Lessons from online teaching, learning and research communications due to COVID-19 related lockdown

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The emergence of coronavirus disease (COVID-19) was first reported in December 2019 in a city known as Wuhan, China. The exact source of this virus is still debated and a popular hypothesis has associated its origin to a seafood market in Wuhan, China. However, the spread of the disease is not controversial as it has reached global proportions, and is still spreading far and wide in most of the world. The nature of the infection has forced authorities and the public to take unprecedented decisions on how to live and work. This is also true to educational and research institutions where most of the activities are now online. The spread of the virus has encouraged the social distancing which led to the shutdown of educational institutes, markets, offices, conferences and businesses etc. (Peterson et al 2020). The global lockdowns have major interruption on students' learning, as schools, colleges and universities are closed, and most of the activities that include teaching and learning have shifted to online mode. According to the United Nations Educational Scientific Cultural Organization (UNESCO) 192 countries have closed their schools and universities as of April 30, 2020. This amounts to about 90%, and on a global scale that means 1.6 billion enrolled learners have been affected. The only historical memory of a similar pandemic that had severely impacted the world was the Spanish flu pandemic of 1918 but the devastation caused by COVID-19 is not comparable. And some of the reasons for that could be the high levels of urbanization and a steep rise in population in the modern world, which also includes the educators and students. It is estimated that 90% of the world's young people are enrolled in primary schools compared to just 40% in 1920 (UNICEF data). Similarly, education and research related events e.g. national and international conferences, meetings, workshops etc. have to be either cancelled, rescheduled, deferred, or shifted to online mode.

Merits of online teaching and learning

An online teaching schedule is relatively easy to handle as compared to a typical university setting where the limitation of availability of classrooms, time slots, course clashes etc. can greatly influence such decisions. The virtual teaching and learning mode allows multiple courses with ease where large audiences throughout the world can participate. Similarly, national and international education, research, and other similar meetings are now slowly shifted towards the online world (e.g. Garisson 2009), and this has the potential to drastically change the process of education and research communications in the modern times. The large global audiences, which were impossible in a typical conference setting, remain one of the most beneficial aspects of online communications. Easy access, user friendly, and interactive nature of online teaching and learning tools makes it doable with little knowledge about digital tools. Similarly, one of the most beneficial aspects of online communications is the recording facility that allows instructors to record, and audiences can replay lectures etc. whenever needed.Education and research communications often require travel to local, national or international institutions, and not all people are comfortable with travel related procedures because of various problems such as immigration, illness, physical body challenges, financial, or any other personal issue. The virtual world may prove beneficial for such a group of people as it provides opportunities that were previously impossible: they can learn at home and can socialize as well.

Challenges of online teaching and learning

Although the global proportions of COVID-19 related lockdown has impacted across the boundaries of religion, caste, wealth, color etc. poor nations and marginalized communities have suffered more: not just by the disease but also by the lockdown related issues, and one such problem is the online teaching, learning, and research communications. A decent online streaming requires a good internet connection, and we know there are many people who will either have no internet access or if it is there it might be too slow. Plus the fact that internet access comes at a cost, and such services are not affordable to all. The internet related crises will deteriorate the education gap for low income households even if these people have access to digital tools. Online mode could add societal pressure and develop disparities between students of different economic strata. Therefore, it is important to map, and learn lessons from this crisis, and work on a plausible future planning where internet access should be considered a free necessity, and particularly for people who are unable to

afford or access such services because of multiple problems (see below). The politically disturbed regions of the world are suffering more because of the ongoing restrictions, and the shifting of learning and other communications to an online mode. The conflict ridden societies have a more pronounced impact on children's health and education. For example in the Middle East 2.8 million Syrian students have been out of school during the last decade, and about 5 million children were out of schools in the Ebola epidemic that spread across West Africa in 2013 (UNESCO). The authors are from Kashmir, which is a more than 70 years old conflict zone (for details about Kashmir conflict please read Shah et al., 2018), and therefore they are eye witnesses to the ongoing complex problem that the COVID-19 crisis has unfolded on the people of Kashmir. This year in February nearly a million students attended classes in Kashmir after seven months of administrative lockdown that India imposed when it revoked the limited autonomy and bifurcated the region into centrally administered units (Aljazeera report 2010). This decision impacted teaching, learning and other research related activities on a similar scale as is witnessed world over because of COVID-19 related problems. On 5th August the Indian authorities snapped the internet which was later partially restored on January 5. The long haul of no-internet world has turned Kashmir into international headlines. According to internetshutdown.in this was the 51st time the internet had been snapped in the region this year. The longest ever internet lockdown in Kashmir inflicted heavy losses for the region's economy, education, and other sectors of life. In Kashmir the internet bans are more frequent because of the political conflict with India that controls it. There have been more than 170 shutdowns since 2011, including a six month long irregular suspension in 2016 (BBC, 2019). The students are perhaps the worst sufferers during such a crisis. The low bandwidth internet was reinstated lately when Indian authorities restored the lockdown related to conflict, and students were attending schools but now the COVID-19 crisis has unfolded and schools are again off the scene. However, during such crises the internet services have been extremely helpful throughout the world where people are now extensively using online services to work, learn, and communicate but such a scenario is largely missing from Kashmir. Indian authorities have not restored high speed internet, and people are seriously struggling with 2G internet speed. Such a service makes it impossible to use online learning, teaching, communications etc. This must be addressed with a solution oriented planning as the Covid-19 crisis will remain active for most of the 2020-2021 academic year?.

Conclusions

Merits and shortcomings that we have highlighted above are a snapshot of the overall Covid-19 related crisis, and the actual conditions on the ground have to be more complicated, and heterogeneous. Nevertheless, it is apparent that online communications offer a number of possibilities and opportunities, which are traditionally lacking in a typical school or office setting, and are important to consider while looking for long term solutions. For example, the economic benefits have to be evaluated as online mode is economical and it saves a large amount of time that people usually spend to commute, relocate, travel, organize events etc. It also opens opportunities for people who are challenged, medically unfit etc. Previous works have also shown that online education can offer learning environments that make learning accessible (Valachopoulos et al 2012) but it cautions that an effective online instruction depends upon motivated interaction between instructors and students (Anna Sian Sun 2016), and this is important to consider while making a transition. Not all instructors are good at learning technologies or facing cameras, and it is possible that such people will need extra help to cope well with the new era of online communications. The majority of students however will possibly face little to no difficulty in moving into the virtual world as they are already used to these tools, and interactive features of e-learning are shown to increase the motivation of undergraduate students for the learning process (e.g. Seoud et al 2014). Perhaps the major downside of the online transition is the socialization component, because students usually enjoy to interact with fellow mates in school or college, and at home such a social connectivity may be missing, and it may impact scores badly (Carlson et al 2015). It is also shown that differences in instructional time causes significant differences in test scores (Lavy 2015). Muntajeeb (2011) however showed that students achieved high scores through online mode as compared with students that were taught through a traditional route, and this suggests that scores may improve with online education. The coming days will improve our understanding, and then a more balanced conclusion can be reached on this. The present understanding on online communications suggests that virtual world will remain active for most of the 2020-2021 academic year. Therefore, it is important to invest in online communication technologies (Hodges et al 2020) to make such a transition smooth, effective, and result oriented. Special provisions have to be adapted for people who are unable to use online communications because of various problem as discussed above, and those which are not covered here.

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