

# Transforming learning through innovation: the COL experience



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It's a pleasure to be here at LINC and I thank Prof Vijay Kumar and the organisers for the invitation. I'll share some examples of how my organization the Commonwealth of Learning is transforming learning through innovation and the lessons learned.

The Commonwealth of Learning or COL is an intergovernmental organisation established by Commonwealth Heads of Government. Our headquarters are in Metro Vancouver and we have a regional office, the Commonwealth Educational Media Centre for Asia, in New Delhi.

Our mission is to help Commonwealth member states and institutions to harness the potential of distance learning and technologies for expanding access to education and training. COL believes that learning is the key to sustainable development.

But first the context.

We work in the Commonwealth which has 53 member states that span all regions of the globe—from the Caribbean to the Pacific--46 are developing countries with several challenges relating to education and training.

Globally, there are 1.2 billion young people between the ages of 15-24, and most of them are in developing countries. The Commonwealth is young with 60% of its population of 2.3 billion, below the age of 30.

However, there is a high rate of youth unemployment especially among the youth. 12% of the young people in the Commonwealth are unemployed, as compared to the global average of 14%.

In which ways can technology help? While there are 80 internet users per hundred in the developed world, the figure in the developing countries drops to 35%, with internet use in Africa being lower still at 21%.

The Commonwealth average for internet use is not much higher at 24%. The real growth in the last decade has taken place in mobile use, which stands at 80%.

Such disparities between the developed and developing world, are also reflected in access to education. The GER ratio for secondary education in the developing world is about 71%, while for tertiary education it is 27%, well below the developed world average of 74%.

How then will we achieve the global aspiration of SDG Goal 4, which aims to ensure inclusive and equitable quality education and lifelong learning for all by 2030?

While there are several challenges that developing countries must address, let me just take up three, the 3 'Cs' relating to content, capacity and connectivity and what COL has done to address these.

While there are trillions of pages of content on the internet, access to quality content is still out of the reach of many in developing countries.

For instance, a UNESCO report found that in Cameroon in 2012, there was one reading textbook for 12 students and one maths textbook for every 14 students.

How can quality Open Education Resources be harnessed to mitigate this challenge?

COL established a six-country partnership to develop 20 sets of course materials in print and online formats, based on the secondary curricula of Botswana, Lesotho, Namibia, Seychelles, Trinidad & Tobago and Zambia. The materials have been developed as Open Education Resources (OER), so that without duplicating effort, participating countries can have access to quality materials that they can adopt and adapt as necessary. This content was provided to Sierra Leone during the Ebola crisis so that students could continue to study when the schools were shut down.

COL has developed a prototype for open textbooks through the use of OER and this has been piloted by Antigua and Barbuda, and is being taken up by the other Eastern Caribbean States. The Minister of Education, Antigua and Barbuda found that with the improved content, learning outcomes in Maths had improved by 20%.

COL's Virtual University for Small States of the Commonwealth (VUSSC), a consortium of institutions from all 31 small states of the Commonwealth have developed needs-based courses which are freely available, as OER. VUSSC is a network of for and by the small states. It has been a powerful forum for connecting the Commonwealth and promoting collaboration.

As a result more open courses are now available. VUSSC has courses and programmes which were the identified by the small states themselves to address some of the challenges the small states are facing.

Ten institutions in 8 countries have started to offer VUSSC courses and programmes. Institutions are offering these through a variety of means mainly through conventional, online or blended modes.

The National University of Samoa offers the VUSSC developed Diploma in Sustainable Agriculture. The first group of students who graduated are already in full-time employment. Vaaelua, a graduate of this diploma plans to carry her qualifications to the University of the South Pacific, where she will pursue a further degree.

The UKOU Research Hub conducted a survey to assess the use of OER by formal learners in India, the small states of the Commonwealth and the Open Learn UK.

Students in developing countries showed high levels of satisfaction with OER in terms of increased interest, better collaboration with peers and improved grades.

OER emerged as a technology driven solution to address issues of costs and quality. But the lesson we have learned is not to view OER as a product but as a process that involves and empowers stakeholders into becoming active producers rather than simple consumers of content.

Let us take up the second C: capacity.

These women from our Lifelong Learning for Farmers project used basic mobile phones to learn about goat enterprise from experts in their own language, Tamil.

The majority of women owned their own cell phones, and this ownership was a critical factor in helping them to domesticate this technology.

Olivia Atieno from Kenya is a school dropout and the only breadwinner in a large family. Through her participation in L3F, during which she learns daily using her mobile phone, she has become an active member of a cooperative, accessed credit and increased both her productivity and income.

COL catalyses the links between the civil society, expert institutions such as agricultural universities and veterinary colleges and financial institutions to develop multi-media based learning.

Learning is a pre-condition for accessing credit. In Uganda, India and Sri Lanka farmers use their mobile phones for audio-based learning; in Kenya DVDs and radios are used for learning.

Research shows that for every dollar invested, income and assets worth \$9 have been generated among these farmers who became lifelong learners using basic mobile phones.

Empowerment is an expected outcome of L3F. But how do we measure empowerment? COL felt that since empowerment is not a unilinear, homogenous process, it developed a three dimensional framework for measuring empowerment.

The framework looks at empowerment at three levels: the household, community and enterprise. Through this three dimensional framework, COL believes that the resources, agency and achievements for making choices can be captured well.

In Uganda and Kenya COL conducted studies comparing L3F households with other control groups such as non-L3F households, villages and associations. The studies revealed an interesting pattern. Empowerment scores are higher for the L3F village than the Non-L3F village. What is more interesting is women in the L3F villages have a higher mean empowerment score than men in the Non-L3F village.

What was the innovation here? COL's L3F placed the technology within a specific social context, used strategies to facilitate the domestication of the technology, built capacity through learning and networking that resulted in the social and economic empowerment of stakeholders.

Finally, how do we address the challenge of connectivity and reach the unreached?

How can we reach students under this tree with quality learning materials?

Aptus or the Classroom Without Walls is one possible solution. It is developed using readily available and low cost components at about \$150.

Aptus does not require power from the mains. We can use solar chargers instead. It does not require any connectivity. We use a wireless router. All this enables teachers and students to access good quality digital materials through this device.

As of now, learners can access the Wikipedia for schools containing over 6000 articles. Or the 2000 Khan Academy videos, covering topics relevant to learners in primary schools or high schools. A whole library of free books is also available. In addition, teachers can develop and upload their own content.

This was deployed in small island states and here you can see the Honourable Minister of Education, Vanuatu presenting it to his officials in the aftermath of Cyclone Pam.

Aptus was deployed in Allama Iqbal Public School in the remote mountainous region of Swat, Pakistan and students were provided tablets.

Students were excited by the multi-media options available and watched animated videos on each topic, which had formerly not been possible.

Both the students and the teachers benefited—the academic performance of the students improved and the teachers attitude towards their teaching practice changed.

In its efforts to achieve digital inclusion, COL tries to tailor the technology solutions to reach the last person in the queue rather than the other way round. The innovation here involves placing technology in a particular social context.

How then can we transform learning and achieve quality education and lifelong learning for all?

By investing in innovation. The innovation in this case is that the emphasis is on the people rather than the technology and learning is seen as a process of knowledge creation.

As we know technologies do enable change and add value to the development process. ICT strategies are only effective, sustainable and worth the effort if they are integrally linked to broader, more comprehensive development and education strategies.

In conclusion, our experience shows that technology by itself does not lead to innovation. Innovation happens when technology is placed in an appropriate social economic and political context and the stakeholder is empowered to domesticate the technology. Finally, digital inclusion requires a proactive, targeted approach.

Thank you for your kind attention.