Constructing the Framework for Financing Tertiary Education

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Introduction

I define tertiary education as any education leading to certificates, diplomas, or academic degrees (graduate and post graduate) from institutions like technical and vocational colleges, universities, technical training institutes, community colleges, distance learning centres, nursing and teacher training colleges. Therefore, tertiary education refers to any institution attended by a learner after completing secondary school. I have used tertiary and higher education interchangeably.

My fellow panelists are focusing on models for student loans and financing of the University of West Indies. Based on the focus of this session and noting the themes of my fellow panelists' presentations, I have focused my talk on understanding the framework that could be considered for financing and managing tertiary education.

My talk will include why tertiary education is a vital part of the value chain of lifelong learning of any nation and possible ways for institutions and governments to achieve value for money.
I will conclude with a look at developments currently impacting tertiary institutions.

The Critical role of Tertiary Education in Social and Economic Development

The debate on whether countries and development agencies should support tertiary education is a contentious one. Some argue that a country, especially a developing country, would make greater investments in its people by financing basic education as this is likely to yield greater economic and social results by enabling skilled citizens to enter the world of work. However, this approach has been challenged as many development specialists note the need for a balanced education system as countries become more industrialised and begin to develop their knowledge economies. The Asian Development

Bank (ADB) – *Higher Education Across Asia* notes in its report – 'modern economies cannot be managed by only primary and secondary school graduates; countries increasingly require personnel with advanced technological, administrative, and managerial skills' (Nov 2011: p 3). The World Bank report on *Higher Education in Developing Countries: Peril and Promise* (as citied in ADB, 2011) is explicit in its recommendation that the issue is not primary and secondary education versus higher education, but, rather, achieving the right mix among the three levels.

In a PowerPoint report by Andreas Blom that was presented to the Tertiary Education Financing in the Anglophone Caribbean Symposium – November 2005), it was noted that in St Vincent in the age category 30 – 34, those with some kind of university education earned approximately US$40 000 per year while those with only secondary education earned just over US$10 000 per year. If a citizen of St Vincent has post-secondary education (excluding university), their earning capacity goes up to US$22 500. This trend is noted across various age cohorts. The data suggests that by having a university degree, one can earn 4 X more than the citizen who has completed high school only. This earning differential is reduced if the citizen has post-secondary education (excluding a university degree).

The graph [*Personal Gains High]* also illustrates the challenge of poor levels of education attainment that can lead to higher and growing risks of unemployment and poverty. This kind of evidence notes the value of tertiary education. This is reinforced by research undertaken in the Organisation for Economic Cooperation and Development (OECD) countries which indicates that investments in post-school qualifications have resulted in greater economic growth and improved social levels. Research by LaRocque (2007) quoted in the ADB Report noted that OECD 'countries that give individuals one additional year of education can boost productivity and raise economic output by 3 - 6% over time'.

There are other valuable areas that tertiary education supports, viz:

- Many countries use tertiary institutions to educate and train primary and secondary school teachers. Good quality teachers ensure students who leave the system are adequately prepared for post-school education and the world of work. On the other hand, poorly trained teachers impact the quality and overall well-being of the education system, which influences the student's ability to become productive members of society. This creates a cycle of poor quality all around.

- Tertiary institutions also ensure a country has high level skills and knowledge needed for business, technology, administration, government and industry. If Caribbean countries are to compete in an increasingly globalised and connected world, then its citizens need appropriate skills and knowledge to do so. Increasingly governments and businesses require people who can manage complex processes, collect and analyse data, implement actions that require administrative and other skills and deliver world class products and services.

- New thinking, research and innovation are necessary for countries as they develop. Tertiary institutions are often where such research and innovations take place, leading to the country becoming economically competitive and its society becoming modernised. As noted by John Beath, Joanna Poyago-Theotoky, and David Ulph (2011: p 1) 'Universities exist to teach and to perform research. Universities add to the stock of useful knowledge through their research and disseminate that stock through their teaching'.

Achieving 'Value for Money'

In most tertiary institutions, funding comes in the forms of grants (mostly from governments) and student fees and these are used for teaching and research. Such funds are dispersed subject to various policy related mechanisms that determine spending. Beath et al have argued that while there are clear quality criteria for research grants, there are very few criteria for grants related to teaching. These grants are often related to the number of students who are enrolled at the university. Universities, and by extension, other tertiary institutions have focused on the costs of and returns to the tertiary system of education. This is linked very closely to the way the tertiary institution is organised, the quality of education provision and related factors.

A key factor in the debate on funding tertiary education is the perception that this sector of the education system requires increased funding for it to effectively support social and economic development. However, it is often not increased funding that is required, but other factors that can improve education outcomes. For example, how the funds are used (as noted above, what percentage is allocated to teaching and research), the quality of the students who emerge from the tertiary education system and how this links to the needs of the Caribbean economy are critical to improve education outcomes. It is often the case that education policy and resulting changes to the education system, and how institutions embrace such changes are more important than increased funding.

Two issues seem to dominate when it comes to funding tertiary institutions, viz. who pays and who decides how the funds are spent.

In response to the first question, who pays, Andreas Blom noted in his presentation that many Caribbean countries spend a reasonable percentage of their GDP on education. The regional average on tertiary education spending is just over 1% of GDP. Private sector investments in education for the region are minimal, therefore the governments of Caribbean countries pay for tertiary education. The average enrollment rate for tertiary education in the Caribbean is just under 20%. The critical question that each Caribbean state has to ask is – what happens to the remaining 80% of the students who leave high school?

The second question also raises interesting responses as in many instances; it is the tertiary institution administration that identifies how the funds are spent. How flexible are governments and institutions in determining how the funds are used? Are tertiary institutions empowered to determine the best use of funds in meeting their mandate to educate citizens? We know that tertiary education is expensive. We know this puts considerable pressure on governments and tertiary institutions to manage these costs, to reduce the cost per student and operational costs and to identify possible ways to increase the numbers of students who successfully leave the system. There is a constant tension between improving cost efficiency and creating sustainable tertiary education at scale without compromising the quality of education.

Sir John Daniel in his book on Mega-School, Technology and Teachers focuses on how technology could support achieving scale in education and uses the three vectors of scale, costs and quality as a triangle is useful for tertiary education. He notes that to transform education into a cost effective mass enterprise of

quality, it 'requires us to stretch the triangle vertically by increasing the vectors of scale and quality while at the same time reducing the costs vector' (2010: p 51). This, he correctly points out, cannot be done with conventional classroom teaching.

The ADB report on Higher Education Across Asia (2011: p 42) identifies six choices that confront governments:

1. Continue to underfund tertiary education and accept lower quality;
2. Find new sources of funding for tertiary education by shifting costs to students or by encouraging private tertiary education institutions;
3. Lower the costs of delivering education without compromising quality;
4. Cap enrollment rates to allow for the delivery of quality education within the available level of funding;
5. Develop a differentiated higher education system by focusing on the top institutions and allowing the quality to become lower in other institutions;
6. Any combination of the above strategies.

Tertiary Education and the Future

A recent posting by Envisioning Technology – a technology trend forecasting firm – focused on educational technology. They forecast that by 2020 (seven years from now), the notion of a digitised classroom will be the norm, even more so than today. Technology will be dispersed through every facet of the education process. This will encourage students to collaborate more with their peers, either within their tertiary institution or amongst institutions globally. The traditional teacher-student model will be unraveled with the student taking more control of her/his learning. These will be enabled by even more access to information and data (through processes such as open access to information, open educational resources and global online courses). Some of these predictions are already taking place in many countries. As Caribbean countries gain greater connectivity, technology and importantly the Internet becomes more accessible to even remote parts of a country and costs are reduced, the scenarios posited by Envisioning Technology for education could become a reality.

This will have important consequences for tertiary education.

A key part of technology developments relates to the availability of the Internet and the use of the World Wide Web for accessing and sharing information. Historically, availability and access to the Internet in developing countries have been uneven. However, there are positive developments with respect to Internet usage, availability and costs that are enabling more people to have access. Moore and Kearsley note that 'from the perspective of distance education, this means that Web-based education programmes will become accessible to the entire population of the planet, which is a rather awe-inspiring thought' (2012: p 275).

While technology is an important driver of education, it is not the only factor. The need for continuous education and training in the information and knowledge age will ensure that the demand for education grows and this puts further pressure on current tertiary education and training systems. This has implications for the tertiary institutions of the Caribbean. The 'brick and mortar' approach to the demand for education will not be enough to respond to the increasing numbers of learners. This means that learners of all ages need to be able to access education without the boundaries of classrooms, time and the need for a lecturer in real time lectures.

These developments impact the design of programmes, courses and how content is constructed. There is a global movement to develop a set of standards for 'learning objects', 'products which can be bought and sold by different institutions to assemble into their different educational programmes' (Moore et al, 2012: p. 281). Such objects include educational content and procedures to help students find and use them. This in turn has implications for lecturers and administrators in terms of time spent on course development, constructing textbooks, etc. An important expansion of the learning object movement is the development of open educational resources (OER). The drive for OER has been initiated and led by individuals, universities, international agencies, donor organisations and a few governments.

The William and Flora Hewlett Foundation describe an OER as 'teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or repurposing by others' (as cited in McGreal, Kinuthia & Marshall [Ed], 2013: p. xvii). There are other definitions quoted in the book by McGreal et al and includes OER being full courses, modules, textbooks, videos, software, tests and assessments, course materials and techniques used to support accessing information.

Perhaps one of the earliest examples of OER is when the Commonwealth of Learning developed materials in science, technology, engineering and mathematics and made them available to all Commonwealth countries, at no cost. Other notable examples include the Massachusetts Institute of Technology (MIT) that made its courseware syllabi, materials, videos and test available on its OpenCourseWare (OCW) site. MIT's OCW site has become one of the most popular sites on the Web for accessing OER, or freely available materials online.

Other institutions, such as the UK Open University soon identified the value of this approach (i.e. improved visibility, increased profile, partnerships and more students being attracted to study) and created policies, systems and other requirements to ensure OER becomes an integral part of their teaching.

COL and UNESCO are the two leading international governmental agencies focused on OER. They supported the 2009 World Conference on Higher Education reference to OER in the communique:

'*At the 2009 World Conference on Higher Education: The New Dynamics of Higher Education and Research for Societal Change and Development (UNESCO, Paris, 508 July 2009), it was communicated that ODL (open and distance learning) approaches and ICTs (information and communication technologies) present opportunities to widen access to quality education, particularly when Open Educational Resources are readily shared among many countries and higher education institutions'*. (Glennie, Harley, Butcher and van Wyk [Ed], 2012: p3)

This important declaration laid the basis for the historic COL-UNESCO 2012 World OER Congress held in Paris on 20-22 June. The Paris Declaration on OER, as this Congress became known, identified three key actions:

1. Foster awareness and use of OER.
2. Encourage the development and adaptation of OER in a variety of languages and cultural contexts.
3. Encourage the open licensing of educational materials produced with public funds.

The advent of Massive Open Online Courses (MOOC) is now taking the developed world by storm. A MOOC is a course offered by universities and private companies where any number of students (many thousands in number) from anywhere in the world can register, usually for free. The student is not restricted by an academic calendar, structure of the degree courses or any institutional constraints. MOOCs offer the first real attempt at the massification of higher education (apart from some of the mega open universities) and make use of technology platforms that allow for the registration of thousands of students. The scale of MOOCs, the use of the Internet to drive accessibility, their global appeal (i.e. no course and tuition fees) has important implications for tertiary institutions. Of particular interest are the universities that are exploring the transfer of credits for students who enroll and successfully complete a MOOC.

As MOOCs gain momentum and become readily available to more Caribbean citizens, the questions that should be asked are:

- will learners prefer to study through a local tertiary institutions or via a MOOC,
- will they seek credits from a prestigious institution and write exams that are likely to be much cheaper than enrolling in a conventional university?

Conclusion

The issues facing tertiary education in the Caribbean are daunting, but I believe can be solved. There is a need to strengthen the efficiencies within the institutions and identify ways to reduce the costs of tertiary education and start to build a sustainable funding model. Central to this is to improve the administration and governance of tertiary education. This is reliant on the policy models that are in place and how effective these are in transforming education, and in enabling greater accountability and responsibility. As noted in my presentation, finding ways to increase equitable access to education will be critical to ensure that more youth from all social strata have access to good tertiary education.

Lastly, given the nature of Caribbean countries, it is imperative to use and build on the strengths of each other. COL has promoted both regional cooperation and cross-border collaboration by establishing the Virtual University for Small States of the Commonwealth (VUSSC). VUSSC is designed to support the 32 small states of the Commonwealth by building the capacity of local institutions and faculty members, by collaborating in course and materials development and sharing these among institutions (as OER)

throughout the world, by using technology and open/distance learning more effectively, and by implementing the Transnational Qualification Framework which encourages national qualification authorities to recognise courses and learner credentials from other countries.

National and institutional policy, institutional collaboration, increased use of technology, support for quality research and teaching, identifying platforms to increase student enrollments and support are critical factors to consider in the discussion on funding tertiary institutions in the Caribbean. It is not just about the funding.

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