

# Achieving SDG 4: Are ICTs The Answer



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Chairperson of the Commonwealth Group, President of the General Conference, Chairperson of the Executive Board, ADG, CI, representative of the Commonwealth Secretariat, Excellencies, Colleagues, it is an honour to be here at UNESCO to address the topic ‘Achieving SDG4: are ICTs the answer?’ from the perspective of my organisation, the Commonwealth of Learning.

Let me begin by thanking Her Excellency Mariam Katagum, Permanent Delegate of Nigeria to UNESCO, member of the Board of Governors, Commonwealth of Learning and Chairperson, Commonwealth Group, for organising this event.

COL has worked in close collaboration with UNESCO and an MOU was signed by the then DG Frederico Mayor and the COL President Tan Sri Raj Dhanarajan nearly 25 years ago. This partnership was further strengthened when your former

ADG Education Sir John Daniel joined COL as its next President.

Several joint activities were held over the years including the landmark first World OER Conference in 2012.

COL is an acknowledged world leader in open educational resources and organized six regional consultations worldwide in collaboration with UNESCO, the government of Slovenia and Hewlett Foundation leading to the 2nd World OER Congress held in Ljubljana last September.

As you know, COL was established by Commonwealth Heads of Government when they met in Vancouver for CHOGM in 1987. Ever since, we have been in beautiful British Columbia, which makes us the only Commonwealth intergovernmental organisation not in London.

Our mission is to help Commonwealth member states and institutions to use technologies for expanding access to education and training.

COL believes that learning is the key to sustainable development. Learning must lead to opportunities for economic growth, social inclusion and environmental conservation.

This aligns closely with the Sustainable Development Goal 4 which aspires to ensure inclusive and equitable quality education and lifelong learning opportunities for all by 2030.

Our strategy is to harness the potential of existing and new technologies to achieve development outcomes.

We work in the 53 member states of the Commonwealth with a population of 2.4 billion people. 60% of this population is under the age of 30 and in need of some form of education or training. 31 of the 53 countries, are small states, affected by climate change. Youth unemployment is high. This gives you the broad context of our work.

In my presentation today, I will first look at the question of whether SDG 4 can be achieved by 2030. This will be followed by a brief description of the six paradigm shifts that COL is leading to help member states accelerate progress towards achieving this goal. I will then highlight the three areas that need more attention and conclude with the way forward.

But first the question, can SDG 4 be achieved?

Rockefeller Foundation recently conducted a global survey on what people considered were the most solvable SDGs. 13000 people from 164 countries participated and the results were interesting. Respondents were most optimistic about solving hunger, followed by eliminating poverty and ensuring access to affordable and clean energy. Surprisingly, SDG 4 does not feature in this list of the eight solvable goals that they identified. The Global Education Monitoring Report, 2016 also indicates that on current trends, the targets relating to primary and secondary education will not be met by 2030.

Why this lack of confidence in achieving SDG4? Could it be costs and benefits? 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.

SDG4 aspires to ensure inclusive and equitable quality education and lifelong learning for all but if you look at the targets and indicators, how will we measure lifelong learning? Is literacy a sine qua non of lifelong learning? Since most of the targets focus on the formal education sector, what are the mechanisms for integrating formal non-formal and informal learning within the spectrum of lifelong learning? How do we blend pedagogy, andragogy and heutagogy?

If we are to achieve SDG4 by 2030, we need to move beyond the ‘business as usual’ approach and the ‘brick and mortar’ mindset which assumes that learning is only possible within the walls of a classroom. We will need alternative and innovative approaches to address the magnitude of the challenge. Are we ready to make the paradigm shifts required to fast track progress towards SDG4?

Let me share with you the six shifts that COL has led.

The first shift: if the child cannot go to school, the school comes to the child.

In the Commonwealth, 17 million primary children need to go to school and 16 million of our youth are out of secondary school. While more boys than girls are enrolled in primary schools, boys are underrepresented and under-performing at the secondary level.

Open schools provide flexible learning opportunities for secondary education. The learner is separated from the teacher and the distance is bridged through appropriate technologies including radio, TV, the internet. ICTs and innovative approaches are making it possible to reach dispersed constituencies of learners at scale.

In India, the National Institute of Open Schooling has a cumulative enrolment of 2.7 million students, 31% being female. The Bangladesh Open School enrolled 165,000 students, 40% of whom are female. In

a smaller country such as Namibia, over 80,000 students, 65% being female enrolled at the Namibia College of Open Learning. The issue of access and equity in secondary education can be addressed by establishing open schools.

What of costs? A COL study found that in India, an open school costs one tenth of what it costs to put a student through a secondary school. Similarly, in Namibia, students who go to NAMCOL pay one fifth compared to their counterparts in government secondary schools. It is for this reason that 27 Commonwealth countries have established open schools.

These young girls go to a COL-supported open school in Belize where we found that every \$ invested resulted in \$ 8 worth of perceived benefits to students.

This young woman from Bangladesh says ‘I left school in year five at the age of 12. I am 22 now and have 3 children. I went back to school so that I could help my children with their schoolwork.’

The second shift: technology enabled learning can break open the ivory towers of tertiary education.

There is a huge demand for higher education and if we are to accommodate all the children who will reach enrolment age by 2025, we will need to build 4 new universities every week with a capacity to cater to 30,000 learners.

As governments and policy makers sought to expand access to higher education, reduce costs and improve standards, they realized that traditional brick and mortar solutions would not be enough. They began to invest in open universities.

There has been a huge growth of open universities in the developing Commonwealth with 31 open universities opening up access to millions of learners. There has been a record growth in Asia and we’ll see the next wave in Africa. Botswana Open University was formally inaugurated this September.

A study by the National Knowledge Commission, India, shows that mega-universities, which achieve economies of scale cost substantially less than campus institutions. Pakistan’s AIOU costs 22%; China 40%; India’s IGNOU 35% and the OUUK, 50% as compared to campus universities.

What of quality? Studies show that there is no significant difference between distance learning and campus education. In fact, in 2012, the Open University, UK ranked 5th in student satisfaction among all UK universities and was one place ahead of Oxford which ranked sixth.

COL’s Commonwealth Executive MBA/MPA is a distance learning programme offered by universities in 11 countries. A recent study conducted at the Allama Iqbal Open University, Pakistan indicates that the graduates of this programme saw an increase of 38% in their monthly income, improved their chances of promotion by over 28% and every \$ invested resulted in \$ 3.40 direct returns for the learners.

Raymond Loh, an alumnus of Wawasan Open University, Malaysia completed this programme in his early fifties, when he was jobless and started a moving and relocation service which now has a presence in 40 countries.

The third shift: Open Educational Resources are the answer to closed and costly textbooks.

A UNESCO study found that in Cameroon, 12 students shared one reading textbook and 14 students had to share one maths textbook. Research

in 22 sub-Saharan African countries shows that textbooks are effective in improving learning; and providing one textbook to every student in a classroom increased scores by 5–20% (Fehrler et al., 2009).

How can OER put a textbook in the hand of every child? OER are free educational materials which anyone can adopt or adapt without having to seek the author's permission.

Affordability and costs are a key barrier to access in tertiary education. In a COL survey conducted in Malaysia, 76% university students decided not to buy a textbook because it was too expensive. Similarly, 73% students in Bangladesh depended on photocopied materials as textbooks were too costly.

OER based textbooks reduce costs while at the same time enhancing quality. In Antigua & Barbuda a student saved ECD 750 per year in buying textbooks and learning outcomes improved by 5.5% through the use of OER.

COL has helped 9 countries to develop OER policies, including the National Universities Commission, Nigeria. 165 universities are now involved in the development and sharing of OER with an impact on tens of thousands of students.

The fourth shift: the digital divide can be transformed into a digital dividend.

Not everyone in the Commonwealth has computers and connectivity. Children studying under a tree is not an uncommon sight. Can these children become part of global knowledge flows?

COL developed Aptus a low-cost offline virtual classroom that provides learners in remote locations with access to digital resources. It's a server that works with a solar charger and a wireless router and costs approximately \$ 150.

Aptus was deployed in a remote mountain school in Pakistan and resulted in better motivation of teachers and improved learning outcomes for students. Students took interest in this technology because they could watch animated videos and access multi-media resources on different topics.

Following the devastation wreaked by cyclone Gita, COL responded by sending secondary school materials to Tonga on Aptus. My colleague who went to train the technical staff in Tonga is presenting the device and tablets to the minister of education. Aptus been deployed with effective outcomes in Kiribati, Samoa and Vanuatu.

COL worked with the University of Seychelles to develop and deliver a free online course on The Blue Economy.

Massive Open Online Courses or MOOCs have been tailored to suit the needs of developing countries and so far over 150000 learners have been reached even through basic mobile phones especially in agriculture related courses.

COL's MOOC for Development model can help us reach the bottom billion by providing simple technology solutions such as basic mobile phone interface, social media integration and delivery in low bandwidth situations. The content is developed as OER and the design encourages a blended approach—online and face to face interactions.

The fifth shift: literacy is not always a precondition for learning.

The Commonwealth is home to 400 million illiterate adults, more than half the global number. Can they aspire to livelihoods and a life of dignity?

In India, women entrepreneurs at the bottom of the pyramid established a farm producers company with COL support. These illiterate women learnt corporate finance through their basic mobile phones. In the

past two years 137,000 women in 11 countries have been lifted out of poverty and every dollar invested has resulted in assets worth 9 dollars.

In Kenya, COL supported women to start agri-enterprises and a recent study concludes that learning leads to empowerment and for every 1% increase in empowerment, there is a 2.3% increase in profits.

Mary Arogya is a school dropout and a grandmother who knew nothing about computers. As part of COL's Lifelong Learning for Farmers project, she is working as a content and web manager for a farmers' organisation, has uploaded hundreds of resources on YouTube, Facebook and trained over a thousand other farmers.

The sixth shift: the social capital of the mother is the most important determinant in bringing girls to school.

During CHOGM 2018, the British government announced an initiative to leave no girl behind and ensure that every girl has access to 12 years of quality education. How will this be possible?

With support from the governments of Australia and Canada, COL is schooling and skilling girls and women in Bangladesh, India, Pakistan, Mozambique and Tanzania for employment and entrepreneurship. Community engagement was one of our main strategies. The community is informed through street theatre performances, the radio, boat shows and awareness raising events. The members of the family must be empowered—this was done through self-growth sessions and advocacy meetings for mothers. In order to skill 35,000 girls, over 200,000 family and community members had to be sensitised.

Fatima, a 14 year old girl in Mozambique, was to be married to her father's colleague. During the door to door visits conducted by our partner, the community facilitator asked Fatima why she was not in school and sought the support of the community leader. Initially, the father was reluctant to listen, but he agreed to put a stop to the marriage. Since then, Fatima has returned to school.

Samina in Pakistan recounts how she was forced to labour with her parents rather than go to school but now with community advocacy she is empowered to send her daughter to school. Empowered mothers and sensitised communities can be the most powerful stakeholders for ensuring that each girl completes 12 years of school

You have seen how COL has steered six paradigm shifts. All these shifts were possible by harnessing the potential of technology not just for formal education but also for lifelong learning. COL integrates conventional pedagogy with self-directed learning or heutagogy. Community involvement and innovative models are key to the success of these initiatives.

What more needs to be done if SDG 4 must be achieved by 2030? Let us look at three priority areas.

First, inclusion and using technology to provide appropriate learning opportunities for people with disabilities. In fact, two of the ten targets in SDG4 draw attention to the need to i) eliminate disparities for people with disabilities and ii) to provide infrastructure and materials for improved access to education. Globally, 186 million children with disabilities have not completed primary school. The situation is worse in developing countries where 90% of the children with disabilities are out of school. The situation is no better in the tertiary sector. In Canada, access to tertiary education for people with disabilities is 11 %. Australia has over 5 % people with disabilities in tertiary education while the percentage drops to 1% in South Africa and .56 % in India.

Assistive Technologies can help improve access and inclusion. Voice recognition, braille displays, screen magnification and various mobile apps are already available on smartphones. We need to use these technologies from a pedagogic perspective to make education more disabled-friendly.

Second, a renewed focus on lifelong learning. As we know, lifelong learning means learning from cradle to grave and includes formal, non-formal and informal learning. Lifelong learning also means focusing on learner centric approaches and promoting autonomous learning.

MOOCs, social networks and online technologies are already helping to promote lifelong learning and to create learning societies. Because of the near ubiquity of technologies, it is now possible to offer badges and micro-credentials.

Third how can we enhance the quality of education through technologies? Blockchain, a major development in the area of financial technology, is, in effect, an open source online register. A learner can have a distinct, persistent ID in this space. An agency that imparts learning can track progress and add scores making the entire set of records a block. It is important to note that the records cannot be modified at all. A prospective employer could directly verify the claims about learning achievements. Institutions can carry out this process online which makes it difficult for digital diploma mills to thrive. COL is already supporting the University of Hyderabad, India to use blockchain technologies for certification.

Learning Analytics can help promote constant learner support, especially for those at risk of dropping out. For example, Khan Academy has deployed learning dashboards in several school districts in California to provide a personalised experience for the students with improved results. We can harness the potential of technologies to address inclusion, lifelong learning and quality.

In conclusion let us look at the road ahead.

The first step would be to promote the use of open distance and technology enabled learning not just for formal education but also for lifelong learning. This is a tried and tested approach over five decades and needs to be deployed by policy makers for achieving development goals.

As Sir John Daniel often reminds us, education has always been constrained by the iron triangle of access quality and costs. If access is increased quality suffers and the costs go up. However, open distance and online learning have proven that the iron triangle of access, quality and costs can be re-drawn to increase access, improve quality and cut costs all at the same time.

The second step would be to adopt a targeted approach to reaching the unreached.

Who are the unreached? In education, the unreached are those groups of people who either have no access to education or have dropped out of the educational system without completing their desired goals, and therefore cannot fully participate in the economic and social development of their nations. They are unreached because they are located in remote regions without educational facilities or they may be too poor to afford education. In some cultures, women and girls are given low priority in terms of access to education. Language can also be a barrier for many communities who do not speak the dominant languages. Unless we develop a targeted approach, we will never reach these constituencies.

The third step is to recognise that ICTs by itself will not help us achieve SDG 4 but must be placed in an appropriate social political and economic context.

They must be placed within the context of the three E's. As robots take up cognitive tasks which they can perform much better than human beings, what human being can bring to the table is empathy—empathy for the unreached will lead to equity. The costs and location of the emerging technologies in global

centres disadvantages people in remote areas—what policies and practices do we need to put in place to ensure that we don't widen the existing digital divide? Finally, there is the question of ethics—with data breaches, cyber crimes, replications of biases, IGO's and policy makers must ensure the ethical use of technologies.

With that let me thank you for your attention.

COL's triennial Pan Commonwealth Forum will be held jointly with the Open University, UK next September in Edinburgh. The theme 'Innovations for Quality Education and Lifelong Learning' links directly with SDG 4. I sincerely hope you'll be able to join experts, policy makers and practitioners from around the world to discuss and identify new paradigm shifts and innovations that will help us achieve our ambitious targets.