Sustainable Higher Education: policy issues

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Distinguished colleagues, thank you for the invitation to be part of this important discussion on the future of higher education. My topic today is 'Sustainable Higher Education: policy issues'

But first a word about my organization the Commonwealth of Learning. COL is an intergovernmental organisation with the mission to help Commonwealth Member States and institutions to use distance learning and technologies for expanding access to education and training.

COL uses technologies to promote learning for sustainable development. This means that learning must promote economic growth, social inclusion and environmental conservation. Does higher education within the current paradigm achieve these objectives?

In this presentation, I will begin by outlining some of the key issues of our time and the impact of these on education, especially during the pandemic. I will then look at how some universities adopted the sustainability agenda over the years. Finally, I will conclude with persistent challenges and the policies needed to build the sustainable HE that we want.

Let us first look at three key issues that impact education in both developed and developing countries. These are the delays in achieving SDG 4, the disruptions caused by the pandemic over the past two years and the increased manifestation of climate-related disasters.

First, as we know, SDG4 aspires to ensure inclusive and equitable quality education and lifelong learning for all by 2030. Even before the pandemic, it was clear that the global community was far from achieving the targets it had set for itself.

If we are to reach our goals for education and lifelong learning, the annual investment in low and lower middle-income countries will have to be doubled. Further, quality education will need a threefold increase in spending for every primary school student. And even if countries did invest in these additional amounts, there is no guarantee that the poorest children will benefit. Data from some countries suggests that the poorest schools get $10 for every $100 spent in mainstream schools.

Second, as the pandemic engulfed the world, 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 were further exacerbated.

Most institutions had to pivot to emergency remote teaching. Many did not have adequate technology infrastructure. The mobility of international students plummeted with countries losing large revenues from student fees. Budget cuts were imposed by governments—research reliant on practical work and external collaborations suffered most.

A study in the US and Canada revealed that over 50% of teachers required help with supporting remote students, needed access to digital materials and wanted assistance with technology.

There is a learning crisis in most countries. A study in the Netherlands, records a learning loss of about 3 percentile points with higher losses among students from less-educated homes.

Third, the climate crisis is escalating. Especially for the Commonwealth, with its 32 small states disproportionately affected by climate change. Even here in Canada, we have seen temperatures rise to 50 degrees centigrade, forest fires and floods—all during this year.

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. How can we respond urgently and effectively?

How did the higher education sector respond to the pandemic? We have seen a wide range of developments that could help us shape a sustainable future.

One has been the phenomenal increase in MOOC enrolments not just of global brands such as Coursera but also universities which had hesitated to offer online courses, came forward to offer MOOCs especially for professional development. The COL-Coursera Workforce Recovery initiative skilled and reskilled over 150,000 Commonwealth citizens in the last eighteen months. How can we use such initiatives to reach the last mile?

The pandemic has also seen the second coming of video learning where teachers made significant contributions, often reaching their students through mobile devices. COL's video-on-demand service brought quality content in low-bandwith contexts in the Pacific.

Formal assessments and proctoring systems suffered major setbacks during the pandemic—where institutions adopted innovative approaches to build flexible models and make assessments more authentic. UNISA developed App-based assessments; Griffith University Australia used oral assessments for the business programme and India introduced open book exams at scale.

Open Educational Resources were in high demand as teachers looked for quality digital content. In a North American study conducted during the pandemic, 44% of administrators were positive about faculty use of OER, while a quarter of teachers believed that OER could contribute significantly to teaching and learning. A recent COL survey found that there had been a 50% increase in the use of OER across the Commonwealth during the pandemic.

The mobility of international students plummeted with travel restrictions and the closure of borders. This led to new partnerships and highlighted the need for hybrid models and branch campuses which could provide an opportunity for students to experience affordable 'internationalisation at home'.

The recent Educause Horizon report sums up six new trends in higher education: the widening of the digital divide; increased use of hybrid learning; demand for new skills; a focus on sustainable development and a decrease in funding.

Respondents were also asked to pick the top technology trends and practices. The results were not surprising with AI topping the list followed by blended course models, learning analytics, and micro credentials. OER and quality online learning were also considered very important. How can we harness the potential of technologies to build sustainable higher education?

Let us briefly reflect on what we understand by sustainable higher education.

The global community included higher education in Sustainable Development Goal 4. Targets include ensuring i) equal access to affordable and quality tertiary education and ii) that all learners acquire the knowledge and skills to promote sustainable development.

Over the past 50 years, one option for offering affordable quality higher education was the establishment of open universities. The 33 open universities in the Commonwealth provide quality education to over five million learners annually, at a fraction of the costs of campus institutions.

In addition, adopting distance and online learning can promote environmental sustainability. The SusTEACH project, supported by the Open University, UK compared the carbon emissions of ICT-enhanced and in-person 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 distance learning group is one third as compared to their campus counterparts.

In the past three decades, several initiatives have emerged to promote sustainability in higher education. As Caird and Roy sum up, these are related to greening the curriculum, greening the campus and using distance and online learning.

The University of the Philippines and Simon Fraser University in Canada offer specialized courses in environmental literacy. The University of Pretoria has adopted a transdisciplinary approach to curriculum enhancing community-based learning experiences, and the agile shift to virtual teaching for sustainability.

Several universities including the Australian National University and Groningen have strategies in place to green the campus and reduce emissions through adopting renewable energy and promoting resource conservation.

What have we learnt from these different initiatives in promoting sustainable higher education? One, that the sustainability agenda has to move from pilot phase to become mainstream. Two, in countries where resources and incentives were provided, this agenda was more successful, as in the

US. Partnerships and platforms have been effective in helping advocacy efforts and sharing best practice. For these initiatives to achieve scale, we need committed leadership at the management, student and community levels.

What is the way forward and how can we build on existing experience to develop the policies we need?

The only silver lining during the pandemic has been the global acceptance of online learning. A recent study in the UK found that the majority of HE students rated the quality of online learning as excellent. But in many other instances, the emergency response did not provide quality teaching and learning.

We have also seen that purely online options do not work for everyone. The future will be a blend of online and in-person approaches, using a range of technologies that are affordable accessible and available. Because of existing digital divide, technology to be effectively harnessed, must be placed in an appropriate social, cultural and political context.

Since most ministries will need to work with existing rather than enhanced resources, the realistic option would be to reallocate the funds available and invest in clicks not bricks. How can we develop policies that will provide an enabling framework for providing affordable devices and connectivity for learners? What role will the private sector play?

Blended and hybrid modes provide opportunities for learning to those who cannot access purely online provision. Traditionally, open and distance learning has always adopted a blended approach keeping in mind issues of social justice. Research shows that blended learning is more effective in developing countries (John Baggaley). Research also shows that there is 'no significant difference' between distance and traditional classroom instruction in terms of learning outcomes; yet there is a lingering perception, that distance education is not as effective as class-based education.

Similarly, a study found that while face to face costs per participant in a teacher training course were USD 6.7, the same training was offered online at half the costs with comparable outcomes.

We need more ministries to develop open and distance learning policies to create an ecosystem of lifelong learning for all. One example of a multi layered framework for open learning is India, where the government has set up – public open universities, a national open school, an open platform for teacher training at scale and sharing quality educational content online as a free resource. Policies need to start with the last mile. Current policies tend to prioritize serving mainstream learners. We find that open and distance learning benefits women, persons with disability as well as disadvantaged communities. Governments need to adopt a targeted approach to reach these marginalised groups first which will, by default, serve the center better.

Sustainable higher education will also need to reach the bottom billion. Access to quality content can be a way forward and shared through technologies that are appropriate to different contexts. At the Commonwealth of Learning we used a tool called MobiMOOC which offers online learning through basic feature mobile phones to deliver lifelong learning to agriculture students and farming communities in local languages.

Open Educational Resources have shown to increase access, reduce costs and improve learning outcomes in some of the studies conducted in Antigua & Barbuda, Malaysia and the USA. And even though OER are being proactively promoted over the past two decades, the uptake has been slow. One reason could be that competition is part of the DNA of universities.

UNESCO's recent report on reimagining our futures together stresses the need for collaboration and the principles of equity and inclusion. Pedagogy must move from emphasizing individual achievement to accomplishment that benefits society and teaching must become a collaborative endeavour. This is a valuable blueprint for higher education for the future. And to achieve this, we need policies and incentives that promote collaboration and resource sharing at all levels.

As the climate crisis assumes greater urgency, we need to transform higher education to inculcate sustainable behaviours. COL supported the development of a Green Teacher programme in India and Nigeria to help teachers inculcate environmental concerns among learners. COL offered MOOCs on Business for Sustainable Development and on Understanding the Blue Economy with universities in Mauritius and the Seychelles.

Sustainable higher education will need to push the frontiers of knowledge and focus on emerging and future skills related to renewable energies, the protection of forests and oceans, and offer practical solutions to avert the crisis. Research in science and a culture of innovations will be central to this agenda.

Universities will need to adopt a green learning agenda, as Christina Kwauk proposes. This agenda would focus on developing the skills for green jobs that would help make the transition to a low carbon economy; green life skills for a more sustainable future and skills for a green transformation that addresses social justice. Governments and institutions will need to develop policies for a greener, fairer future.

In short, the four policy pillars for sustainable higher education relate to technology, open and distance learning, collaboration and sharing and investing in a green learning agenda.

These policy interventions will lead to sustainable higher education. This means higher education that is affordable and accessible for all. It also means that universities will need to align more closely with the needs of their societies and promote research for sustainable development. And finally, universities must play a leadership role in modelling sustainable behaviours that lead to the prosperity of the people and the planet.