

ICT, Education and Social Transformation: COL's Experience in "Learning for Sustainable Development" & Its Relevance to Jamaica



26 October 2016

ICT in Education Conference 2016, EduVision
Ocho Rios, Jamaica

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On behalf of the Commonwealth of Learning (COL), I will be speaking on our experiences in Learning for Sustainable Development, and its relevance to Jamaica. I will be specifically focusing on the role of ICT and education in social and economic transformation.

It is a privilege to be invited to be a speaker in this conference, and I am grateful to the conference organisers, particularly to the Ministry of Education, Youth and Information. Jamaica is an active partner of COL and we have been able to gain strength through the constant support of Jamaica over the last 25 years.

The year 2015 marks a new beginning in the endeavour of this world to address developmental challenges. 193 member states of the UN adopted set of seventeen aspirational "Global Goals" with 169 targets to achieve 5 P's: ending **poverty**, ensuring **prosperity**, fostering **peace**, protecting the **planet** and implementing through **partnership**, by the year 2030.

According to UNESCO, this time "the SDGs reflect the important role of education by encapsulating targets in a stand-alone goal (Goal 4)" (<http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/sdg4-education-2030/>).

Sustainable Development Goal 4 aims specifically at: Quality education leading to effective learning outcomes; skills for employment and entrepreneurship; Knowledge and skills for peace and global citizenship; and strengthening teacher education.

Is SDG 4 a stand-alone goal? I do not think so. Global development is like 17 wheel super truck. Even if one wheel fails, the truck will be in trouble. Each wheel has to synchronise with other 16 wheels and add value to them. The Inter-University Council for East Africa estimated that more than half of all graduates in the region are "inadequately prepared for employment" (<http://monitor.icef.com/2016/10/employability-challenge-sub-saharan-africa/>). It is not only in Africa, but also in other parts of the developing world as well in the developed world. Given this condition, how can education address goal 8 of decent work and economic growth?

Hence ladies and gentlemen, we need to understand how education as a goal can add value to the other 16 goals. A working paper from The United Nations Department of Economic and Social Affairs (DESA) has been looking at the role of education in addressing the issues of gender, health, inequality, growth and employment, sustainable consumption and production, etc.

(Katia Vladimirovaa, David Le Blanc, DESA Working Paper No. 146 ST/ESA/2015/DWP/146, October 2015

<https://sustainabledevelopment.un.org/content/documents/2111education%20and%20sdgs.pdf>)

We need to look at the role of ICT in strengthening education to bring about social and economic transformation.

Let us look at Jamaica. For a long time, the world has been talking about “missing men” in education in Caribbean countries. But if you look at the figures given by UNESCO institute of Statistics, the Gross Enrollment ratio in secondary school has declined not only among boys but also among girls. While there is an improvement in tertiary education, “the missing men” syndrome still continues.

This is in spite of the fact that the Jamaican government has been enhancing its resources for education both as a percentage of the GDP as well as a percentage of the government expenditure.

The Ministry of Education, Youth and Information has taken cognizance of it and has well-defined strategies and objectives to address the challenges.

Jamaica has been rapidly progressing in terms of ICT infrastructure. Broadband internet, facilities such as Community Access Points, mobile phone penetration at 110% etc. offer enormous scope to strengthen education and human resource development.

Education as a sector always a faced a challenge, which is popularly called the Iron Triangle. Reduced access, declining quality and increasing cost. The Iron Triangle has kept a large proportion of the world population away from education.

One of the fundamental questions which needs to be answered is whether ICT can help to reshape this triangle by reducing the cost, enhancing the quality and widening the access.

Ladies and Gentlemen, The answers to these questions will define the role of ICT in social and economic transformation. While there are answers here and there, the question remains still valid. Jamaica too needs to look at these questions vis-a-vis its socio-economic context.

In 2001, while looking at the role of ICT in development, UNDP warned that the belief that there is a technological silver bullet that can “solve” illiteracy, ill health or economic failure reflects scant understanding of real poverty

(http://www.np.undp.org/content/nepal/en/home/library/human_development/human-development-report-2001/).

Tim Unwin, UNESCO Chair in ICT4D, points out that ‘ICT have the potential to increase equality or to reduce them, depending on the social, political and economic contexts within which they are introduced’ (Unwin Tim, ICT4D: Information and Communication Technology for Development, edited by P. T. H. Unwin, Cambridge University Press, 2009, p.7)

Studies show that technology becomes effective when it is socially shaped. Silverstone and his colleagues in 1992 postulated the domestication theory that technology needs to be tamed or appropriated by its users. Technology is integrated into everyday life and adapted to daily practices. Then, the user and its

environment change and adapt accordingly. These adaptations feed back into the innovation processes in reshaping the technology.

(Silverstone, Roger, Hirsch, Eric (Eds.) (1992). *Consuming Technologies: Media and information in domestic spaces*. London/New York: Routledge).

An interesting study in South Africa shows how domestication (commodification, objectification, incorporation and conversion) influenced the performance of eLearning in South Africa. The author points out that “without appropriate pedagogical techniques that use technologies in constructive ways, e-learning is less likely to fulfil its potential in the higher education sector”.

(Dagada, R. (2011). Domestication of E-Learning in Higher Learning Institutions in South Africa. In S. Barton, J. Hedberg & K. Suzuki (Eds.), *Proceedings of Global Learn 2011* (pp. 2285-2293). Association for the Advancement of Computing in Education (AACE).)

This brings us to an important question of ICT in education. ICT can play a role in education. Broadband internet, mobile phones, radios and televisions have huge potentials in addressing education. But ICT is not just an artifact. Issues such as content, connectivity, culture, economic and financial viability, and relevance to the learners are the major questions which need to be answered. Schemes such as “One Laptop Per Child” faced challenges due to failure in addressing issues of content development, best practices of integration, and retooling of teachers.

(http://kessa.org/yahoo_site_admin/assets/docs/5_MoseKessa14proceedings-post.6161214.pdf). Hence ICT alone cannot answer the problem. We need a paradigm shift in our approach to education.

In the conventional approach to education, pedagogy was meant for children. Andragogy for self-directed learning of adults and heutagogy for self-determined learning of adults.

But a silent revolution is taking place and the lines between these three approaches are blurring. ICT has enabled children and students to move towards self-directed and self-determined learning. They acquire skills faster, but they have challenges in shaping them as knowledge and values. Teachers have the knowledge, but their access to skills and ability to facilitate self-directed and self-determined learning is limited due to more emphasis on pedagogy in teacher training. This is a fundamental contradiction which needs to be looked into. In Singapore, there are discussions taking place to institutionalise self-directed learning among students in formal schooling and to train teachers to facilitate such learning. Msila of University of South Africa talks about teacher training programs which need to stress critical thinking through heutagogy . (<http://www.sciencedirect.com/science/article/pii/S1877042812053785>)

Let me start with one example from the experiences of Commonwealth of Learning. I am talking about Open Schooling (or Open Innovative Schooling). Open Schooling is characterised by the physical separation of the learner from the teacher, the use of unconventional teaching methodologies, information and communications technologies (ICTs) and blended & flexible approaches.

This slide shows the advantages of open schooling in terms of costs. The studies of Rumble and Kaul (2007) show that the cost of an open school is one fifth to one tenth of a conventional school. Studies in India show that it has not only widened the access but also has ensured quality as reflected by learning outcomes. A tracer study conducted by COL shows that seventy one per cent of female respondents and 80 per cent of male respondents who were open schooling students are pursuing undergraduate courses from various universities (Rumble & Kaul. 2007. *Open Schooling for Secondary & Higher Secondary Education: Costs and Effectiveness in India and Namibia* <http://oasis.col.org/handle/11599/228>)

(2015. Tracing the Education and Employment Status of Open School Graduates in India, Centre for Budget and Policy Studies, Bangalore)

The model of Open Schooling integrates pedagogy, andragogy and heutagogy. Various types of ICTs are used in such schooling. In addition to teachers and institutions, communities also play a major role in open schooling. COL with the support of Government of Canada and Government of Australia is introducing Open Schooling in five countries to prevent the early marriage of girls. Can Open Schooling arrest the declining GER in Jamaica?

Let me talk about my organisation, the Commonwealth of Learning, popularly known as COL. It was established by the Commonwealth Heads of Government Meeting in 1987 in Vancouver. Hence we are in Vancouver. Our theme is 'Learning for Sustainable Development.'

We are involved in developing the roadmap for linking learning to economic growth, social inclusion and environmental conservation.

We support, governments, educational institutions, civil society and the private sector in their endeavour to widen the access, enhance the quality and reduce the cost of education and learning so that they can lead to sustainable development.

We are a small organisation with less than 50 staff working in 52 countries. We work in the area of formal education, as well as in skills, both at the formal as well as at non-formal levels. Gender is a cross cutting theme in all our activities. We develop models, influence the policies through such models, help to build capacity and, wherever required, support in material development. Our strength lies in partnership-working with more than 300 partners all over the Commonwealth. We are not a funding agency- but a technical and a facilitating agency.

In the area of higher education we are focusing on enhancing the quality of distance learning. In Jamaica and the Caribbean, we are involved with the University of Technology, which piloted the Commonwealth of Learning Review and Improvement Model (COL-RIM) for enhancing quality. The University College of the Caribbean offers the Commonwealth Executive Master of Business Administration (CEMBA) and Master of Public Administration (CEMPA) programme and many students from Jamaica have benefitted from these courses.

In teacher education, we have helped the Joint Board for Teacher Education to convert face-to-face B.Ed. modules for online delivery. We are also supporting JBTE in developing and piloting special education assessment instruments which are culturally appropriate for Caribbean students.

Virtual University for Small States in Commonwealth (VUSSC) is platform in which universities and colleges from many countries come together and share their resources. Jamaica is playing a key role in the Transnational Qualification Framework (TQF) developed by VUSSC, which enables the mobility of students between different institutions. VUSSC has supported Technical and Vocational Teacher Training (TVET) Courses for University of Technology and it has a strong partnership with UWI, Mona Campus.

VUSSC is also helping partner institutions in developing suitable and appropriate courses.

COL's Technical Vocational Skills Development (TVSD) is supporting capacity building for online materials development to strengthen online learning programme in Jamaica; it is providing training in flexible TVET systems and quality assurance for HEART Managers.

Its programme called Lifelong Learning for Farmers (L3F) is being implemented by RADA. COL is helping RADA in its Mobile Phone Based Extension System, a capacity building programme for

extension officers through eLearning, in strengthening gender policy, and in developing an Online Repository on Agriculture.

L3F is an interesting model which places learning in the context of the entire development chain. The learning takes place in relation to financial capital and social capital. ICT based ODL, particularly mobile phones and radios are reaching more than 200,000 marginalized communities mainly women who semi-literate and illiterate.

Studies by financial institutions and Universities showed that for every \$1 invested in the project, a community got \$9 worth of direct and social returns. Banks earned 8 times more profit due to this project and the cost of the learning of farmers under L3F was six times less than that of conventional agricultural extension training. University of Nairobi in its study showed that the household food security in Kenya and Uganda project areas was enhanced due to lifelong learning.

COL is now actively involved in strengthening Open Educational Resources movement (OER). OER provide an immediate way to make education significantly more accessible for students. Studies have shown that the cost of learning materials borne by students as well as by governments can be reduced considerably through OERs. Jamaica can play a major role in OER in the context of ICT in education.

UNESCO, COL and Government of Slovenia will be hosting the 2nd World OER congress with UNESCO member states in Slovenia during 2017. The theme of the Conference is OER for “Inclusive and Equitable Quality Education: From Commitment to Action” to make it relevant to SDGs.

The organisation of Easter Caribbean States are already in the OER movement through their Open Text Book programme.

Massive Online Open Course (MOOCs) which started in the USA and Europe in a big way had technological challenges for developing countries. COL has helped to evolve a platform for MOOCs for countries with limited bandwidth and which could be used in different media such as mobile phones.

COL is now involved in developing a quality assurance framework for MOOCs

And Malaysia is already on its way in defining mechanisms for accrediting MOOCs.

While mobile phones, tablets and laptops have been distributed in many developing countries to students, internet connectivity is still a challenge. COL has developed a product called Aptus, an offline wifi system, to address this challenge. Its cost right now is less than US\$150.

Aptus helps in developing ‘The Classroom Without Walls’. It is an off-grid and offline system; it can be set up anywhere without need for access to electricity or the internet; it can be accessed through mobiles, tablets and computers. Multiple students can access the materials hosted on the server using their own tablets or mobile devices.

A study by the National University of Samoa shows that students find learning through Aptus easier. It has promoted strong self-directed and self-determined learning among the students.

Ladies and Gentlemen, in conclusion, let me summarise: ICT by itself will not bring change. A paradigm shift in the educational theory and practice of education is a precondition for ICT integration. Local innovation systems are a must for placing ICT in an appropriate socio-economic and cultural context.

Through your innovation, you gave a new meaning to music. You gave a new meaning to sports. You can now give new meaning to ICT in Education. Jamaica has the potential to be a leader and role model in this area.