Transforming the library into a "teaching-learning laboratory": the case of University of Botswana Library

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Abstract

This paper examines the University of Botswana's efforts at implementing e-learning and transforming the University of Botswana Library (UBL) into a learning resource centre (LRC), with the assistance of the US Government's education, democracy and development initiative (EDDI) project. The paper informs that the project is on course, with the Centre for Academic Development having run demonstrations on "smart classroom", "WebCT"; "high impact WebCT" and redesigned a lecture room into a fully functioning e-learning room. Enumerates the EDDI consultants' recommendations on how to effectively transform UBL into a LRC. Concludes that commitment and the political will on the part of all stakeholders is germane to the success of this new vision of student-centred approach to teaching, and the LRC approach to information services support.

Introduction

Today, teaching and learning is represented by a student-centred, open learning approach, the key features of which are flexibility, variety of learning styles, a more supportive and less dominant role for the teacher/institution.

The student-centred approach is the basis of what is today called "open and distance learning", and "e-learning". These two teaching and learning methods allow for a powerful combination of highly interactive information and communication technologies, with two-way asynchronous communication between real teachers and students.

Open learning usually refers to a course of studies undertaken by students working independently whilst occasionally meeting at a designated centre to address areas of coursework more conveniently delivered face to face. Distance learning describes studies largely undertaken outside an educational establishment without any attendance requirement on the part of the student. However, both open and distance learning allow students to study at home, in their workplace or at a designated centre. Students have access to their personal tutor and to university facilities when they require them. In many countries today, open and distance learning methods have become an effective and equitable means of providing learning for people in all situations and of all ages.

E-learning on the other hand, has been defined as the appropriate organization of information and communication technologies for advancing student-oriented, active, open, collaborative and life-long teaching-learning processes (Uys, 2002). According to Anderson as cited by Moore (2001), the anytime, anywhere characteristics of e-learning tools, and the fact that they are available from devices including desktops and notebooks, can also accelerate the productivity gains by making education more accessible. Indeed, e-learning could be regarded as an improvement on the delivery of open and distance learning.

E-Learning at the University of Botswana

E-learning has become very popular internationally because of the various benefits it

offers to the institution, academic staff and students, which include its potential to assist the University in preparing students for effective participation in the wider information society, to support student-directed learning, to provide more flexibility for student learning, to provide additional material for students and to enrich both staff and students through collaboration with external parties (UBL, 2001).

Thus, in line with its vision of a "student-centred, technologically advanced, collaborative learning", "professionally competent, reflective practitioners engaged in critical inquiry", and "technology enhanced, and critical thinking enabled, life-long and distance learning", in July 2001, the Educational Technology Unit in the Centre for Academic Development (CAD) of the University of Botswana spearheaded its development. The initial funding came from the Education, Democracy and Development Initiative (EDDI) project currently being implemented at the University (UBL, 2001).

The US Government's EDDI project, for which the agreement was signed with Botswana at the University of Botswana on 11 December 2000, is meant to catalyse major improvements in African education systems by linking them, through modern information technologies that serve US education well. The instructional technology component seeks to establish technology-enhanced classroom, video-conferencing for distance learning, and the library as a learning centre with appropriate staff training. The consultants have made quite a number of recommendations (Brown and Peterson, 2001) and the project is very much on course. For example, CAD has succeeded in organizing demonstrations on "Smart classroom", and WebCT and ran a number of workshops on e-learning. It concluded the first course series on "High impact WebCT" on the 19 April 2002. It is currently planning to commence the next series. With seriousness of purpose, CAD has also succeeded in redesigning a lecture room into a fully functioning e-learning room with e-learning facilities. The e-learning room does not have a distinct front.

The impact of the teacher-centred learning on the traditional role of libraries

The prime obligation of information services delivery of any university library has been to the members of the institution of which it forms a part. It has to satisfy the needs of the undergraduate and must also meet the requirements of the graduate student who is embarking on research, and the much more complex and exacting demands of the postgraduate student. It is important, for example, that a young lecturer's research be facilitated in every way, as he, because of low financial status (power), is the least able to travel in search of materials, or to accumulate an expensive private collection. Second, it was also believed that a well-stocked library is a strong element in attracting new members to the university and in retaining those already there. Third, an impressive collection of research materials in any subject, displayed on open access, is seen as an incentive to the young research worker to set and maintain his/her standards, and to perpetuate a tradition of scholarly excellence (Jordan, 1998). Hence the aim of traditional libraries has been to collect documents of various types, books, periodicals, maps, etc.; and to identify the collection so that an individual who requests an item can retrieve it successfully. The emphasis has therefore been on storage and preservation, and browsing based on physical proximity of related materials.

The teacher/institution-centred approach to teaching and learning has been responsible largely for the fixing of the above role of the library. It is responsible for the relationship between the teacher and the librarian. In this approach, according to Pack and Pack (1988), the teacher gives the subject matter to his/her class as laid down in a syllabus and interpreted by him/her. Classes are timetabled; teaching is largely face-to-face; and assessment, usually by written examination, is at the end of the course. In other words, the institution and the teacher make almost all the decisions about mounting and operating the course. The institution decides the length of sessions, when and where it will meet and who will teach it. The teacher makes the tactical decisions as to how the

syllabus is to be covered, the relative weighting to be given to each section, and the level at which it is to be treated. The student has little to contribute to these decisions, hence the students' inability to develop and apply critical thinking in their studies. Their role is to respond to the teacher, adapting their learning style to the approach of the teacher and the constraints of the institution. The approach thus encourages students armed with reading lists to descend on the stock, competing for copies of the texts specified on reading list, while about 95 per cent of the collection remains relatively little used. The library therefore becomes exclusively a reservoir of materials that reinforce lectures and provide the information on which written assignments can be based (Pack and Pack, 1988). It basically encourages individual study.

However the dramatic changes in teaching and learning, and also the rapid advances in information technology are now forcing libraries to refocus services provision in order to accommodate these new challenges. Hence, while there has been the rapid integration of digital libraries into the traditional library services, the establishment of a learning resource center (LRC) is now beginning to gain acceptance. The LRC is expected to allow for (i.e. support) skills development, independent and group study, choice of time, place and learning style, and work-based learning.

The trend in many libraries

In order to move with the changing times, and to address the new challenges resulting from the application of information and communication technologies (ICTs) in the teaching-learning processes, many libraries are currently adopting an approach, which integrates digital library into the traditional library services, and thus transforming the library, with additional resources and services, into what is today called by a variety of names. These names according to McDonald (1995) include: learning resource centre (LRC), learning centre, learning base, resource centre, learning services, information services, library and information services, etc. For the purpose of this paper, the term learning

resource centre shall be used to refer to this model of learning support.

While digital library (DL) might connote different meanings to different communities, there appears to be an agreement as to what constitutes a digital library, i.e. one that includes electronic databases on the Internet, the World Wide Web (WWW), CD-ROMs, and proprietary services such as Dialog, EBSCOHost, IOP-EJ, Lexis/Nexis, etc. Thus digital libraries contain a wealth of information of direct applicability to everyday subjects, while it is also ubiquitous. According to Ojedokun (2001), DLs add value and save time, and reduce the need for proximity to information resources while still emphasizing the quality of resources. The DL environment is such that emphasis is on access to digitized materials, wherever they may be located, cataloguing down to individual words, browsing based on hyperlinks, keywords, or any defined measure of relatedness, and broadcast technology. In other words, users need not visit a DL except electronically; for them the library exists at any place they can access it, e.g. home, school, office, or even in a car. They are now rapidly being integrated into the traditional library services.

A more recent development is the move towards transforming the Library into a LRC, perhaps as a result of the growing interests in the e-learning seen as an improvement in the teaching-learning processes. Learning as seen today indicates that the emphasis is on supporting learning as opposed to research, and so a LRC contains a high proportion of reader spaces rather than collections. The variety of reader spaces, according to McDonald (1995), will reflect the learning strategy and styles within an institution. The quality of the learning environment is seen as a crucial part of the student's experience. Indeed some of the common features of LRC include: focus on student learning, accessibility and flexibility, resource-based activities, as well as the center concept itself. Students would like to learn together in a conducive environment with study spaces, serviced equipment, and where trained assistance is available. A LRC is much more than just a physical entity, but one with wide-ranging educational and organization consequences. LRCs are therefore seen as

"active" places where formal and informal teaching occurs. They often contain computer clusters, drop-in facilities and information skills training rooms. A LRC, according to McDonald (1995), therefore contain a variety of learning resources, with strong emphasis on electronic sources and other non-print media, and so houses a large number of computers and other equipment. Indeed, in many universities, some provide media services, curriculum innovation centers, teaching and learning development units, and language centres (McDonald, 1995). One university, according to McDonald, even described its LRC as a "one stop learning shop". In other words, it can reasonably be said that the library is rapidly transforming into a "teaching-learning laboratory".

It is however worth noting that the term LRC in itself is not new as there has been, in some colleges of higher education, a convergence of library, computing and audio visual services, in the late 1970s and early 1980s and the phrase "learning resources centre" was well known and understood (Downey and Dye, 1996).

This paper examines the efforts at transforming the University of Botswana Library (UBL) into a teaching-learning laboratory otherwise called a LRC, and its implications for the university and the library.

UBL as a LRC

Although not specifically designed to serve as a LRC, the new library glass building, completed in 2000, can thrive as a LRC. Essentially it is a four-floor building excluding the basement (referred to as the lower ground floor). Each floor provide services for each faculty except the "upper ground" and 1st floors which provide services for two faculties (science and engineering, and social science and business respectively) each (there are currently six faculties in the university), and has not less than 13 open study carrels (except for the 3rd floor with nine open study carrels), three seminar rooms (with collapsible wall divider), computers and traditional reader spaces laid out with open tables. The readers' spaces are close to the open glass paneled areas on each floor, to provide enough illumination. Currently there

are close to 16 networked personal computers (PCs) for Internet, word processing, Web OPAC (online public access catalogue) search, etc. and some terminals for OPAC search only on each floor. But the plan is to have 200 networked PCs on each floor. The main circulation is at the basement, with 13 lockable study carrels reserved for graduate students, and seating capacity for about 80 readers. It also houses the Botswana Documentation and Special Collections. Subject librarian offices are arranged on every floor (with glass separation from readers) close to their collections. In terms of security, especially for resources, the design avoided windows that could be used to pass books to fellow students. It also provided adequate security for staff. The new building will merge into the old building currently being renovated, and will therefore provide more space. This, when merged, will increase the total size of the library from 3,800m^2 to 16,555m^2 (Darko-Ampem, 1999)

The library was opportune to benefit from the expertise of the EDDI consultants whose services were deployed to looking at the possibility of transforming the library into a LRC.

The consultants in their studies, and in line with the minimum acceptable standards, agreed that the library could thrive as a LRC but with improvement on facilities. Among their recommendations are the need for "information kiosk" computers; computers for small group collaboration; computers with ample table space for books, papers, and note taking; spaces for small group collaboration, and printing facilities. In addition, they recommended the provision of computers in areas with adequate acoustic treatment to permit group discussion, and provision of patron-owned computers to connect to the network in the library. It was also recommended that the library design efficient methods for effective usage of equipment, software and facilities to realize a virtual learning environment for use by both on-campus and distance learners (Brown and Peterson, 2001).

The consultants also met and discussed with selected library and faculty staff, particularly on the current method of information literacy course delivery. It was recommended that the course should be broadly envisioned and

re-designed to model collaborative learning. The new design should integrate collaborative, critical-thinking instructions with technology. Assessment should also be created based on critical-thinking skills that match the goals and activities, independent of how and where they are implemented. With the realization that this will necessitate partnership with the faculty, it was agreed that a "learning support request" (proactive and support versions) form, which will detail learning goals, objectives of assignments, and expected activities, be created. This is expected to foster partnership between the faculty members and the subject librarians, through a discussion of the kind of support required.

The library has accepted most of the recommendations in principle. These have been communicated to the university authority. The authority is expected to affirm its commitment, also in principle, as a prelude to implementation.

Implications for UBL
One major issue that can be deduced from the consultant's recommendation is that the design of a good LRC must take into consideration, the concept of the "one stop teaching-learning laboratory". In other words, the convergence of IT and library services into a single building, thus changing teaching and learning strategies must be the key issue in transforming UBL into a LRC. This must also take into consideration, all the functions, the activities and the resources that staff (from both faculty and the library) and students might need, and how to provide them all under one roof. Since students would like to learn together in a conducive environment, the issue of quality of space must also be given a high priority. Students will be spending long hours in the building and the design can substantially influence whether they find this experience comfortable or not. It needs to look and feel welcoming and accessible, especially for the disabled. The building must also acknowledge the need for variety. For example, a small group of students sitting around computers may not be good neighbours for those seeking quiet individual study, which must have formed the basis for recommending spaces for small group collaboration by the consultants. The design must acknowledge that both have legitimate interests. When the above

is however combined with the provision of teaching and learning resources, it translates into a huge financial commitment for the institution, in this case, the University of Botswana.

Learning resource centres can be said to be concrete forms of expression of open and flexible learning, which are the pedagogical basis for them, with the aim to create student-centred programmes offering the use of flexible resources. In this scenario, subject librarians may have to assume the role of teacher-librarians, becoming both teachers and librarians actively involved in instruction and cooperative planning and teaching. They would have to share responsibility with teachers for planning, teaching, and evaluating instructional units and other educational programs used to deliver resource-based learning. In other words, they would have to work cooperatively with faculty to integrate resources into all stages of instruction from planning to implementation to evaluation. They would also have to work cooperatively with faculty to develop, coordinate, and implement a continuum of learning, research and study skills to meet the needs of the students. They are, in addition, expected to teach students and staff how to use resources and equipment, and also help students and faculty develop the ability to critically examine, select and judge all forms of information. They would also be looked upon to encourage students to become successful independent learners by stressing the need for the development of information retrieval skills necessary for life-long learning and decision making. This they could do by striving to increase student's ability, interest, and confidence in reading and developing a life-long appreciation for literature. In other words, more liaison will be required with faculty and computing staff, as well as involvement with Committees, working groups and faculty teams. However, they themselves must have a firm understanding of program content, teaching objectives, and curriculum development at all grade levels. This is because they will increasingly be involved in course development and validation. Subject librarians would be expected to provide in-service programs that facilitate resource-based learning, produce and/or arrange for the production of learning

resources, and utilize current research in evaluating current programs and in planning for the future (STF, 1998). The library would therefore need to look into how the "learning support request" (proactive and support versions) form recommended by the consultants, could be effective developed to address the issues above.

Although librarians may be experts in providing knowledge, suggestions, ideas or advice to students and teachers in resource-based learning, they need to work cooperatively with other categories of staff such as computing (e.g. for networks and software applications), audio visual and the faculty staff as mentioned above. Darko-Ampem (1999) particularly observed that the work of subject librarians and computer support personnel is drawing closer together; their working together would therefore be difficult to avoid. The growing reliance on networks has, according to him, increased the pressure for convergence, especially as librarians become aware that information technology is altering the power equations in their institutions. They would also need to work with the faculty in support of activities relating to assignments given to students. Although libraries have a service orientation, while both the faculties and computer centers have a product orientation, there has to be a paradigm shift. New formal working relationships would have to be established, particularly at the operational levels. However, experience has shown that organizing courses on how to manage change is sometimes a disaster, as it usually leaves people feeling more stressed and anxious than they were before. According to Downey and Dye (1996), bringing staff together works better by working very hard at the social side of things to get the required team feeling. It might include arranging Christmas lunch, cakes for people's birthday, group trips, etc. This however requires someone with the social skills, and the willingness, to organize it. There is the need to break down barriers between the categories of staff that must work together, so that staff can feel genuinely like LRC staff.

As UBL transforms into a LRC, two main problem areas to expect on the part of students are, misuse of facilities and noise, due to its use as a social space. With the introduction of "high tech" machines with access to the Internet, the playing of computer games will feature constantly. While it may be difficult to catch students playing games (as some are quick at pulling down dummy menus to cover up their actions), according to Downey and Dye (1996), it may also be soundly argued that graphics students do need to look at games. In addition, there would also be problems with noise and discipline, partly due to the activity-based nature of the work that many students are doing and partly due to problems with certain group of students. With some students, selfishness may be the norm. To them, having paid their fees, they can talk and use their mobile phone anywhere. So whatever the solution that may be proposed (e.g. introduction of discipline policy), it is a problem that is unlikely to go away entirely.

UBL must also note that transforming into a LRC has implications for the staffing of issue and enquiry desks, as transactions would increase. This then raises issues concerning the qualifications and skills level of the staff on enquiry and help desks. The need for multi-skilled "information staff" is therefore important, as staff on enquiry and help desks would be called upon to give advice and support on "technological" problems as well as "information" problems. Effective information support services within LRC equally have implications for staff training and development. In order to support resource-based learning effectively, subject librarians, as they assume the role of teacher-librarians, would need training in teaching and learning methods, and skills to improve user education, as well as on the use of the Internet and evaluation of its resources. This skills training relates directly to the mission of the University, which is to provide competencies and skills and make both academic staff and students effective lifelong learners and also make the students more employable when they leave university.

More importantly, however, is the need for staff and students' re-orientation, and training in readiness for the use of the LRC. They would especially need to be made aware of new facilities, services, structural arrangements, modes of services delivery, etc.

Conclusion

There is no doubt that the university community welcomes the university's initiative at implementing e-learning as well as transforming its library into a LRC. However it is obvious that commitment and the political will on the part of all stakeholders is germane to the success of this new vision of student-centred approach to teaching, and the LRC approach to information services support. From the foregoing, it is equally obvious that academic institutions wishing to respond to the dramatic changes in teaching and learning, and the rapid embrace of LRC (i.e. teaching-learning laboratories) as a means of providing effective teaching-learning information support services, must not lose sight of the inherent implications. Issues such as building design considerations, financial commitment, staffing and staff training, partnership between stakeholders (computing, librarians, audio-visual and academic staff), and their commitment are therefore crucial.

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