

# Skilling at Scale: what are the options?

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Chair, Distinguished Colleagues, Friends. It is an honour to be here in Winneba after nearly a decade and I thank Prof Anamuah Mensah and his team at the University of Education for the invitation.

Let me begin with a brief introduction to my organisation the Commonwealth of Learning or COL which 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.

Our mandate is to work in the fifty three Member States of the Commonwealth, which span all regions of the globe—from the Caribbean, to Europe, Africa, Asia and the Pacific.

Ghana is an active member of the Commonwealth and has been consistent in its financial and intellectual contributions to COL. Thank you, Ghana.

COL has an international Board of Governors, and Dr Esi Sutherland-Addy and Prof Akilagpa Sawyerr represented Africa on the board with great distinction.

The Focal Point for Ghana is none other than Prof Anamuah Mensah.

And Joshua Mallet served COL as an Education Specialist and is a well-known personality around the Commonwealth.

We have been working with the University of Education when it was still the University College of Education.

Some modules of COL's Teacher Training materials the STAMP 2000+ were offered by Winneba as far back as 2002.

COL's Commonwealth Executive MBA/MPA programme is offered by the Kwame Nkrumah University of Science and Technology along with institutions in 11 Commonwealth countries.

Last year, in collaboration with the National Open University of Nigeria, COL offered offered training for women leaders in Cape Coast.

This project on financial literacy and financial inclusion is being implemented in Northern Volta and Upper East regions.

These programmes give you a flavour of what we do in Ghana.

My topic today is ‘Skilling at Scale: what are the options?’. Skills development is a top priority for most governments in both developing and developed countries. After setting the context, I will look at two game changers that can help us skill our youth in more cost-effective ways. These are Technology Enabled Learning and Open Education. I will conclude with some suggestions in which we can prepare our young people for livelihoods opportunities.

First, the context.

There are 1.2 billion young people between the ages of 15-24, most of them in developing countries. Governments are looking for ways in which these young people can be skilled for employment and entrepreneurship. Ghana has over 5 million young people, accounting for nearly 20% of the total population. How can we convert this into a demographic dividend?

The global rate of unemployment among the youth is almost 14 %. The unemployment rate for young people in the 15-24 year age-group in Ghana is relatively low at 4 %. Education, especially higher education, is seen as a way out of this situation.

Even though Ghana has over 130 tertiary institutions, they can only absorb about 14% of the relevant age group of 19-23 year olds. This is well below the OECD average of 40-50 % participation in tertiary education required for sustainable development.

In which ways can the phenomenal growth in technology help? What kinds of technology? While in the developed world, there are nearly 80 internet users per 100 persons, in Ghana the average drops to 24%. The real growth has been in mobile devices at 130%. How can institutions harness the potential of this affordable and available technology?

Within this context, let us briefly review the first major game changer, technology enabled learning, and what opportunities it provides for skilling our youth at scale.

Distance education has always been regarded as a delivery mode which can increase access, reduce costs and improve the quality of education. Ghana is no stranger to distance education which first started as correspondence courses. These were followed by Radio for training teachers and in the 1990’s several institutions began to offer distance education. This is now extending to polytechnics as they adopt more blended approaches.

The Centre for National Distance Learning and Open Schooling was established in 2012 to harmonise and regulate open and distance learning in Ghana at all levels tertiary and pre-tertiary and in the formal and informal sectors.

What are the emergent trends in technology globally? The recent Horizon report estimates that in the next two years, there will be a greater emphasis on measuring learning and blended learning would be used increasingly. Over the next three to five years, and institutions will redesign their learning spaces and focus on deeper learning approaches. In the longer term, we will see more innovation and a rethinking of how institutions work. (Johnson et al, 2015). Are we prepared to make these transitions effectively?

With more access to technologies, we have seen an increasing trend towards online learning, especially in the developed countries. According to a Babson survey, nearly 30% of all higher education students in the US take at least one online course. The growth rate for eLearning in Africa is 16.3%. According to the Ambient report 2015, Uganda has the highest growth rate in Africa at 45%, followed closely by Ghana and Rwanda.

The eLearning Africa report 2015 asked respondents, what are the most commonly used ICTs? Laptops came first with 19%, smartphone at 14% and PCs at 13%. This is a dynamic field and we would need to watch this space. Mobile devices such as smartphones and tablets may well supersede PCs and laptops in the near future.

The same report surveyed the benefits of ICT in education. The top three uses identified were: one, to enhance learning; two, to equip students with digital skills to prepare them for the workforce and three, to access information.

Research comparing distance education, online learning and face-to-face education have indicated that there is no significant difference in learning outcomes. Bernard et al. (2004) after a meta-analysis of 232 studies concluded that in many cases, the DE group outperformed the traditional education group by over 50%. There were other instances to the contrary, and therefore, it could not be concluded that DE is better than, worse than or even equal to traditional education, reaffirming the conclusion that there is 'no-significant difference' between different forms of educational provision. Another meta-analysis by Shachar and Neuman (2010) indicated that in 70% of the cases, students taking courses by distance education outperformed their counterparts in the traditionally instructed courses, which means distance education is becoming the "new normal".

Over the past five years, we have seen the phenomenal growth of Massive Open Online Courses or MOOCs, a form of distance and online learning. In 2015, more people signed up for MOOCs than in the previous three years combined. As MOOCs establish their presence, new sets of credentials are being offered—badges, specialisations, credits. The MOOC has one distinction: it is the only scalable educational technology that was developed by and for educators. Nearly all other educational technologies such as radio and TV were adaptations of technology developments for other sectors.

Who are the MOOC participants? Most already have a first degree, are mostly male and those who take MOOC, often become serial MOOC-takers. How will we reach the unreached, who most need MOOCs?

What impact have MOOCs had on learners? A recent study shows that the majority of learners reported career-related and educational benefits. 33% got career benefits such as promotions and pay raises while 18% gained credit towards an academic degree.

The same study shows that students from less educated and less affluent backgrounds are more likely to benefit more in term terms of career advancement.

What of impact on teachers? Thirty instructors from Duke university in the US who offered MOOCs, reported an improvement in classroom materials and activities; developing better measures of student learning and adopting new pedagogies.

Have MOOCs reduced the costs of higher education? Costs per completer of an 8 week course at Columbia University was \$74, while a 4-week course at the American Museum of Natural History cost \$272 per completer. These are early estimates but demonstrate that learning can be offered at scale and at lower costs, something that distance educators have experienced for years.

In collaboration with the African Virtual University, COL offered a MOOC for teachers in integrating ICTs into teaching and learning.

COL, in Canada in partnership with IIT, Kanpur in India offered a MOOC on Mobiles for Development reached participants in 116 countries, including Ghana. A new blended model began to emerge. In Sierra Leone participants were given content on DVD and they used their limited bandwidth to interact with

tutors and to do their assignments. Participants in Zambia formed a group to study video materials and go online using the one available computer.

Content can be delivered in low bandwidth situations including on basic mobile phones. Social media integration is valuable because it encourages participation and peer to peer interactions. We believe that MOOCs must lead to more sharing and development of OER.

That brings me to the second game changer: open education. This includes flexible work-place based learning, Open Educational Resources or OER and open access policies. Let me just focus on OER.

There has been a phenomenal growth of OER in the last few years. While the US has played a leadership role globally, many developing countries are beginning to adopt open licence policies, with China, India and Nigeria contributing substantially to free and open content. Fiji has adopted a national OER policy this year.

As we know, OER are educational materials which are free and freely available. OER can be reused and repurposed to suit different needs and could be available in any medium, print, audio, video, digital. One key difference between OER and other educational resources is that OER have an open license, which allows adaptation and reuse without having to request the copyright holder.

What impact have OER had on teachers? A 2014 study shows that over 80% of the teachers surveyed said that the use of OER has helped them to one, adopt a broader range of teaching and learning methods; two, use a wider range of multi-media and three, reflect more on their teaching practice.

Another study confirms these findings. The majority of teachers said that the use of OER had helped them extend their coverage of the curriculum and adopt a broader range of teaching methods.

Students too reported a positive impact of OER on their levels of interest and satisfaction with their studies. 39% said that their grades had improved.

Robinson et al report that students who used open textbooks scored .65 points higher in science tests than those who used traditional textbooks.

As we know textbooks are a costly proposition. In the USA, according to David Wiley, 31% students don't register for a course because of textbook costs. But initiatives such as the Utah Textbooks project have demonstrated that it is possible to use OER to get a zero cost online textbook or a \$5 printed copy.

In which ways can we harness the potential of OER for skills development? COL has developed a Directory of OER which has nearly 500 OER resources for skills development from UK, India and Malaysia. Merlot is another source.

Given the importance of ICT in education, how many institutions/countries have ICT in Education policies in Africa? This slide may be of interest. Eight countries have ICT in Education policies developed over the last decade. You will note that only seven African institutions have OER policies, with the latest being the Open University of Tanzania.

COL developed free content on English Language Teaching which has been used to train teachers in Kenya. Teachers have indicated that students are already demonstrating better learning outcomes. The teachers and the students in the classes are the same—but what is new are the teaching resources which are making the difference.

UEW has been a partner in TESSA, which COL supported.

The OER helped teachers to adopt a diverse set of teaching practices and helped them to be better prepared.

Because of TESSA, teacher educators were more aware of the potential of OER, and by engaging with the international community, they appreciated the changing role of teachers. Teacher educators also reported an improvement in their writing skills and ability to create new materials.

Finally, how can we harness the potential of these developments to skill our young people with speed and at scale?

The international community has identified 17 sustainable development goals and these goals will define the development agenda for the next 15 years. Goal 4 of the 17 SDGs focuses on education. The objective of this Goal is to 'ensure inclusive and equitable quality education and lifelong learning opportunities for all' by 2030. Open distance and technology-enabled learning will have a key role to play.

The goal has several targets: one, quality education must lead to effective learning outcomes, two, we must focus on developing skills for employment, entrepreneurship and global citizenship, and three, having qualified teachers in place will be critical to achieving these targets. We note the emphasis on skills development for livelihoods.

A McKinsey report points out that 'employers, education providers and youth live in parallel universes' and very often these worlds do not meet. Over 50% of the youth surveyed did not believe that their secondary education would lead to employment. Similarly about 50% of the employers did not think that the new graduates had the skills to be hired even at the entry level. There seems to be a disconnect between what we teach in our schools and universities and what is required by the job market.

What is it that employers want? As the Results for Development Institute's report points out that employers are concerned about non-cognitive skills just as they are about cognitive and technical skills. These relate to communications, teamwork, leadership, entrepreneurship etc.

Geoff Colvin's recent book *Humans are Underrated* says that the high achievers in the C21 will be 'relationship workers' as opposed to the 'knowledge workers' of the C20. Robots will perform most tasks better than human beings but it is humans who have social skills and empathy, can solve complex problems and are creative. How do we nurture such skills among our learners?

What can we learn from other countries? Four key strategies have been identified to get Europe's youth into work. One is to invest in innovations so that education becomes more affordable and accessible. Two, to bring together young people, employers and education providers, something that we need to focus on. Three build enabling structures and four share the practices that work. Context is always important and the models that we adopt must be 'fit for purpose'.

Last year, the unemployment rate in Switzerland dropped from 7 to 6%. The Swiss do not think that the university is the right destination for more than 15% of its young people. It has a highly developed vocational system and invests in apprenticeship for skills development. Germany and Austria follow similar models, one result of which is lower unemployment rates.

But is it enough to provide skills alone? Let me share what a young Ethiopian woman said 'if someone can give me the skills and the opportunity to work, I know I can achieve my goals'

The youth need not just the skills but also the opportunities that their societies provide. Governments have a major role in developing not just sound educational policies but also enabling policies in trade, industry and agriculture (Stiglitz & Greenwald, 2015).

How can we, as institutions, address the challenge of skills development, gainful employment and livelihoods? One, by transforming the curriculum to integrate cognitive and non-cognitive skills. Two, harness appropriate technologies and emerging developments such as MOOCs and OER. Three to ensure there is a convergence between the needs of the labour market and the education provided to youth.

And as Stiglitz and Greenwald say in their book *Creating a Learning Society*, nations progress when they are clear about ‘what is to be learned, the process of learning and the determinants of learning’.

With that, let me thank you for your kind attention.