THE VIRTUAL
UNIVERSITY

| Models & Messages | Lessons from Case Studies |

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Messages and lessons learned

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List of abbreviations

AVU   African Virtual University

CNFD   Campus numérique francophone de Dakar (Dakar Francophone Digital Campus)

ICT   Information and Communication Technology

UNESCO   United Nations Educational, Scientific and Cultural Organization

UNITAR   Universiti Tun Abdul Razak

USQ   University of Southern Queensland

UVPL   Université virtuelle en Pays de la Loire (Pay de la Loire Virtual University)

UVQ   Universidad Virtual de Quilmes (Quilmes Virtual University)

Messages and lessons learned

The preceding case study chapters presented the experience of those who have been involved in creating new institutions, extending existing ones, whether for profit or not for profit, or working with others in a consortium. The objective of the authors was to help the reader understand what the institution set out to do and how, and to convey the messages and lessons learned from the experience.

The final section of each of the case study chapters was devoted to drawing together these messages and lessons learned. However, it should be noted that many comments on significant issues are embedded in the other sections of the cases as well. The analysis that follows is based largely on those issues the authors deemed to be the most significant to the policy, planning and management of their institution, and which they enumerated and described at the end of the case.

Reading through these sections in each case, one is struck primarily by the diversity of the messages. Even when compared by type of institutional model or by region, it is still diversity that characterizes the comments and concerns. Since cases were selected to represent a range of institutional models and different geographical regions, perhaps it is not entirely surprising that there is more diversity than commonality in the comments. The institutions described have differing objectives and situations, which are compounded by the complexity associated with the development of these new initiatives.

Nonetheless, despite their breadth, the lessons and comments relate to five general issues:

- institutional development and organization;
- technology;
- management;
- academic programmes and concerns;
- national and international environment.

1. Institutional development and organization

Perhaps the single most important decision with respect to creating a virtual university is the choice of the *institutional model*. This decision will have a wide impact on the policies needed, as well as planning and management strategies. The institutional model will need to reflect the situation of the institution, student demand and access to technology, among other concerns. The different models and approaches described in the case studies underline the fact, however, that there is no single model, and some of the comments by authors suggest that the best approaches have yet to be found.

Leadership and support from senior management is essential to the introduction of change in an existing institution or the creation of a new one. One of the barriers noted is institutional inertia, although there may be 'random acts of innovation' undertaken by risk-taking individuals. However, it is rare that this type of individual action becomes rooted in the institution as a whole. Because the development of an ICT-supported environment for teaching and learning normally implies significant institutional change, vision and leadership from the senior level will make it clear that there is institutional commitment to the initiative.

Institutional policy development is a challenge whether in a new or existing institution. However, although it may be more difficult in an existing institution with policies and procedures that have been developed for face-to-face education, the situation does provide an opportunity to review and question existing policies. The same may be said of the formal *organizational structure* of the new entity. Newly created institutions have the freedom to create the structure deemed most suitable, while initiatives of existing institutions will have to carve themselves an appropriate place in the organizational structure of the parent institution.

Since most virtual universities aim to reach learners in a global higher education environment, lack of information about potential learning opportunities constitutes a barrier to access. Students may be knowledgeable about the provision of higher education and even distance education in their own local area and country as there may be numerous sources of information available – for example, other students, government information offices or publications. In an international market, however, it is difficult for students to have information about the range of institutions offering educational opportunities through e-learning. The need for an *information, dissemination and marketing strategy* was identified in several of the cases, both to explain the new mode of education as well as promoting the services.

Whether an institution has been carefully planned, or has evolved through a process of learning by doing, the recommendation to *document the development process* is a wise one. With time, it is easy to forget exactly why a particular decision was taken or a particular approach followed, and that makes it difficult to evaluate outcomes.

2. Technology

Technology is central to most of the functions of a virtual university, both the technological infrastructure that supports the operation of the whole institution, and that supporting the teaching and learning function. The stability of the system and the scope of the support given to the users are both critical. Service must always be there when users need it, that is 7/7 and 24/24. Since one of the main advantages of ICT-supported education is its flexibility, students expect to study and be supported whenever they have time available, on their own schedule, not just during regular office hours. And the same can be said for teachers and tutors.

The building and maintenance of the appropriate *technological infrastructure* poses a number of challenges. First, rapid obsolescence necessitates careful planning to ensure that hardware and software are updated on a regular basis and that this can be managed within the annual budgetary planning and allocation process. Second, maintenance and student and staff support require trained technical staff and, sometimes, in larger numbers than initially envisioned.

The determination of an appropriate institutional model will be influenced by the ease of *access to technology*, particularly by the students. In some situations, access is not available easily or at a reasonable cost. In such circumstances, institutions have developed different approaches and combinations of technologies. The African Virtual University sites such as Kenyatta AVU, rely on satellite delivery to groups of students in a classroom setting with interactivity by audio conference and the Internet, while the Campus numérique francophone de Dakar actually constitutes a resource centre that provides an Internet access service for distance education students for a low subscription fee. The Universidad Virtual de Quilmes invested in a small Internet service provider to ensure access for students in a geographic area where connectivity is difficult, and judged that that had been a good move. While this strategy proved to be appropriate in the context of a corporate entity, it might not be so for a publicly supported university. The lack of resources and technological infrastructure in developing countries suggests that a hybrid model, such as NetVarsity might be most appropriate.

The selection of *software to support teaching and learning* is a crucial decision. The technology must support the teaching and learning model effectively and there are numerous options from which to choose, and possibly with which to make expensive mistakes. Some institutions have chosen to build their own solutions, some to buy them. Developing proprietary software was noted to have important resource implications. The Universidad Virtual de Quilmes acquired the software programme developed by the Universitat Oberta de Catalunya through an inter-university agreement and a licence. This arrangement allows both universities to profit from the development of specially created software for a virtual university environment. It is important to have a software platform that makes navigation easy for students, with user-friendly interfaces. Technology should also be put in place to support the administrative functions of a virtual university. USQOnline entered into a commercial partnership with a private sector company, NextEd, for the provision of virtual campus software platform. In a developing country context, CNFD decided to transfer to Linux as an operating system gradually, and to use open source software, given the high cost of commercial software licences.

3. Management

The *management practices* and problems differ depending, to some extent, on the institutional model. Newly created institutions, whether public or private, have the opportunity to develop their management practices according to the structure of the new entity. They can choose to implement a pragmatic business model, as was noted in the case of UVQ.

It is to be expected that in the case of the evolution of an existing university there would be some difficulty in implementing a new and different management structure. To address just this issue, the parent university created a private company to operate UVQ, which facilitated the introduction of modern management and accountability methods that were appropriate to the complex programme and the need to be flexible in coordinating the different players involved.

USQOnline was founded by a dual-mode institution already having considerable experience with distance education, and therefore with many of the financing and administrative challenges of a different teaching and learning model. Nonetheless, the creation of USQOnline was a carefully planned initiative that included a communication strategy, which was designed to ensure that the entire institution understood the planned development and the commitment of the senior level of the university. It was noted that every effort should be made to avoid debilitating administrative complexity by having a single set of regulations for all students.

A *senior level position* should be created for the head of the new entity to ensure that it is integral to the university and that it is recognized as such.

The assurance of adequate financial resources is stressed in a number of the cases. The cost of the technology that enables a flexible responsive offer of education is not to be underestimated. Once a commitment has been made to a specific instructional approach and technological infrastructure, it is essential to ensure that the resources will be available to continue development and maintain and upgrade the technology as necessary. Be prepared to invest and do not expect immediate returns – a blunt message.

4.   Academic programmes and issues

The *choice of programmes and courses* must be made carefully in order to ensure that subjects are chosen that are suited to the type of delivery planned, but also that they respond to demand. A *feasibility study* is recommended as virtual education requires high initial investment that can only be recovered with significant numbers of students.

The *teaching and learning model* receives a good deal of comment in the cases. First, it is essential to recognize that existing course content cannot be shovelled into technology-supported courses. New pedagogical models are needed, and the challenge is to improve the process of interaction and knowledge construction. The model also needs to accommodate different types of learners. As the demand for higher education throughout life increases, institutions face an increasingly diversified student profile.

One message that stands out across the cases is that the need for training academic, technical and support staff should not be taken lightly. The difficulty of finding trained experienced staff that can work in a virtual university e-learning environment was noted repeatedly. This means that it is essential to plan for and support *staff development*.

Working in *course teams* is a well-accepted model for developing high-quality distance education, and it is a recommended strategy for e-learning. There are different skills required in course development: a team of individuals having complementary expertise related to the subject matter, instructional design, media, communications and editing is advisable. Working in a team is a form of staff development and UVPL, which represents the consortium model, stressed the advantage of people working together to develop the new skills needed in e-learning.

Classroom-based face-to-face education can be described as teacher centred – the 'sage on the stage' model – while e-learning in a virtual university setting is often described as learner-centred, with the teacher acting as 'the guide on the side'. Learning in this setting requires that the student take more responsibility for his or her own learning and take an active role in the learning process. This means that the design of the learning experience and the *student support services* need to be of high quality to ensure the success of the learner. USQOnline uses asynchronous discussion forums to engage the student actively in the learning experience, and ensures support seven days a week, twenty-four hours a day. The challenge of the Kenyatta AVU experience was to ensure an adequate supply of teaching materials and equipment. Both UNITAR and NetVarsity use study centres, which allows face-to-face interaction and supports a hybrid institutional model.

In a virtual university, *student aid* is an important issue. Many developments have been undertaken to serve not only a wider audience in a more flexible manner, but also to generate revenue. This means that the student fees may constitute a barrier, and rather than increasing access for a broad range of students, virtual universities may serve primarily financially privileged students. This problem was underlined in the UVQ case, as students are not required to pay fees to study in the parent institution. NetVarsity, although a private sector venture, has recognized the significance of fees as a barrier and created a privately financed student aid scheme.

Of all the academic issues put forward, one that reflects the concern of most in the higher education field, including UNESCO, is that of *quality assurance*. Athabasca University identified this issue first in the list of lessons learned, and noted that it was a national, peer-regulated accreditation model for institutional review and approval that was needed – and that this was lacking. At the institutional level, a good instructional design system combined with external peer review and accreditation constitute the framework for ensuring rigorous academic quality. The development of courses by teams of academics, and professional and comprehensive student services are essential. Kenyatta AVU noted that high-quality programmes are the prerequisite for high student enrolment. People are prepared to pay for quality education, and quality assurance strategies must be put in place in the institution.

5. National and international environment

Distance education and e-learning can be deployed to expand provision of higher education in both developing and developed countries, but it cannot be done without considerable investment and the appropriate technical and administrative infrastructure. This means that it is vital to encourage *partnerships and cooperation* to optimize the use of the resources of all those involved. This is an important role for the national higher education system. Both Kenyatta AVU and CNFD contribute to a local increase in provision through arrangements with other universities. Athabasca University identified the removal of provincial barriers as a role for policy-makers, and recommended the establishment of a national infrastructure for e-learning. By creating virtual consortia, such as the Canadian Virtual University, participating universities could rationalize their offer and seek niche expertise to serve all members of the consortium. The consortium experience of UVPL was positive, and the authors of the case felt that it contributed to capacity building across the member institutions as staff collaborated on joint activities. In addition, the consortium intends to make a contribution to increasing the international availability of courses and programmes in French.

Although *copyright* was identified as an issue at the institutional level, it constitutes an important policy issue at the national level. Moreover, since virtual universities aim to cross borders, the issue becomes further complicated because international copyright clearance must be acquired.

The fact that virtual universities operate in a borderless environment outside their local or national policy context raises an important concern related to the issue of *accreditation and recognition of credentials*. This may be one of the more important policy issues.

Although the debate on international trade in educational services was not directly raised, a number of institutions referred to an *increasingly competitive environment* and a concern to find a niche within a global provision of higher education. This fact, and the desire of most institutions to reach students regardless of their geographical location, underlines the crucial need for national governments to define the policy objectives for higher education as a public good in a context of growing private and transnational provision.

International institutions such as UNESCO have an important role to play. In fact, recognizing two of the major policy concerns related to borderless education, UNESCO Education Sector established the 'Global Forum on International Quality Assurance, Accreditation and the Recognition of Qualifications'[1] to link existing frameworks dealing with international issues of quality assurance, accreditation and the recognition of qualifications and provide a platform for dialogue between them. With the Organisation for Economic Cooperation and Development, UNESCO has developed guidelines on 'Quality provision in cross-border higher education'.[2] The guidelines are non-binding, but are intended to enhance quality provision in cross-border higher education at a global level, by strengthening dialogue, mutual trust and understanding between providers and receivers of

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[1] http://portal.unesco.org/education/en/ev.php-URL_ID=21666&URL_DO=DO_TOPIC&URL_SECTION=201.html
[2] http://portal.unesco.org/education/en/ev.php-URL_ID=29228&URL_DO=DO_TOPIC&URL_SECTION=201.html

cross-border higher education. It is hoped that they will contribute to the development of robust quality assurance systems and help protect students from disreputable providers.

6.   Concluding comments

The study of the virtual university and e-learning was undertaken in the expectation that an examination of the experience of a number of institutions would contribute to a better understanding of a new development in higher education. The institutions described represented different institutional models and different geographical regions and had different stories to tell and lessons to share, but taken together they suggest that ICT-supported higher education can succeed.

Moreover, it was felt that looking at the experience of each institution at two points in time could prove to be an instructive exercise, potentially pointing out changes in orientation or direction and perhaps additional lessons. The four-year period during which the study was undertaken coincided roughly with the end of the roller-coaster years of the dot-com boom and bust. However, as of 2005, none of the institutions participating in this study had suffered the experience of so many hopeful initiatives that were launched during that period when there seemed to be an urgency to develop online education ventures and to ensure a market niche.

Over the years, various technologies have been seen to offer promise and hope for increased access, greater flexibility and more learner-centred education. Initially embraced with much enthusiasm and often inadequate planning, they were then found wanting and eventually either rejected or sidelined. Will the Internet and e-learning be added to the list of such disappointments? Perhaps not.

The chapters presented in this publication have important messages to convey, and the key issues identified have informed the strategy of IIEP to promote and support active discussion and debate by means of a series of Internet forums. These forums, and the international community of interest that is building, ensure ongoing reflection on a development that may have suffered from unrealistic expectations initially, but that shows every possibility of becoming a permanent part of the landscape of higher education worldwide – the virtual university and e-learning.