Flexible Futures for Education in a Post-COVID World

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Distinguished Colleagues, thank you for the invitation to be part of this conversation on 'flexible learning'. How can we learn from the COVID-19 experience and build flexible education systems for a more equal, safe and resilient future?

But first a word about my organisation the Commonwealth of Learning. COL is an intergovernmental organisation with headquarters in Canada and a regional office in New Delhi. COL works in 54 Commonwealth Member States which span all regions of the world.

Our mission is to help Commonwealth Member States and institutions to use distance learning and technologies for expanding access to education and training.

In this presentation, I will begin by outlining some of the key issues that emerged during the pandemic and then share examples of how COL responded. I will then look at some of the potential futures of education that lie ahead and conclude with the essential elements that need to be part of the flexible future we want.

Most of the Commonwealth Member States are developing countries. What were their challenges?

During the pandemic, we found the greatest challenge related to digital infrastructure—lack of access to devices, connectivity, electricity. Teachers were not prepared for the sudden transition to online learning. Existing inequalities in both developed and developing countries have been further exacerbated.

In a survey conducted at Stanford University,16% of the undergraduate students did not have access to the internet for half the time and 60% of students from low-income homes did not have a private space for study. What was the situation in the Commonwealth?

At the University of Hyderabad, India, while close to 90% of all students had a mobile phone, only about 37% could access online classes. The barriers included unreliable connectivity, high costs of data connection and 'unreliable power supply'.

Over 63 million teachers were impacted by COVD-19. Data from OECD countries indicates that only 60% of teachers had some training in ICTs.

In SSA, 64% primary and 50% secondary teachers had received minimum training and lacked the digital skills needed to offer quality distance learning.

The vulnerable are most impacted in crisis situations. It is estimated that the numbers of school dropouts will increase, with 11 million girls not likely to return.

The existing learning crisis is already showing signs of further deterioration. A study in the Netherlands records a learning loss of about 3%, with higher losses among students from less-educated homes.

The only silver lining has been the global acceptance of distance and online learning. What would have taken years of advocacy happened within a matter of days. Chinese colleagues report that the quality of online learning is finally being recognised. Similarly, a recent study in the UK found that the majority of HE students rated the quality of online learning as excellent.

As an intergovernmental organisation, with the expertise and experience in open and distance learning, how did COL respond? COL used a multi-pronged approach—providing Guidelines and Resources, building the capacity of teachers, providing tailored responses to requests from Member States and promoting collaboration for increased impact. Let me share some examples.

There can be no future of education without trained teachers. COL has been running a series of MOOCs on ICT integration, OER use and cybersecurity for teachers.

In partnership with the OER Foundation at the Otago Polytechnic, and ICDE, COL launched OER4COVID which attracted participants from 89 countries. The survey conducted found that people did not simply want access to repositories or general capacity building but rather sought urgent help with curated content aligned to the curriculum.

For low bandwidth contexts, COL responded by developing a video-on-demand service in STEM subjects aligned to the curriculum in Fiji, Nauru and Samoa.

Even as countries have been forced to close borders, it is clear that the future lies in collaboration. COL's call for a partnership attracted more than 60 organisations, institutions and associations. Open Door has become a vibrant platform where partners have shared over 200 courses and regular interactions with global thought leaders are a popular feature.

In collaboration with COURSERA, COL offered free training opportunities to over 130,000 persons around the Commonwealth. Even though connectivity was often a challenge, learners used mobile devices or library facilities in what has been a life-changing experience for thousands.

As you can see, COL has been using flexible approaches to ensure that learning could continue in diverse contexts. Let us briefly reflect on what we mean by flexible learning.

As an organisation established to promote learning through the use of technologies, COL has been an advocate of open education to democratise education in the developing countries of the Commonwealth. To us, open education describes policies and practices that permit entry to learning with as few barriers as possible. The founding chancellor of the Open University of the UK, Lord Crowther defined openness in relation to people, places, methods and ideas. This is the basic philosophy of open education.

Put into practice this meant that institutions have flexible entry requirements, allow learners to choose the courses they wish to study and accumulate credits at their own pace and convenience. Charles Wedemeyer was a visionary, who described openness in terms of access, curriculum, participation and accreditation way back in 1973!

How is flexible learning different? An Australian definition tells us that flexible learning expands our choices about what, when and how we learn.

In practice this means, that synchronous learning is not the only option—we can choose to learn asynchronously at any time and any place of our choice. It also points in the direction of competency-based learning where duration becomes insignificant and what counts is the outcomes achieved rather than the hours put in. Flexible learning allows the option to mix institutional and work-placed learning to suit individual needs. Recognition of prior learning allows for multiple learning pathways.

In short, flexibility is an evolving concept. Professor Taylor's five generations of distance learning models sum up the evolution of flexibility from correspondence education to multi-media to online provision. Interestingly, the intelligent flexible model of the fifth generation brings us right into the fourth industrial revolution and the age of AI.

Considering the current context, what are the futures of learning? Futurist Wendell Bell identifies three types: preferable futures, probable futures and possible futures. Let us consider each of these.

First, the preferable future that points to a more desirable state. Sustainable Development Goal 4, which aspires to ensure equitable access to quality education and lifelong learning for all by 2030 is the global community's preferable future. Five years down the line how close are we to this future? Trends indicate that even the slow progress achieved is likely to be further set back because of the huge disruptions.

SDG 4 aspires to leave no one behind. 15% of the world's population suffers from some form of disability, yet only a fraction have access to education at any level. Similarly, gender parity in education continues to elude us.

The 'learning crisis' is assuming massive proportions. A study in West Africa indicates that only 45% students in grade 6 achieved competency level in reading and math. The situation is not much different in South Africa or India. The preferable future—which must be based on equity, inclusion, quality and lifelong learning for all—can only be achieved through alternative and innovative approaches.

Second, the probable future is what is more likely to happen based on current trends. Developments in technology will continue to drive changes in the way we teach and learn, and technology adoption has been further accelerated due to the pandemic.

AI is being mainstreamed in education. Intelligent Tutoring Systems use AI techniques to simulate one-to-one human tutoring, provide timely feedback, all without the presence of a human teacher. Machine Learning helps to analyse and summarise the discussions in online courses so that a human tutor can guide the students towards fruitful collaboration. Are there opportunities for reaching persons with disabilities? A popular example of AI in education is a Virtual Teaching Assistant that can offer personalised assistance to learners. AI-powered systems can be deployed as robots with human-like speech.

Chatbots are already being deployed as fairly effective teaching assistants—right from Georgia Tech to the Open University of Malaysia. But these have also served to highlight the need for human teachers and physical interaction.

Assessment has been a great challenge during the pandemic. AI-based assessments can constantly provide feedback to learners, teachers and parents about how the students learn, the support they need and the progress they are making towards their learning goals. In South Africa, mobile based assessments were used to reach those in the most remote shanties. The crisis is generating creative ways of assessment and evaluation.

The third is the possible future--– something visionary that may or may not happen. The climate crisis is one of the defining issues of our times. Especially for small island states which are disproportionately

affected by climate change. Over the past 40 years, the number of climate-related disasters globally has tripled, a trend that is expected to continue.

The education sector, from primary to tertiary, contributes to both direct and indirect emissions, with an impact on environmental degradation and associated economic costs. If we look strictly at contributions to emissions, the achievement of SDG4, under the current paradigm, could potentially worsen the climate crisis.

The SusTEACH project, supported by the Open University, UK compared the carbon emissions of ICT-enhanced and face to-face courses and found that distance teaching models had significantly lower environmental impacts (Caird et al. 2013; Caird et al. 2015). COL conducted a similar study in Botswana, and found that the average learning-related carbon footprint of the face-to-face group is nearly three times greater than that of the distance learning group. Are flexible learning approaches the way forward?

In conclusion, let us look at some of the key issues that emerged during the pandemic and how we can learn from this experience to build the flexible future we want.

We have seen that purely online options do not work for everyone. The future will be a blend of online and in-person, using a range of technologies that are affordable accessible and available. Because of existing digital divide, COL believes that technology to be effectively harnessed, must be placed in an appropriate social, cultural and political context. According to GSMA, 3.7 billion of the 5.2 billion mobile subscribers live in developing countries. Appropriate technologies can offer flexible options for how learning is delivered.

As the pandemic forces governments to cut back on resource allocations for education, we will need to look for cost-effective solutions to bring quality learning to all. Mainstreaming OER by building the capacities of teachers and policy makers and preparing learners on how to find and use OER could be another way forward for providing more flexibility options for what people learn.

We have seen a huge rise in self-directed learning during the pandemic, as we can see from the phenomenal increases in MOOC enrolments—how can we build on these foundations to promote lifelong learning for all? Interestingly formal education accounts for about 18.5 % of time up to grade 12 and this keeps decreasing as we transition to post-secondary study. The rest of our waking lives are spent in informal learning environments—how can teacher-led sequential learning be supplemented with unstructured learner-led approaches to support learning throughout life?

Learning approaches, credentialing and recognition strategies will need to change. Formal assessments and proctoring systems suffered major setbacks during the pandemic—how can we learn from the innovative approaches that people adopted to build flexible models that make assessments more authentic? NZQA has developed a micro-credential framework to provide industry, employers, and/or the community to develop programmes and certify achievement for a coherent set of skills and knowledge. This could be a model to promote lifelong learning through an evidence-based assessment of learning outcomes.

The pandemic has highlighted the critical need for learner support not just for academic matters but also for general well-being and mental health. Parents and siblings became a critical resource in supporting learning—where parents were illiterate, they provided support by motivating their children. How can parents/siblings be empowered to become part of a more flexible ecosystem when learners can learn at any place or time?

Governments and institutions need to develop policies for leaving no one behind. This would mean developing policies that address the needs of the last person in the queue—women, girls, those in remote regions and persons with disabilities. The policies that target the margins are also effective in serving the centre. Flexible learning must also take into account who learns.

If we want to build back better, we need a transformative approach powered by flexibility. A successful outcome of education today is the acquisition of skills and competencies. A transformative approach would go beyond that to empowering individuals not just to be prepared for change but to also shape the course of that change. There is a great deal of emphasis on education leading to employment or entrepreneurship. The transformative approach would integrate the values of environmental conservation and global citizenship. Finally, the dominant educational paradigm values achievement rather than accomplishment. Marc Prensky explains the difference—achievement benefits only the individual and her personal goals while accomplishment goes beyond individual achievement and benefits others and society leading to transformation. Creating flexible learning opportunities could make that transformation to better futures.

On that note, let me thank you for your kind attention.