

QUALITY ASSURANCE OF TRANSNATIONAL VIRTUAL HIGHER EDUCATION: LESSONS LEARNED FROM A BUSINESS STUDIES PROGRAM DELIVERED IN SUB-SAHARAN AFRICA

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Abstract

Increased competition, diversification and advances in educational technologies have been accompanied by the rapid expansion of online transnational higher education. Alongside these developments there has also been an increased focus on quality audit and assurance of transnational programs. In this context, Curtin University of Technology in Western Australia in partnership with the African Virtual University (AVU) in Nairobi, Kenya, delivered accredited business studies programs to students in four AVU partner institutions between 2004 and 2008. This paper describes the challenges involved in delivering ICT-based courses in developing countries and the quality assurance strategies employed in program design and delivery.

Background and Context

International higher education (HE) has undergone a transformation over the past 20 years with increased competition and diversification across the sector and exponential growth in the use of information and communication technologies (ICTs) making borderless education a reality (Coleman, 2003). In Australia, a number of universities have extensive records of international provision, with some having been involved in the export of educational programs since as early as 1985. In 2003, it was estimated that Australian institutions were offering nearly 1600 programs across 42 countries (Garrett & Verbik, 2003) with the majority of these programs being offered in Asia. Coleman (2003, p.355) outlines the trends in internationalization in Australia as follows:

The radical developments in international higher education systems in the 20 years since 1980 were especially pronounced in Australia . . .

Australia's relationship with international students shifted from one of aid to trade, with educational services growing to a \$4.2 billion (AUD) industry and the nation's ninth largest export earner.

These developments in Australia were coupled with a period of declining Federal Government funding for higher education, providing the impetus for a rapid expansion of the tertiary education export market in order for universities to diversify and grow revenue. The impact of these policy drivers on the Australian

HE sector is evidenced by the fact that education is now Australia's third largest export industry, increasing from \$12.2 billion in 2007 to \$15.5 billion in 2008. Much of this growth has depended on the provision of programs to students in developing countries. Although e-learning programs have formed part of the increased transnational offerings the growth in online provision has been more modest. In this regard, an OECD report states:

E-learning is becoming increasingly prominent in tertiary education. All available evidence points to growing enrolments and provision, although from a low starting point. However, after the hype of the new economy, growing disenchantment with e-learning has replaced over-enthusiasm. Failures of e-learning operations have, at least temporarily, overshadowed the prospects of widened and flexible access to tertiary education, pedagogic innovation, decreased cost, etc., that e-learning once embodied. (2005, p. 11)

As noted in the OECD report, the initial promise of online course delivery for increasing access to tertiary studies across national borders has not been met and has since led to a more considered approach to the development of e-learning programs. In addition to the high costs incurred in the development and maintenance of online programs, there are numerous challenges involved in the delivery of these programs across national borders, particularly when the provider institution is in a developed country and the students are in developing countries as is increasingly the case: "The irony is that while online learning might be of most benefit to developing nations, the developing world has generally poor telecommunications infrastructure and insufficient funds to invest in expensive new technologies" (Garrett, 2002, p. 3).

It is well documented that HE systems in developing countries are under considerable strain with escalating demand and chronic under funding impacting on the quality of both academic staff and curricula (The Task Force on Higher Education and Society 2000). Furthermore, the relationship between tertiary education as a driver of economic growth and the problems associated with unmet demand for post-secondary studies in developing countries has been noted:

Given that increased access to post-secondary appears to be one of the drivers of economic growth in knowledge economies, cross-border post-secondary education can increase access in receiving countries. The benefits of access mainly concern developing countries, as most developed countries do not face a large-scale problem of unmet demand. (OECD, 2004, p. 239)

This changing scenario in HE raised questions about the quality of educational offerings from the perspective of both provider and host institutions and countries and the growing number of students enrolled in transnational programs, forecast to be in excess of 7.2 million by 2025 (Hyam, 2003). Moreover, with the rapid expansion in the diversity and scale of transnational programs it has been argued that many institutions headed into uncharted waters with program provision and that this in some cases preceded the establishment of appropriate quality assurance arrangements (Baird, 2006). In this regard, the sharing of experiences, outcomes and lessons learned from transnational DE provision in different contexts can be useful to inform improvements in the design, development and delivery of further transnational programs (Baird, 2006; Machado dos Santos, 2002)

It was against this background that in 2002 Curtin University of Technology successfully tendered for the AusAID funded African Virtual University (AVU) project. The project was part of the Virtual Colombo Plan, an Australian Aid initiative which aimed to bridge the digital divide in higher education. The project's goal was to increase access to higher education across Africa. A further purpose was to strengthen the capacity of the AVU and its' partner institutions (PIs) to facilitate the development and delivery of online higher education programs. The original scope of the project included the following objectives:

- To strengthen the capacity for AVU partner institutions' learning centres to develop and deliver ICT-enhanced courses and to provide support to academic staff responsible for AVU courses.
- To strengthen AVU policy frameworks, management and technical systems.
- To increase AVU formal course offerings through the supply of ICT-based business studies programs contextualised for the African context.

The project's main focus then, was on capacity building within the AVU and its partner institutions as well as the provision of contextualised course materials and licenses for the business studies programs to the AVU and its Lead Partner University (LPU). The intention was for the AVU to on-sell the programs to its partner institutions and for the LPU to accredit the programs in Africa. However, before the project's inception the AVU requested that the programs be accredited by Curtin on the basis that there maybe less demand from African fee-paying students for programs accredited by an African university. The subsequent negotiations delayed the project's start-up and impacted on the project objectives resulting in a significant reduction in the capacity building components for the AVU. The change in focus also had implications for Curtin with regard to the contextualisation of the course materials and quality assurance of program delivery as detailed below.

Overview of the Curtin African Virtual University (AVU) Project

Curtin University of Technology is Western Australia's largest university and the third largest provider of transnational education of the Australian universities. Curtin is a large multi-campus institution, operating out of 16 locations including campuses in Sydney, Malaysia and Singapore. It has over 41,000 students with international students representing 41.5% of student enrolments (approximately 17,000) and approximately half of the international cohort study offshore, mainly in SE Asia. Curtin was one of the first Australian universities to offer programs offshore, commencing a collaborative partnership with the Marketing Institute of Singapore in 1986.

The African Virtual University (AVU) is an inter-governmental organisation based in Nairobi Kenya. It was established as a World Bank initiative in 1997 to use the potential of emerging information and communication technologies to increase access to tertiary programs for African students. The AVU has a network of more than 50 Learning Centres located in universities across 27 African countries. The AVU Learning Centres offer various short courses as well as business and computer science degree and diploma programs which the AVU brokers (generally provided by Australian and Canadian universities) and delivers across its network. Over the course of the Business Studies project the AVU changed direction from brokering programs provided by other universities towards a focus on the development and dissemination of open source distance and e-learning content across the African content.

Notwithstanding our extensive experience in offshore provision, the AVU Project was ground breaking for Curtin involving as it did an innovative approach to transnational online distance education in four African countries. Thus, Curtin was contracted to provide fully accredited Bachelor of Business Administration (BBA) and Diploma of Business programs to two cohorts of students in AVU Learning Centres located in Ethiopia, Tanzania, Rwanda and Kenya. The BBA was provided by the Curtin Business School (CBS) whilst the competency based Diploma was provided by Curtin's Vocational Training and Education Centre located in Kalgoorlie. Curtin's Learning Support Network (LSN), a central unit with responsibility for distance education and staff professional development across the University, coordinated the design, development and delivery of the programs.

Transnational Quality Assurance Framework

"Transnational education is now high stakes, high risk core business for most Australian universities and it is appropriate that this activity be placed under rigorous scrutiny" (McLean, 2006, p. 57). In Australia the Federal Government

has developed a regulatory framework for the quality assurance of international education which includes the National Protocols for Higher Education Approval Processes, the Educational Services for Overseas Students Act and the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS) (Hyam, 2003). Governmental quality agencies are also recognising the importance of assuring a country's offshore programs (see for example, Stephen Jackson and Martin Carroll for UK and Australian initiatives in Baird (2006)), with the emergence of quality assurance (QA) and audit protocols which focus specifically on an institution's transnational offerings (Baird, 2006). More recently, the Australian Universities Quality Agency (AUQA) has further strengthened its framework for the quality audit of Australian universities' international operations (Woodhouse & Stella, 2008). At Curtin the main regulatory mechanism for QA of offshore programs is the Collaborative Education Services Policy which aligns with the relevant Federal Government QA initiatives. This policy covers all aspects of the process of initiating, operating, reviewing and terminating offshore programs.

Quality Assurance of Program Design and Delivery

In designing the AVU programs we were mindful that as McLoughlin (1999) and others have pointed out, educational programs are often tailored for particular cultural groups and assume a homogeneous student body. In this regard, there were a range of ethnic, socio-economic and linguistic backgrounds amongst the student cohort including those from Francophone backgrounds. Also, although some entered the programs from high school many were mature-age students. By the same token, as McLoughlin (1999) warns it is important not to adopt a 'deficit' model of cultural differences, because whilst students from other cultures may need specialised support, they also bring cultural values that can enrich the learning experience. However, in the context of the AVU Project we were re-purposing existing programs into an online format and this placed constraints on the extent to which the materials could be adapted. The delivery model also did not lend itself to input from African academics and students, imposing restrictions on flexibility of access and the pedagogical approach. As noted above, the change to the project objectives from an emphasis on capacity building to the delivery of Curtin accredited programs had a significant impact on QA processes and procedures.

Quality Assurance of Course Materials

Prior to the inception of the AVU Project, an instructional design team was established to develop and contextualise the course materials and to prepare a range of staff and student support resources (Siragusa et al., 2004). This team worked closely with academic staff (disciplinary experts) in developing the

Diploma and Degree study units. The approach to contextualisation involved adapting learning materials, learning activities and assessment tasks to include Australian, international and, where possible, local African contexts. The aim was to ensure that the curriculum was sensitive to the social, political and religious environment of the learners and that there was a balance between Australian and international perspectives. Contextualisation strategies included:

- ensuring cultural issues were addressed by removing elements and images that may be insensitive to other social, cultural, political, economical and religious environments;
- broadening the content and learning activities beyond Australian perspectives to include international and/or global perspectives;
- providing comparative explanations, examples or additional information where the content was embedded in an Australian context and for various reasons could not be modified;
- providing learning activities such as problem solving exercises and case studies that encouraged students to apply knowledge in their own contexts;
- explaining ideas and concepts using analogies that students could identify with and relate to;
- removing jargon, idioms, acronyms, colloquialisms, and abbreviations; and
- quality assurance of learning materials through proof reading and editing.

Based on these strategies a contextualisation checklist was developed which focussed on the unit content including, teaching and learning processes, assessment, language and gender. As part of the contextualization process, language support was also provided through a glossary and new case studies were developed to enhance learner interactivity with the online materials.

Along with the development of the academic programs, additional resources for staff and student support were identified and developed alongside the preparation of program materials. For example, orientation activities such as an introduction to the WebCT learning environment were developed for the students to provide them with the requisite skills to begin and progress their studies successfully. For teaching staff involved in the AVU Project, both at Curtin and the African partner

institutions, a range of resources were provided including background information on the partner institution countries and the educational background of students (for Curtin staff) as well as online, CD-ROM and print-based resources to assist facilitators (for AVU staff) with teaching online (Siragusa et al., 2004).

Quality Assurance of Program Delivery

Under the terms of the tri-partite Agreements between Curtin, AVU and the Partner Institutions, the Learning Centres (LC) in each collaborating university were to provide: (1) computing laboratories for access to the online learning resources; (2) class rooms or lecture theatres for students to view videos or DVDs; and (3) a resource centre where students could borrow text books or hard copies of the online materials. Prior to the inception of the project the facilities in each institution had been inspected to ensure the adequacy of technical and physical infrastructure. However, at the time of these visits we were unaware that another university had been contracted to provide a computer science program in the same learning centres. Thus, by the time the Curtin programs started the Learning Centres were already under strain and access to the computer facilities was limited. These problems increased as subsequent cohorts entered the programs, resulting in a detrimental impact on student learning in some Centres.

Inception workshops, facilitated by AVU and Curtin staff, were held before the first semester start up of the Business Studies programs. These were attended by the Learning Centre managers and Academic Coordinators from each of the partner institutions. At the inception workshop, comprehensive Program Administration and Quality Assurance manuals were provided by Curtin to each Learning Centre with details of the programs to be offered and relevant academic procedures and policies. Curtin staff also conducted workshops for Learning Centre staff on various aspects of the program design and delivery model. Staff were also provided with CD-ROMs with an introduction to online teaching and learning and the Web-CT learning environment for dissemination to local academic staff who were to be involved in facilitating the programs.

The delivery model required Learning Centre managers to schedule weekly classes and employ facilitators (local academic staff with relevant discipline expertise) to facilitate student learning following the Curtin study materials and semester schedules. The facilitators also led tutorial exercises, class discussions or group activities and undertook some assessments, although all final examinations were marked by Curtin academic staff. Additionally, sessions were to be scheduled in the computing laboratories so that students could work through the online materials at their own pace. To accommodate variations in ICT capacity and infrastructure at the Partner Institutions, all program materials were provided in multiple modes, i.e. Internet (WebCT), intranet, CD-ROM, as well as hard copy resources so students and facilitators could revert to whichever mode of tuition

was appropriate depending on local conditions and to ensure learning was not disrupted.

The evaluation of program delivery and the learning environment was based on information derived from various sources including data from an online Student Evaluation of Learning Survey (SELS). This is a personalised instrument that asks students to indicate their involvement in the learning environment. When aggregated, the data show how students appear to experience the learning situation along various dimensions:

Relevance: Relevance of course content.

Reflection: Encouragement of students' critical reflective thinking.

Interactivity: Engagement in online dialogue and activity.

Tutor Support: Encouragement for students to participate in learning.

Peer Support: Student support for fellow students.

Interpretation: Sense made of online communications.
(Yeo, Taylor, & Kulski, 2005)

Data from the SELS was supplemented by the use of a paper based student evaluation of teaching form used as a QA measure in other Curtin off-shore programs. The Learning Centre in each partner institution was also audited biannually. During audit visits the project team conducted interviews with staff and students and inspected the technical facilities in the Learning Centres to determine the availability of resources. All course materials were reviewed at the end of each semester by a Joint AVU Curriculum Contextualisation and Quality Committee which had representation from AVU, Curtin and the partner institutions. This Committee also monitored student progress and reported on any issues which had arisen during the semester. The procedures for the evaluation of program delivery were designed to be iterative so that we could build on and improve program design and delivery based on feedback from the previous semester.

Nevertheless, it became evident in the early stages of the AVU Project that all the Learning Centres experienced problems to various extents in delivering the programs as initially designed. This required us to further modify the original delivery model. For example, the instructional design of the programs originally included satellite broadcasting of lectures between Curtin and the partner institutions. However, due to political and legislative restrictions surrounding

electronic transmissions in the Sub-Saharan African region, the satellite broadcasts were suspended and we were required to provide pre-recorded lectures instead. There were also problems encountered with high staff turnover in some Centres leading to a lack of continuity in facilitators and program administrators. For print-based resources, we found textbooks were unaffordable for many students and some Centres found the cost of printing multiple copies of learning resources prohibitive. This was counteracted to some extent by the provision of multiple copies of Unit readers and textbooks. Study periods were also disrupted in some Centres when there was political unrest in the host country or where strikes by academic staff delayed the commencement of semester or impacted on the examination period. Whilst many of these problems were outside Curtin's control they placed considerable pressure on the Project team. Thus, issues related to a scarcity of resources, political unrest and the lack of connectivity and access to computers, compounded as the Project unfolded requiring in many instances flexible and sensitive responses from the Curtin Project team.

Project Outcomes

Although the conditions for learning deteriorated over the course of the project, particularly in three of the four partner institutions, data derived from the student surveys and the review of materials by the Joint AVU Curriculum Contextualisation and Quality Committee, indicated that students generally found the unit content relevant and that our efforts to make the material accessible and contextually meaningful were largely successful. On the other hand, due to internal accreditation and quality assurance pressures (Curtin and Australian Government policies prescribe equivalence between on-shore and off-shore provision) some content could not be altered despite the fact that it was not necessarily relevant to African students (e.g. Australian business law). Moreover, although we were aware that there were significant differences between the student cohorts across the four countries, we were unable to modify the programs to make them country specific. This led to some students being disadvantaged (e.g. those from Francophone backgrounds).

Student progress data from the first year of delivery indicated that despite the difficult learning environment in which the African students operated, pass rates for some units compared favourably with our Australian based on-campus cohort. However, in the second and third years of the BBA program it was found that pass rates at the unit level were generally lower than for students at the Curtin home campus with the exception of the Kenyan students who often outperformed the other locations. The performance of the Kenyan students was primarily attributed to the fact that the Kenyan Learning Centre had a relatively small cohort of high quality students who experienced fewer problems of access to the learning

resources. Overall, at the program level the attrition rate was approximately 30 percent in comparison to approximately 15 percent for Australian-based students. Whilst there is considerable variation in DE attrition rates reported in the literature, this attrition rate compares favourably with those in other distance education programs in Africa where rates in excess of 50 percent for some programs are reported (Adewale & Inegbedion, 2008).

Conclusion

Curtin's AVU Project demonstrates some of the many challenges universities may encounter when delivering online programs to students in developing countries. In undertaking this Project we found the establishment and fostering of good relationships and open communication with all stakeholders over the course of this endeavour was particularly challenging, but was of paramount importance to the Project's success. Moreover, analysis of the Project activities and outcomes reveals the importance of a systematic and comprehensive approach to quality audit and assurance of transnational programs and the capability for institutional responsiveness to the changing circumstances of students and host institution staff. Despite the fact that some of the problems we encountered were anticipated, such as poor Internet connectivity or ICT infrastructure in the partner institutions, others were not. Thus, although the possibility of political unrest in the host countries had been identified in a risk analysis we had not anticipated the extent to which this could impact on student performance or program delivery.

Nevertheless, we found that online communications greatly enhanced our ability to monitor the learning environment of the AVU students and was invaluable in overcoming the 'tyranny of distance' between students, teaching, and administrative staff, enabling us to respond to issues in a timely manner. Our review of the AVU Project also highlights the complexities involved when adapting and contextualising a university's QA procedures and programs for delivery in four disparate locations concurrently, and the need to adjust these processes to suit a host institution's circumstances. For example, in addition to the standard QA approaches required for accreditation and audit purposes, supplementary QA methods such as the Joint AVU Curriculum Contextualisation & Quality Committee have the potential to facilitate collegial exchange and academic input on QA matters from all partners involved in the Project. In this regard, the QA strategies used in the AVU project provides a model for other institutions seeking to offer online transnational distance educational programs.

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