

Access and Affordability in Higher Education

Asha S. Kanwar, President and CEO, & Sanjaya Mishra, Education Specialist: eLearning, Commonwealth of Learning, Canada

Introduction

The demand for Higher education continues to rise. A key driver of this demand, according to a recent World Bank working paper, is the steady return on investment. The average rate of return on investment for private and social costs is estimated at 15.8% and 10.5% respectively. The returns are higher in lower-income countries relative to higher-income countries (Psacharopoulos & Patrinos, 2018). A study from the London School of Economics revealed that doubling the number of universities is associated with over 4% higher GDP per capita in a region (Valero & Reenen, 2016). The estimated global enrolment in tertiary education is expected to rise to 262 million by 2025 (Maslen, 2012) and 522 million by 2035 (Calderon, 2012). In real terms it means that if we are to accommodate the children who will reach enrolment age between now and 2025, we will need to build four new universities with a capacity of 30,000, every single week.

Emergence of Distance Education

Distance education emerged as an alternative approach to complement and supplement brick and mortar institutions. Correspondence courses opened up access to newer constituencies and the first distance teaching university in the world was established in South Africa in 1946. However, a major boost to the provision of distance higher education came with the establishment of the Open University, UK (OUUK) in 1969. The OUUK initiated a new type of higher education provision—more open and flexible that relied on the use of technology and distance education methods. The success of the OUUK captured the imagination of policy makers globally but particularly in developing countries. Today, there are 30 open universities in the Commonwealth, 17 of which are in India alone. A COL report based on survey of 27 open universities of the Commonwealth indicates that over 4 million students study every year in these institutions (COL, 2017a). In addition to open universities, there are many campus institutions that also offer distance and online courses to increase access to higher education opportunities. In the USA 31.6% of students take at least one distance online course (Seaman, Allen, & Seaman, 2018).

The Commonwealth of Learning

Recognizing the value of distance learning and technologies, Commonwealth Heads of Government decided to create the Commonwealth of Learning in 1987. Major concerns at the time were inadequate access to higher education in developing countries, the high costs of sending students overseas and brain drain. The aim was to look for technological options that “could make it possible to move courses rather than the students” (Daniel, 2007, p.108). Affordable technologies were emerging but many Commonwealth countries did not have the capacity to harness the potential of these technologies for higher education. It began by promoting the development and sharing of open learning and distance education

knowledge, resources and technologies. In the last 30 years, COL has evolved and is considered a thought-leader in the use of innovative technologies. It supports Member States to harness the potential of technologies for promoting learning that leads to sustainable development.

Evolution of Technologies

Historically, open universities pioneered the use of audio and video media in teaching at a distance, especially at the OUUK through its collaboration with the BBC to “harness the power of broadcasting to the values of liberal education” (Weinbren, 2015, p.62). The use of self-learning printed materials supported by radio and television created a new pedagogy of learning for adults where learning could take place without a teacher. Distance teaching universities developed expertise in instructional design and the development of self-instructional materials to cater to the needs of a diverse range of learners. The learner could learn at her own pace, place and convenience at substantially lower costs. The emergence of online courses led to innovations such as authoring tools, learning management systems, unlimited web resources and online self-tests which introduced a greater scope for personalization and flexibility in both distance and campus-based institutions. As most higher education institutions integrate technologies in their teaching and learning, the boundaries between distance and campus universities are increasingly blurred.

Massive Open Online Courses

Massive Open Online Courses (MOOCs) started in 2008 at the University of Manitoba, Canada to open up access to those beyond the classroom. MOOCs quickly became a trend and the New York Times declared 2012 as the year of the MOOC (Pappano, 2012). Major consortia of the top universities on both sides of the Atlantic have led the movement. Coursera, Udacity, EdX and FutureLearn are the well-known leaders in MOOCs.

In order to ensure that MOOCs serve to bridge the digital divide, COL promotes MOOCs for Development (MOOC4D) with technology options that work in low bandwidth scenarios in developing countries and provide offline-learning possibilities. Using the innovative platform mookIT, developed at the Indian Institute of Technology, Kanpur, COL has supported the offering of free online courses at Athabasca University, Canada, National Open University of Nigeria, and the University of South Pacific. Many governments are harnessing the potential of MOOCs to strengthen their conventional educational curriculum, as is the case in India’s SWAYAM¹ (Study Webs of Active Learning for Young Aspiring Minds) and the Malaysia-MOOC². These online courses are largely available free of cost and can be taken up by anyone with an Internet connection. Many of these are also available through mobile apps. With the advent of MOOCs, learning modules have become smaller and more granular, with greater emphasis on video learning and more dialogue and interaction, mostly among peers. To some extent MOOCs address the issues of access and affordability. A study published in *American Economic Review*:

¹ <https://swayam.gov.in/>

² <https://www.openlearning.com/malaysiamoocs>

Papers and Proceedings in 2015 revealed that US colleges are charging lower fees for online course work which “bends the cost curve” in higher education (Deming, Goldin, Katz, & Yutchman, 2015).

Open Educational Resources

The high costs of textbooks can be a major barrier to access and affordability in both developed and developing countries. A study in the US noted that full-time students at public two-year colleges spend over \$1,200 per year on textbooks and course supplies (College Board, 2013). A recent study in Bangladesh revealed that 73% of students depend on photocopied materials and spend about BDT 1,850 (about CAD\$30) per year on textbooks (COL, 2017b). Similarly, another COL study in Malaysia shows 76% of students do not buy textbooks because of prohibitive costs and spend on average over MYR 190 (about CAD\$56) per year on textbooks (COL, 2017c). COL promotes the use of Open Educational Resources (OER) so that it is possible to put a textbook in the hand of every student. OER are teaching and learning materials that are available free of cost with permission to reuse, revise, remix and redistribute without the permission of the original copyright holder. This allows teachers to modify/translate learning materials for specific learning contexts. OER include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials or techniques used to support access to knowledge.

Research shows that the use of Open Textbooks cuts costs and improves efficiencies. A study commissioned by COL in Antigua and Barbuda revealed that the use of open textbooks saved 64.50 EC dollar (about CAD\$30) per student per semester at the Antigua State College. In comparison with the previous year when students only used commercial textbooks, it was clear that students who used Open Textbooks also demonstrated a 5.5% higher score (Emerge Ed Consultants, 2017).

Using Offline Technology

Not all regions of the Commonwealth have access to electricity or connectivity. COL offers technology solutions that are accessible, available and affordable. COL has developed Aptus, a server with a WiFi router and solar charger for deployment in areas with no access to grid electricity or data connectivity. Aptus was deployed to teach Foundation Computer Studies (HCS081) at the National University of Samoa, and a study concludes that both teachers and students found that access to the learning management system via Aptus helped teachers to manage their class notes, exercises, and interactive testing for drill and practice on course content more efficiently and improved the motivation of students (Mow, et al, 2017).

Conclusions

COL is widely recognised as a thought-leader in the field of educational technology. Some lessons learned from our interventions in higher education institutions are:

First, technology by itself cannot be a panacea for all that ails higher education today but must be placed in an appropriate social, cultural and political context.

Second, the systematic development of institutional policies and systems to support the integration of technology are required for optimal impact.

Third, to identify appropriate technologies that can be sustained over a period of time. This would include consideration of open source options, security and data protection issues, hosted services and cloud technologies.

Fourth, continuous capacity building for staff at all levels.

Fifth, monitoring and evaluating results. Leadership oversight on technology integration in teaching and learning leads to university-wide understanding and acceptance of the importance of technology in higher education.

Recent developments in technology (such as artificial intelligence, blockchain, augmented/virtual reality) have far-reaching implications for higher education institutions in terms of access and affordability. How can we harness the potential of technology to prepare our teachers and learners for the road ahead? Are we bystanders, reluctant adopters or ahead of the game? The future of higher education will depend on our response today.

References

- Calderon, A. (2012). High Education in 2035 – The Ongoing Massification, Retrieved from https://www.academia.edu/2612867/High_Education_in_2035_The_Ongoing_Massification
- COL (2017a). *Open Universities in the Commonwealth: At a Glance*, Burnaby: COL. Retrieved from <http://oasis.col.org/handle/11599/2786>
- COL (2017b). *Towards a National Policy on Open Educational Resources in Bangladesh*. COL: Burnaby. Retrieved from <http://oasis.col.org/handle/11599/2740>.
- COL (2017c). *Towards National Policy Guidelines on Open Educational Resources in Malaysia*. COL: Burnaby. Retrieved from <http://oasis.col.org/handle/11599/2739>.
- College Board (2013). Trends in college pricing 2013. Retrieved from <https://trends.collegeboard.org/sites/default/files/college-pricing-2013-full-report.pdf>
- Commonwealth Secretariat (1987). *Towards a Commonwealth of Learning*, London: Commonwealth Secretariat.
- Daniel, J. (2007). Some experiences of a distance educator, In Elizabeth J. Burge, Ed, *Flexible Higher Education: International Pioneers Reflect* (pp.102-111), Berkshire: OU Press
- Deming, D.J., Goldin, C., Katz, L.F., & Yutchman, N. (2015). Can Online Learning Bend the Higher Education Cost Curve? *American Economic Review: Papers & Proceedings*, 105(5), 496–501

- Emarge Ed Consultants (2017). Impact of Open Textbook Adoption at Antigua State College. COL: Burnaby. Retrieved from <http://oasis.col.org/handle/11599/2750>.
- Maslen, G. (2012). Worldwide student numbers forecast to double by 2025, *World University News*, Retrieved from <http://www.universityworldnews.com/article.php?story=20120216105739999>
- Mow, I.C. et al (2017). An Evaluation of the Usefulness and Ease of Use of the Aptus within the Samoan Education Context, *Journal of Learning for Development*, 4 (3), 338-347. Retrieved from <http://jl4d.org/index.php/ejl4d/article/view/192/258>
- Pappano, L. (2 Nov 2012). The Year of the MOOC, New York Times, Retrieved from <http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html? r=0>
- Psacharopoulos G., & Patrinos, H.A. (2018). Returns to Investment in Education: A Decennial Review of the Global Literature, (Policy Research Working Paper 8402), Washington, D.C.: The World Bank, Retrieved from <http://documents.worldbank.org/curated/en/442521523465644318/pdf/WPS8402.pdf>
- Robinson, T., Ficher, L, Wiley, D., & Hilton III, J. (2014). The Impact of Open textbooks on Secondary Science Learning Outcomes. *Educational Researcher*, 43 (7), 341-351.
- Seaman, J.E., Allen, I.E., & Seaman, J. (2018). *Grade Increase: Tracking Distance Education in the United States*, Babson Survey Research Group, Retrieved from <http://onlinelearningsurvey.com/reports/gradeincrease.pdf>
- Valero, A., & Reenen, J.V. (2016). The Economic Impact of Universities: Evidence from Across the Globe, Retrieved from <http://cep.lse.ac.uk/textonly/new/staff/ValeroMimeo2016.pdf>
- Weinbren, D. (2015). *The Open University: A History*, Manchester: Manchester University Press.