

Achieving Sustainability in Education: what will it take?



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Distinguished colleagues, let me begin by thanking Chancellor Melinda Bandelaria and the Team for the invitation to join you today. My topic is ‘Achieving Sustainability in Education: what will it take?’

But first a word about my organization the Commonwealth of Learning, which works in 56 Member States that span all regions of the globe. COL helps 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 of our times and their impact on education. I will then look at what we mean by sustainability in education followed by a discussion of different models and approaches that have been developed to support sustainable education. Finally, I will conclude with the way forward to building sustainable education that leaves no one behind.

But first the context. We live in a disruptive age, where change is happening faster than ever before and in more unpredictable ways than we can imagine. Three years ago, no one could have predicted the pandemic or foreseen its magnitude. Technology is growing faster than anyone can keep pace with—presenting exciting opportunities and unprecedented risks. We are encountering the increasing impact of the climate crisis in our daily lives.

The pandemic has deepened the existing learning crisis. A study in the Netherlands, records a learning loss of about 3 percentile points with higher losses among students from less-educated homes. Even within OECD countries, huge disparities exist between students who go to privileged schools and those who study at disadvantaged institutions in terms of access to computers, the internet and a quiet place to study at home.

In the last few months, we have seen an explosion of innovations in generative AI. We need to look at generative AI from the perspective of the teacher, the learner, the institution and the context. What are the pedagogical possibilities and the ethical considerations?

The climate crisis is one of the defining issues of our times. Especially for the Commonwealth, with its 33 small states disproportionately affected by climate change.

Is the education sector prepared for the uncertainties that lie ahead? The population has already crossed the 8 billion mark making greater demands on existing resources. Life expectancy has gone up and those born after 1997 could live to be a hundred. The jobs that exist today were unheard of ten years ago and the jobs of the future will need to be aligned to the green and blue economies.

Can these challenges be addressed by promoting sustainability in education? What is the relationship between sustainability and education? How can we make education more sustainable? How can education lead to sustainable development? Sustainability is a vision, a process and a goal.

Let us explore the concept, its evolution and contemporary relevance.

More than three decades ago, the Brundtland Commission highlighted the need for sustainable development and defined it as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

In 2015, the global community committed to achieving 17 sustainable development goals. SDG4 aspires to ensure inclusive and equitable quality education and lifelong learning for all by 2030. With only seven years to go and the setbacks caused by the pandemic, it is clear that many targets will not be achieved if we continue with the 'business as usual' approach.

The two targets in Goal 4, specific to sustainability, refer to providing technical and vocational skills for livelihoods, literacy and numeracy for adults, knowledge and skills for sustainable development. There is an urgent need to fast track quality education and training that is sustainable and leads to sustainable development.

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. Let us look at examples of each.

SFU, Canada offers environmental literacy courses and the University of Pretoria, South Africa takes a transdisciplinary approach to its curriculum by aligning it with the SDGs.

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.

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 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 distance learners is three times lower than that of the campus counterpart.

Over the years, we have seen several terms emerge such as sustainability education, education for sustainable development, education for sustainability, sustainable education. These are often used interchangeably, even though there are subtle differences in emphasis.

COL believes that learning must lead to sustainable development by which we understand that learning must contribute to economic growth, social inclusion and environmental conservation.

One example of economic growth is the Commonwealth Executive MBA/MPA programme offered by universities in 11 countries. A study indicates that graduates of this programme saw an increase of 38% in their monthly income and every \$ invested resulted in \$ 3.40 direct returns for the learners. This programme includes a course on Business for Sustainable Development.

As part of social inclusion, COL uses affordable and accessible technologies to reach the bottom billion. Open Educational Resources are another solution to improving the quality and reducing the costs of education.

Finally as part of its environmental conservation agenda, COL supports the development of a Green Teacher programme in Nigeria which helps teachers inculcate environmental concerns among learners. All three dimensions—economic growth, social inclusion and environmental conservation are interrelated and integral to the sustainability agenda.

What are some of the models and approaches different stakeholders have adopted to implement sustainable education?

We are all aware of UNESCO's Decade of Education for Sustainable Development (ESD), a holistic and transformational approach to education that addresses learning content and outcomes, pedagogy and the learning environment. The intervention resulted in increased visibility in national policies and international agreements but was not fully integrated into education systems in most countries.

Another interesting model is the EARTH University in Costa Rica, a carbon neutral campus, which prepares young people to contribute to sustainable development by an interesting combination of theory and practice—students work in the fields in the morning and attend classes in the afternoon. This 'whole-school' model addresses not only the content of the programmes, but also the organisational culture and physical infrastructure.

In Japan, there are numerous efforts to link students to the community and the environment through their daily experiences and interactions. One of the best examples of this approach is the school lunch programme when students are taught about where their food comes from and have a chance to speak directly to the farmers to learn more about the process.

Outdoor education is an experiential approach to schooling where learning is anchored in the local natural environment. Many schools including the Kootney Boundary School district in British Columbia, are implementing outdoor education programmes, and have developed resources of curricular ideas and materials for outdoor, environmental and place-based learning.

Here is a photo of the barefoot wireless engineer training in India that takes place in the community. Another example is the E-Apprenticeship programme in Manitoba where learners work with an employer in their own community and simultaneously complete six months' of part-time online study.

Similarly, the skills sector recognizes the need to develop a "transition ready workforce" for careers in environmental sustainability. The green skills required relate to clean technologies and soft skills required to adapt to the changing world of work. In Western Canada, where the fossil fuel industry is one of the region's major sources of employment, there has been a push to develop policies and plans to re-skill or 'upskill' workers in emerging green technologies.

Studies have shown that countries where individualist orientations are stronger tended to have higher per capita CO2 emissions. Adger et al. (2013) and Chuang et al. (2016) reported that people having 'interdependent selves' were more likely to engage in pro-environmental behaviors than 'independent selves'. By linking learners to their communities, we can build this sense of interdependence. Community-based learning gives meaning, relevance and context to learning, and helps to inculcate a greater sense of responsibility. This is possible through the use of technologies.

Another example of technology use is the MOOCs that COL offered on different aspects of the Blue Economy to raise awareness on the need for the responsible use of oceans and the existential plight of small states in the context of rising sea levels.

How have Open Universities contributed to promoting sustainable education? The UPOU offers a doctoral programme in sustainability. The Open University of Sri Lanka has established a Centre for environmental studies and sustainable development. The Open University UK runs a Sustainability Hub that offers free courses. AIOU features well in the Times Higher Education Impact Rankings which assess universities against the UN sustainable development goals.

These examples highlight some of the innovations that address the issue of environmental sustainability through education, but these mostly exist in small pockets and often do not achieve scale. What have we learnt from these different initiatives in promoting sustainable 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 is more successful. 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 management, student and community levels.

Let us look at the way forward for transforming education for sustainability and sustainable development.

First, climate disasters are likely to be the biggest disruptors of education in the coming decade. 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.

As Bill Gates points out, the biggest emitter of greenhouse gases is the construction industry. As the need for education grows, is building more institutions our only option?

COL convened a high level panel to develop a report on transforming education through climate action. The panel highlighted the need for urgent action that would require behavioural change and empowering our youth.

This was presented to Commonwealth Ministers of Education and provides a road map for how ministers of education can climate proof education systems, and promote education for climate action. Ministries of education can adopt a 'whole of government' approach for greater policy coherence and co-ordination. Institutions can strengthen their resilience by promoting research, climate literacy, and building the capacity of staff to implement a green learning agenda. Individuals need to be empowered at every level of education to change their behaviours and become powerful champions of environmental conservation and climate justice.

As the climate crisis assumes greater urgency, we need to integrate key sustainability concepts into the curriculum. This would mean adopting a green learning agenda. 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.

The vulnerable are the hardest hit when disasters strike. For example, four out of every five people displaced by climate change are female. Girls with education can help families handle climate related risks and in Nepal and India, women's involvement in forest management yielded better results.

Second, 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.

One example of accomplishment comes from High Tech High in San Diego California, which supported students to learn to use complex water-monitoring equipment when the government cut funding for trained water monitors. The students not only continued the extremely valuable practice of monitoring the water, but also published the data online to share with their entire community.

Sustainability education has evolved in the past few decades to move from environmental education in the first wave to campus greening initiatives in the second to a greater focus on the need for changing the pedagogic approaches. In the third wave, there are discussions about emancipatory and transformative pedagogies while in the fourth wave, there is an emphasis on contemplative education.

Contemplative pedagogy complements both the rational and the sensory and focuses on mindfulness and meditation—developing values among learners that lead to creativity, empathy and caring for others—demonstrating the interconnectedness of people and the planet.

Third, technology can play a role in facilitating such a shift to sustainability. COL's experience shows that by leveraging technology for learning we can one, reach larger numbers at speed, scale and lower costs; two, increase access especially to the most marginalized, remote and rural communities; three, enhance sharing, cooperation and collaboration and four, reduce carbon emissions.

An ITU report 2022, indicates that while 60% of the global population uses the internet, in Africa, the percentage drops to 40. The same pattern is visible in the ownership of mobile phones. In terms of gender equality, women are 12% less likely to own a mobile phone than men. How do we ensure that our teachers can harness the potential of ChatGPT which can become a powerful personal assistant?

We have 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.

In order to help member states mainstream ESD, UNESCO organized a conference which proposed five pillars of education for sustainable education: policy, transforming learning environments, building the capacity of educators, empowering youth and inspiring local level action.

Local level action can contribute to education for sustainable development. This can be summed up in the four R's: reduction in carbon emissions; raising awareness on sustainability; reskilling for a greener future and building resilience in the education sector so that it is prepared for future uncertainties.

What then is sustainable education? It is education that is affordable and accessible for all. Institutions need to align more closely with the needs of their societies and promote research that leads to sustainable development. And finally learning must result in modelling sustainable behaviours that lead to the prosperity of the people and the planet.

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