Inspiration amidst crisis: e-learning in a medical school of Nepal during COVID-19 pandemic

Inspiration en pleine crise : l'enseignement en ligne dans une faculté de médecine du Népal pendant la pandémie de la COVID-19

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Abstract

The Coronavirus disease (COVID-19) pandemic continues to shut down colleges and universities including medical schools all over the world, thus pushing medical schools to seek e-learning to maintain continuity of curriculum. Although developed countries are comfortable learning through the internet, low-income countries like Nepal with limited experience in e-learning have used this lockdown as an opportunity to develop online classes. This crisis has clearly revealed the importance of e-learning in for medical educators in Nepal to disseminate knowledge beyond the restrictions of geography and other barriers.

Résumé

La pandémie de la maladie à coronavirus (COVID-19) continue de provoquer la fermeture des collèges et des universités partout dans le monde, incitant les facultés de médecine à recourir à l'enseignement en ligne pour maintenir la continuité des programmes d'études. Tandis que les pays développés s'adaptent bien à l'enseignement en ligne, les pays à faible revenu comme le Népal, qui ont une expérience limitée de cette technologie, ont profité du confinement pour mettre au point des cours en ligne. La crise a mis en évidence l'importance de cette modalité d'enseignement pour les enseignants en médecine au Népal dans la mesure où elle leur permet de surmonter les contraintes géographiques et d'autres barrières à la diffusion des connaissances.

After the World Health Organization (WHO) characterized Coronavirus disease (COVID-19) as a pandemic in mid-March 2020, the government of Nepal imposed a complete lockdown in the country later that month. One month later, the number of COVID-19 cases skyrocketed worldwide and in no time succeeded in tearing its way through developing countries like Nepal. This upsurge of cases added substantial burden to the fragile health system of Nepal which lacks sufficient personal protective equipment for the frontline health workers, and even less for medical students to assist.

Medical schools in Nepal thus launched distance medical education methods, trying to follow other countries using e-learning techniques.[1] But Nepal is a resource-limited country where 80.26% of the population resides in rural areas.[2] Barriers of internet speed, lack of skilled users and poor institutional policies on internet have long been a barrier to applying modern online educational technologies in Nepal. This is a nation where most of the population is not in step with the rest of the planet; where culture, age, and gender create a sobering gap on the usage of internet; and where social and cultural acceptance of internet is a challenge in itself.

The Gurukul approach (with a guru teacher followed by a flock of students) of knowledge-dissemination has heavily influenced medical education in Nepal.[3] However, this tradition limits our ways of learning by focusing on large group lectures in the classroom. When even universities of developed countries use e-learning with skepticism, e-learning is certainly not a natural choice for Nepal where

human bonding and physical interaction lies at the core of traditional learning.[4]

Next, among medical students, parents, and the society as whole, e-learning might raise questions of efficacy in acquiring core medical knowledge and skills. People might not easily swallow the idea of online medical learning. The roots of this resistance dates back to the ingrained social assumption in Nepal where laptops and phones only served to entertain its users. As for medical education, which is believed to require more attention and craft than many other fields, pursuing such a demanding course through e-learning involves the added burden of societal doubts about medical student reliability.

Gender issues cannot be overlooked when adopting distance medical education in Nepal. Women worldwide struggle to balance work-life with home-life making it difficult for them to choose competitive careers in medicine.[5] The expectations of Nepalese families for female medical students to master household management prior to mastering the complex medical courses undoubtedly makes learning from home less appealing to and more challenging for female students.

Also, the majority of the 77 districts within the country lack the infrastructure required for internet access.[6] Maintaining connectivity in remote areas would demand a high investment from the district/government and a significant return on this investment would be improbable due to the limited expected uptake on internet usage at those locations. The use of internet in medical education thus remains embryonic or nonexistent in most Nepalese medical schools.

Despite these barriers to e-learning, the COVID-19 pandemic has increased the need for and, therefore, acceptance of internet among medical residents. Faculty and teachers have come to view the internet as a vehicle to educational tools and so less judgment is imposed upon the use of laptops at school. The first phase of lockdown motivated the medical schools to fill their curricular gaps with presentation slides and other learning materials. Inside the remote areas of Nepal where medical students could not access the internet, data packages working within the mobile network signal were often used to keep them connected with online classes.

Medical education curricula in Nepal have been developed for in-person lecturing and not online delivery, and thus most of the lectures uploaded online by the teachers were structured for in-person classroom lectures. Lack of teacher training and student experience with the development and use online materials respectively created adjustment issues with added stressors like sudden power outages and poor internet access. To overcome these challenges to synchronous online classes, teachers frequently uploaded the recorded lectures to make it accessible to students at their convenience.

After almost three months of routine online classes medical examinations were held online. With no hardcopies of reading materials and the students' unfamiliarity with online examinations, another wave of panic followed. The medical school examinations were conducted through a local mobile app with a maximum number of multiple-choice questions. Students were asked to ensure they had sufficient data on their phones as a back-up in case of power outage, which is not rare in Nepal. Thus, amidst a lot of criticism and question of reliability and feasibility, medical schools did manage to walk another mile along the internet.

Upgrading Nepal's medical education system from the traditional classroom learning to a more technologically advanced format had previously been unthinkable by ignorance and a perceived lack of necessity. This COVID-19 pandemic-induced lockdown has motivated medical schools to invest more energy, imagination, and resources to adopt e-learning forms of education. Medical schools routinely can provide additional online materials and training to teachers and students to use e-learning resources more effectively. E-learning in medical school is still in its infancy and should be kept under consideration while formulating the national educational plans in particular. The government has to integrate internet development in its national strategic plans to bridge the digital gap between the mountains and plains of the country. Only then will this developing nation be equipped to widely integrate e-learning with their medical school curricula.

Conflicts of Interest: The authors report no conflict of interest.

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