-19 are provided in Table 1. The items surveyed teachers' opinion on lecture method, sharing of power between teacher and students, moving towards providing more support, and negotiation over content and methods. Teachers' opinion on student supporting each other and the use of technology not only in teaching but also in assessment, as well as providing support and assistance to the students and synchronous learning strategies are also reported in Table 1.

Table 1
Teachers' opinions on post-Covid trends in education in percentages, corrected for missing data (n=51)

Items	Agree & Strongly Agree n (%)	Neutral n (%)	Disagree & Strongly disagree n (%)	No response n (%)
Lecture is no longer centre of learning	17 (34.7)	17 (34.7)	15 (30.6)	2 (3.9)
More sharing of power between teacher and student	33 (68.7)	15 (31.3)	0	3 (5.9)
More student support for each other	37 (77.1)	10 (20.8)	1 (2.1)	3 (5.9)
Increased use of information technology	43 (89.6)	5 (10.4)	0	3 (5.9)
Use of more synchronous learning	39(81.3)	9 (18.8)	0	3 (5.9)

The respondent's opinions of "important skills" to be acquired to succeed in the post-COVID-19 scenario are listed in Table 2.

Table 2
Ratings of important skills to be acquired by teachers for post-Covid teaching in percentages, corrected for missing data (n=51)

Items	Agree & Strongly agree n (%)	Neutral n (%)	Disagree & Strongly disagree n (%)	No response n (%)
Mindset reorientation[1]	30 (61.2)	15 (30.6)	4 (8.2)	2 (3.9)
More facilitating skills	33 (66.0)	13 (26.0)	4 (8.0)	1 (2.0)
More blended approaches	36 (75.0)	10 (20.8)	2 (4.2)	3 (5.9)
Better communication skills	42 (84.0)	2 (4.0)	6 (12.0)	1 (2.0)
More ICT skills	37 (77.1)	6 (12.5)	5 (10.4)	3 (3.9)

Note[1]: Mindset re-orientation refers to re-orientation from teacher-centric pedagogical approaches to approaches that enable student autonomy and reduce teacher- student hierarchy.

Other data are from an open-ended comments section of the questionnaire. Some teachers made recommendations for new skills and measures that would be needed in the post-Covid education scenario, as follows:

1. Adequate infrastructural support from the institution.
2. In-depth workshops actually using different platforms and online aids.
3. Development of e-content.
4. Training for innovation, creativity and other IT skills.
5. Re-orientation of focus away from completing the syllabus and focus on meeting learning objectives, meaningful learning activities, and overall authentic learning.
6. Supporting and monitoring young teachers to ensure they that are acquiring needed skills.
7. Training on mentoring and career counselling skills should be mandatory for all teachers.
8. Basic counselling skills.
9. Disaster management seminars focusing on infectious diseases, hygiene, public health and well-being.
10. Mental and psychological support for teachers. Relaxation and other coping methods for virtual teachers.

Teacher perceptions about future of teaching as a career

Teachers were asked for their opinion on what they perceived to be the effect of COVID-19 on teaching as a career. In general, majority of teachers (55.1%) reported they welcome the changes they perceive as occurring within the field of Higher Education. Their responses to other related questions are presented in Table 3.

Table 3

Perceptions on the effect of COVID-19 on teaching as a career in percentages, corrected for missing data (n=51)

Items	Agree & Strongly agree n (%)	Neutral n (%)	Disagree & Strongly disagree n (%)	No response n (%)
More attractive as a career option	13 (26.0)	26 (52.0)	11 (22.0)	1 (1.9)
Will discourage potential teachers to join the workforce	9 (18.2)	22 (44.9)	18 (36.7)	2 (3.9)
Those in the workforce will find it difficult to adapt to new methods	21 (42.9)	11 (22.4)	17 (36.7)	2 (3.9)
Role of teachers will be enhanced	35 (71.4)	11 (22.4)	3 (6.1)	2 (3.9)

Discussion

The abrupt changes in the teaching-learning landscape because of COVID-19 has challenged the attitudes and skills of teachers. A majority of the respondents recognised and were in agreement with the emerging trends in education. There was one exception: only one-third of teachers (34.7%) felt that lectures would no longer be at the centre of learning though there was a large spread in the responses. Apparently, most teachers within the surveyed sample continue to believe in a lecture-centred learning model in spite of a body of literature that shows the benefits of active learning. The reasons against lecture-centred higher education have been well-elucidated by Schmidt et al. (2015). A meta-analysis of 225 studies concluded that grades improve with active learning and that the odds ratio for failing was almost twice as high for students in lecture-based learning (Freeman et al., 2014). A landmark systematic review of 52 meta-analyses has shown the benefit of blended education and stressed the importance of teacher training and professional development for this pedagogical approach (Bernard et al., 2018).

What were formerly considered as optional skills in digital teaching have emerged as 'must-haves' during the COVID-19 period. When institutions reopen, whether with in-person or blended models, teaching and learning will not look the same again. The need to update and uptrain teacher skill sets existed before the COVID-19 crisis. We suggest that retraining should be addressed in the same mode of urgency that has been demonstrated in the adaptation of the healthcare sector to the pandemic. Upskilling and reskilling of teachers is urgent, and needs to be concurrent with continuation of their teaching schedule.

Content of upskilling programs

Calls for teacher upskilling have so far been made mainly through international agencies. A UNESCO/ILO paper from May 2020, deals mainly with administrative support with little mention of upskilling content. A later paper, in October 2020 jointly authored by UNESCO, UNICEF and the World Bank (2020b), reports a survey of 149 countries, where a majority of countries (66%) reported their teachers as having received instructions on how to operate and deliver their lessons through remote learning. About two-thirds of high-income countries, in comparison to almost half of middle-income and just 20% of low-income countries, offered special training, which generally consisted of strengthening their ICT skills and innovating pedagogical approaches to delivering learning contents. A paper from the World Bank also called for teacher training (Azevedo et al., 2020).

While the policy advisory papers from international agencies recommend teacher

upskilling, they have provided very little detail as to the content of such training. A group of European universities have recommended dedicated training and funding for pedagogical development for teachers (The Guild, 2020), but even this paper is short of specific recommendations for content.

Teachers in our survey indicated the need for a broad range of skills, covering academic areas, student support and self-care. The immediate set of skills are the use of ICT for course delivery, instructional design and pedagogy. Teachers also expressed the need for course and classroom management. Apart from the pedagogical and ICT skills, our respondents expressed the need for personal psychological, emotional and social adaptations. There were requests for better mentoring and counselling skills and seminars on disaster management and public health. But looking beyond, it appears that maintaining motivation, adaptability, problem-solving and composure will be a continuing necessity. These will pose challenges to psychological well-being and mental health. Constant demands to cope with unpredictable and rapidly changing situations will take a toll. Teacher upskilling must include these topics for discussion. They must also have knowledge of new social realities and changes in the job market because of Covid.

Other imperatives loom on the horizon. With new education systems, quality assurance will be a challenge. The European Association of Distance Teaching Universities has created quality standards for MOOCs for e-learning and open education. However, few quality assurance systems are in place and no country has implemented one at the national level. Development of standards will need teacher and administrator participation and would need to be a component of teacher upskilling in the medium-term (Mullock, 2020). In this new era of education, it will also be vital to create modalities that foster teacher collaboration and the formation of professional communities. On the other hand, this crisis has stimulated innovation in education. In India for example, new approaches are becoming available from radio and television to proprietary packages. In other countries, distance learning solutions were developed as quick responses by governments and NGOs, including the Global Education Coalition convened by UNESCO (2020b). These changes have highlighted the promising future of learning, and the accelerated changes in modes of delivering quality education. COVID-19 provided a timely catalyst and a powerful test of the potential of online learning.

The future for teacher careers

In our survey, there was a mixed response about the future attractiveness of a teaching career, and twice as many agreed than disagreed, that potential teachers would be discouraged from entering the profession, because of Covid uncertainties. A majority of the respondents welcomed the changes in education that would ensue. This perception heightens the need and challenge of teacher upskilling.

In times of economic downturn, job retention is uncertain. In India, while government teachers continue to get paid from the public treasury, private schools have released many teachers. A Times of India survey of employees in education, found that 11% had been released. About one-third had a pay cut of at least 40%. Almost two-thirds of teachers were teaching less than three hours a day, which is about half of their pre-Covid hours (Borwankar, Chhapia, & Rao, 2020). Careful policy planning is needed to reverse these trends in a pedagogically sound manner.

Conclusion

The prolongation of the current hiatus in on-campus higher education appears likely. In the post-Covid era, a new normalcy is likely, in which active learning will further replace lecture-based teaching.

Uptraining in ICT skills and the concomitant approaches to teaching-learning are must-have strategies for the new era. While new strategies and teacher training have been widely called for, specific approaches and content have not yet been drawn up.

The purpose of our survey was to encapsulate teacher experiences during the COVID-19 period at our university and to ascertain teacher needs so as to effectively meet the teaching-learning challenges of the Covid exigency at our university. The results of the survey point to a broad panoply of clear-cut academic and other needs that will enable us to construct approaches and content for teacher upskilling. These findings perhaps also mirror the needs of the wider higher education teaching community.

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Note

[1]According to a UNICEF definition, "aggregate shocks include those that affect: a) aggregate or macroeconomic variables (e.g., GDP, current account, exchange rate); and b) a large group of people within a country." Aggregate shocks could affect the poor in both the short and long term, notably women and children—particularly during periods of economic volatility when they are potentially most vulnerable, and result in poverty traps. Global economic integration, climate change and the increasing frequency of weather-related shocks (e.g. droughts, floods, etc.), evolving energy and food demand (and supply) conditions, rapid economic growth and fundamental economic and political changes in many parts of the developing world (including large countries like Brazil, Russia, India and China), and continuous advancements in financial innovations (coupled with lagging and often limited cross-border regulatory oversight), are only some of the factors that could contribute to a more volatile global economic landscape for years to come. From, *Aggregate Shocks, Poor Households and Children: Transmission Channels and Policy Responses*© United Nations Children's Fund (UNICEF), Division of Policy and Practice, New York, 2009, New York, NY 10017 2009.
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Appendix 1

Covid Teaching Experience Questionnaire

According to a United Nations special report, "The COVID-19 pandemic has created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents. Closures of schools and other learning spaces have impacted 94 per cent of the world's student population, up to 99 per cent in low and lower-middle income countries. On the other hand, this crisis has stimulated innovation within the education sector. We have also been reminded of the essential role of teachers. But these changes have also highlighted the promising future of learning, and the accelerated changes in modes of delivering quality education". United Nations Policy Brief: Education during COVID-19 and beyond (August, 2020).

We wish to compile the experiences of MLCU teachers as you have conducted online teaching-learning for students since March-April 2020. The change to online from conventional teaching happened suddenly and required us to adapt immediately to the new scenario. The purpose of this survey is to review the MLCU experience, especially to highlight difficulties, best practices and suggestions. The results of the survey will enable us to consider new academic policies and to conduct upskilling and professional development for MLCU faculty.

This survey is not to evaluate teacher performance, so your responses will remain anonymous and confidential. We will disseminate the results by the end of November 2020 and thereafter make the plans for next semester accordingly.

Please answer the following questions:

1. Email address: _____

A. About Yourself
2.   1. Your qualifications: Select all applicable
        Check all that apply.
            o Master's
            o MPhil
            o PhD
            o NET

3.   2. Your teaching experience in MLCU
        Mark only one
            o 0-2 yrs
            o 2-5 yrs
            o >5 yrs

4.   3. Your teaching load in credits for Spring Semester 2020
        _____

5.   4. Your teaching load in credits for Autumn Semester 2020
        _____

B.   About Your Covid Teaching Experience

6.   1. What percentages of students connect to/attended your classes?
       _____

7.   2. As far as you know, what devices do they use and which was the most commonly used? Select all applicable
       Check all that apply.
           o   Desktop
           o   Laptop
           o   Mobile phone
           o   Other device

8.   2. a. Most commonly used is
       _____

9.   3. What percentage of students expressed problems with internet connection or other access problems eg no electricity?
       _____

10.   4. What percentage of students did you have personal/individual contact with?
       _____

11.   5. What percentage of students submitted their assignments/answer papers?
       _____

12.   6. What device do you usually use for teaching? Select all applicable?
       Check all that apply.
           o   Desktop
           o   Laptop
           o   Mobile phone
           o   Other device

13.   7. From what location did you usually teach? Select all applicable
       Check all that apply.
           o   Home
           o   Office
           o   Other location

14.   8. Which platform do you usually use? Select all applicable
       Check all that apply.
           o   Zoom
           o   Google meet
           o   Others

15.   8a. If Others Name: _____

16.   9. Which of the following pedagogies and resource materials have you used? Select all applicable.
       Check all that apply.
           o   Online lectures
           o   Recordings
           o   Group sessions

- o White board
- o Powerpoint
- o Chat feature for questions and comments
- o Social media: Facebook, WhatsApp, YouTube
- o Open courseware: Khan, SWAYAM
- o Videos, simulations, games
- o Learning resources provided by pdf, links, references
- o Webinars

17.   9a. If Others, Please specify

_____
_____

18.   10. Which of the following modes of instruction did you use? Select all applicable
Check all that apply.
- o Synchronous class
- o Individual attention
- o Group sessions
- o Project work
- o Practicals
- o Student presentations

19.   11. What modes of assessment did you use? List them

_____
_____
_____
_____

20.   12. Did you use any new approaches to enhance the teaching-learning experience, or in assessment? If so please describe.

_____
_____
_____

C. Training and Skill enhancement

21.   1. Did you attend any webinar that has helped you in teaching- learningprocess?
Mark only one oval.
- o Yes
- o No

22.   2. What are the new skills learned in teaching learning?

_____
_____
_____

23.   3. Did you used any Learning management system such as google classroom?
Mark only one oval.
- o Yes
- o No

24.   3a. ? If yes, how has it improve your skills in management of the teaching, learning and assessment process and content?

_____
_____
_____

25.   4. Did you used other interactive free online presentation software?
Mark only one oval.
- o   Yes
- o   No

26.   4a. If yes, name the ones you used and how does it help you?

_____
_____
_____

D. General and Personal Issues

27.   1. Did you have any discussions on Covid with your students?
Mark only one oval.
- o   Yes
- o   No

28.   1a. If yes, please provide three examples.

_____
_____
_____

29.   2. Did you have any discussion with your students, as a group or individually about the following types of problems (2a. below) that they were experiencing?
Mark only one oval.
- o   Yes
- o   No

30.   2a. If Yes, Select all applicable
Check all that apply.
- o   Learning
- o   Personal
- o   Financial
- o   Social
- o   Psychological
- o   Career
- o   Other

31.   2b. If Others, please specify

_____
_____
_____

32.   3. What would you recommend for the university on the basis of the above discussion?
For students

_____
_____

33.   4. What would you recommend for the university on the basis of the above discussion?
For teachers

_____

_____

_____

E. Student response

Please indicate whether you found the following to be satisfactory or unsatisfactory about student response.

34.   a. Attendance
Mark only one oval.
   o   S
   o   U

35.   b. Level of engagement
Mark only one oval.
   o   S
   o   U

36.   c. Ability to access, evaluate and synthesize information and knowledge i.e. construct knowledge from multiple sources, discussion and teacher feedback
Mark only one oval.
   o   S
   o   U

37.   d. Level of ability to manage their learning
Mark only one oval.
   o   S
   o   U

F. Emerging Trends

There is a growing body of published research on education during Covid, which indicate some clear trends in learning. What is your opinion about some of these trends as they are expressed below.

38.   1. The classroom with information delivered through a lecture is no longer the unique centre of learning.
Mark only one oval.
   o   Strongly agree
   o   Agree
   o   Neutral
   o   Disagree
   o   Strongly disagree

39.   2. An increased sharing of power between the instructor and the student. This is manifest as a changing instructional role, towards more support and negotiation over content and methods, and a focus on developing and supporting student autonomy.
Mark only one oval.
   o   Strongly Agree
   o   Agree
   o   Neutral
   o   Disagree
   o   Strongly Disagree

40.   3. On the student side, this can mean an emphasis on students supporting each other through new social media, peer assessment, discussion groups, even online study groups but with guidance, support and feedback from learning and content experts.
Mark only one oval.
- o   Strongly agree
- o   Agree
- o   Neutral
- o   Disagree
- o   Strongly Disagree

41.   4. An increased use of technology, not only to deliver teaching, but also to support and assist students and to provide new forms of student assessment.
Mark only one oval.
- o   Strongly Agree
- o   Agree
- o   Neutral
- o   Disagree
- o   Strongly Disagree

42.   5. Using synchronous learning strategies, students can work together to learn share and create knowledge. The teacher provides enough information, guidance, and structure to allow students to build their knowledge and skills, while, at the same time, not being the dominant presence in class.
Mark only one oval.
- o   Strongly agree
- o   Agree
- o   Neutral
- o   Disagree
- o   Strongly Disagree

G. Faculty Development

It seems apparent that the teaching profession needs to embrace and be better prepared for a new era in education. Studies convincingly show the benefits of blended learning that combines the advantages of in-person, on-campus education with self-directed and online learning, moving away from the conventional lecture-centric model.

1. In your opinion what skills do you feel are important to be to be acquired to equip oneself for this new era? Kindly response the following.

43.   a. New pedagogical skills such as facilitating skills rather than teaching skills
Mark only one oval.
- o   Strongly disagree
- o   Disagree
- o   Neutral
- o   Agree
- o   Strongly agree

44.   b. Mindset re-orientation from teacher/lecture centric to enabling student autonomy, and reducing teacher-student hierarchy
Mark only one oval.
- o   Strongly disagree
- o   Disagree
- o   Neutral
- o   Agree
- o   Strongly agree

45.   c. Curriculum and lesson plan writing to include blended approaches
        Mark only one oval.
            o   Strongly disagree
            o   Disagree
            o   Neutral
            o   Agree
            o   Strongly Agree

46.   d. Better communication skills
        Mark only one oval.
            o   Strongly disagree
            o   Disagree
            o   Neutral
            o   Agree
            o   Strongly Agree

47.   e. ICT skills
        Mark only one oval.
            o   Strongly disagree
            o   Disagree
            o   Neutral
            o   Agree
            o   Strongly Agree

48.   2. In your opinion what technology support will be required for the university and the teacher?

        _____
        _____
        _____

        3. In your opinion what will be the effect of Covid-influenced changes on the perceptions and aspirations of teaching as a career. Kindly response the following.

49.   a. It has made teaching more attractive as a career.
        Mark only one oval.
            o   Strongly disagree
            o   Disagree
            o   Neutral
            o   Agree
            o   Strongly agree

50.   b. It will discourage persons from taking up teaching as a career.
        Mark only one oval.
            o   Strongly disagree
            o   Disagree
            o   Neutral
            o   Agree
            o   Strongly agree

51.   c. The adaptation to the new method of teaching will be difficult
        Mark only one oval.
        o   Strongly disagree
        o   Disagree
        o   Neutral
        o   Agree
        o   Strongly agree

52.   d. In general teachers will welcome the changes in education
        Mark only one oval.
        o   Strongly disagree
        o   Disagree
        o   Neutral
        o   Agree
        o   Strongly Agree

53.   e. The role of teachers has been enhanced
        Mark only one oval.
        o   Strongly disagree
        o   Disagree
        o   Neutral
        o   Agree
        o   Strongly agree