Designing the University of Botswana Distance Education System: A Systems Approach

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ABSTRACT

Designing a distance education system for a dual mode university is a complex process that can benefit from a systems approach. The decision to re-design the distance education system at the University of Botswana (UB) was based on the findings that the Department of Distance Education had not functioned to its full capacity partly because of an unclear system. Therefore, the effort to re-design the distance education system from a systems perspective was framed by the Ideal Systems Design Approach.

The process of re-designing the distance education system for UB went through a number of phases; (i) establishing the need through a research study; (ii) developing the design plan (iii) developing the system (iv) institutionalizing the designed system.

The purpose of this paper therefore, is to share the experience of applying a systems approach in designing the distance education system for UB and the impact it would make on increasing access to university programmes. Furthermore, the experience illustrates the value of stakeholder involvement. The UB experience has demonstrated that such a process results in high level of ownership of the system, ownership of the collective decisions that were made, as well as commitment to the system.

The high level of accountability of the systems stakeholders is likely to impact the operation of the system and to increase the success factor including facilitating the realization of the objective of increasing access to UB programmes through the distance education mode. Involving the community of stakeholders as designers is also a tool that managers can use to keep pace with developments in the wider context of the system's environment.

INTRODUCTION AND BACKGROUND

Designing a distance education system for a dual mode university is a complex process that can benefit from a systems approach where by a system is designed in its totality within the context of its environment. Yet the introduction of distance education in conventional universities is seldom approached in a systemic manner. Piecemeal approach does not enable the education system to reach its full potential and piecemeal adjustments have proved inadequate to cope with changes that occur in the larger environment of social systems (Banathy, 1992).

In 1991 the University of Botswana (UB) decided to increase access to its programs by employing the alternative approach of distance education. UB came to the realization that it was not meeting all the needs for university level education and that it could not do so adequately as long as it used the full-time, campus-based education alone (University of Botswana, 1990). To that end, the Centre for Continuing Education (CCE) was created with a distance education unit. The Department of Distance Education (DDE) was given the mandate to adapt university programs into the distance education mode as a way of increasing access to university education (UB, 1990). Increasing the number of distance education programmes would democratize university education beyond the publics that were reached through full time campus-based programmes. Nonetheless, the creation of the DDE followed a piecemeal pattern in that it was treated as an add-on to the existing structure.

An attempt was thus made in 2004 to use the Ideal Systems Design Approach (ISDA) to frame the deliberate effort to design the distance education system for UB. DDE, which houses most of the processes of the UB distance education system, was thus approached as a subsystem of UB which has relational arrangement with other subsystems of the university system. The process of designing the distance education system therefore went through a number of phases including;

(i) Establishing the need through a research study;
(ii) Developing the design plan;
(iii) Developing the system;
(iv) Institutionalizing the designed system.

The purpose of this paper therefore, is to share the experience of applying ISDA as a framework for designing a distance education system for UB, a conventional university, and the implications a well designed system has on its success in realizing its purpose.

ESTABLISHING THE NEED FOR A DISTANCE EDUCATION SYSTEM

The implications for the decision to offer distance education programmes university-wide was that the distance education system needed to be created and the question of what model of distance education to adopt for UB tackled. Several attempts were made since 1994 to develop frameworks for distance education programmes. All of them identified a model and its subsystems, but none went to the extent of detailing the processes of the system. Furthermore, none of them was formalized as a UB distance education model through the approval process of the university. All of them were intuitive, they were not preceded by a situation analysis nor any form of empirical study.

Intuition has its value in decision making; however, decisions that are made in the design of a social system are too complex to be based solely on intuition. It was therefore necessary to analyse the practice in order to design an appropriate distance education system for UB. The Tau (2002) study titled, “An analysis of distance education at the University of Botswana from a systems perspective,” provided such an analysis. It established the need for a clearly designed distance education system for UB. The study identified two major flaws in the practice of distance education at UB; failure to plan strategically for the provision of distance education and a structure that restricts or even inhibits optimum operation of the unit that is charged with the responsibility of administering distance education programs for the university. The study notes that the organization and governance of distance education needed to take into consideration the

special nature of distance education and to come up with structures that facilitate its performance and growth.

Furthermore, the study concluded that "because UB was a conventional university that introduced distance education midstream, it needs to reorganize and reorient its other components to accommodate distance education's special management needs and the needs of distance learners."(Tau, 2002, abstract page). The analysis of the distance education system revealed that it was rudimentary and its processes were not fully developed.

The opportunity to design the distance education system for UB came in 2004. The Department of Distance Education (DDE) decided to organize a two-day retreat whose major aim was to identify the operational systems and processes of distance education at UB. The 2004 retreat marked the beginning of a journey towards the ideal distance education system for UB. The next section discusses the framework for the process of designing the distance education system for UB and subsequent sections tell the story entailing the experiences of the journey. The framework of this process was developed in 1998 by one of the members of DDE staff as a class assignment and was followed by the 2002 study. The process of designing the UB distance education system was thus a bottom-up approach.

DEVELOPING THE DESIGN PLAN

The design plan when it was originally conceived in 1998 focused on building motivation for user-designers participation in the design process. However, the implementation of the plan since 2004 expanded the plan as follows:

Stage One: Designing the human system that would design the UB distance education system—Palapye 2004
Stage Two: System development;
i. Step One—Mapping the design journey: Systems Audit process 2005/06
ii. Step Two—Consolidation, Palapye 2007
iii. Step Three — Review of Palapye input UB Library December 2007
iv. Step Four —Final outcome and implementation: an outline of the UB DE system
Stage Three: Institutionalization of the designed system

Characteristics of Ideal Systems Design Approach (ISDA)

"It is unethical to design a social system for someone else and the design of a social system is the right and responsibility of people who serve the system and are served and affected by it" (Banathy, 1996, 254). This statement articulates the philosophy that underpins ideal systems design approach.

Banathy's assertion that it is unethical to design a social system for someone else influenced the decision to involve stakeholders in the design process of the distance education system for UB. System's stakeholders include "people who serve the system, who are served by it, and who are affected by it," also referred to as "user-designers" (1992, p.33). ISDA provides the framework that facilitates involving stakeholders in the design process. For UB distance education system, user-designers included mainly staff from the Department of Distance Education.

A special feature of ideal systems approach is that it is process oriented. The metaphor Banathy (1992) uses to illustrate this process is that of a "journey", that design is a journey towards the ideal. The approach emphasises the process because participants are changed in the process of bringing about change to their system. The other dimension is that there is no end to change, change is a continuous process. Thus the "ideal is in the process of creating, not in the content

of the process" and the "power of the quest (for the ideal) lies in the journey rather than the destination" (Jenlink, 1995, p. 41).

DESIGNING THE HUMAN SYSTEM THAT WOULD DESIGN THE UB DISTANCE EDUCATION SYSTEM: PALAPYE I

The designing system is the initial stage of the design process and it involves designing the human system that will be designing the distance education system. What designing the designing system is about is answering the question, "what is it that designers should know, understand, and be able to do in order to be engaged in designing the designing system." Hitherto design has been expert driven and as such the stakeholder community did not have to have design skill or the design culture. Yet people participate meaningfully if they know what they are doing and are confident of what they are capable of doing. Accordingly, the induction of UB distance education user-designers took place at a retreat in June 28th - 29th 2004 at Palapye. The list of participants included strategic partners in the provision of distance education programmes in UB including the Information Technology Department, Academic Services, Centre for Academic Development, Department of Adult Education and a sister institution, the Botswana College of Open and Distance Learning.

Preparations

The aim of the DDE retreat was to begin the process of designing the distance education system for UB. Therefore, the modus operandi of the workshop included motivation and presentation of concept papers on aspects of the system to facilitate discussions. Facilitators were given guidelines for developing concept papers which were meant to assist them identify the operational systems and their processes consisting of questions such as; what it is; why it is done; how it is done; who does what or who should do what? These efforts were part of the orientation of user-designers on the ideal systems design approach.

The initial plan to start the design process was not fully accomplished. From the presentations it was clear that identification of operational systems and their processes was posing a challenge to presenters. It also became clear that the objectives of the retreat were too ambitious. As it turned out, it was the establishment of the motivation to participate in the design process that was accomplished; a necessary stage in the applications of ISDA. In that regard, the 2004 Palapye retreat served as an induction of user-designers into the design culture. This is in line with Banathy's suggestion for guided workshops that involve intensive conversation and documentation of findings, learning and doing experience or "learning while doing and doing while learning" (Banathy, 1992, pp. 257-258).

SYSTEM DEVELOPMENT

Following the Palapye retreat and in view of the fact that the department did not accomplish the objective of identifying the processes and their functions, there was need to continue the design process. The task of developing the distance education system was accomplished in four steps. The first step was a slower process that was attempted in the period spanning 2005-2006.

Step One: Mapping the design journey: Systems Audit process 2005/06

The systems audit process spanning 2005/06 thus became the first stage of designing the system. The design process followed the decision by the department to meet one afternoon a week for the systems audit. Systems audit process steps go beyond the system development to include its implementation; user-designers would collectively:

1. Identify operational systems
2. Identify their subsystems
3. Identify processes with purpose, input and outcomes
4. Identify activities/process steps

5. Determine relationships
6. Develop procedures for major/critical activities e.g. residential sessions, frequency and structure; training of part-time staff—tutors, writers, content editors; types of records kept; tutorials; etc
7. Identify job areas and job performers
8. Develop job descriptions

The one afternoon a week sessions provided the opportunity for colleagues in DDE to interact intimately on the process and content of designing the distance education system for UB. It led to shared understanding and interpretations of processes and related issues. The other outcome was a well mapped out learner support sub-system. Nonetheless, mapping out processes for learner support could not be fully accomplished without other processes that it is coupled with such as programme development, which almost needed to be tackled concurrently with learner support. Sub-processes and process steps identified under learner support included a lot of the activities involved in providing education at a distance in general.

The systems audit process had its own challenges. Attendance could not be assured even though staff was expected to participate; it was never made mandatory. To that end, attendance wore out as time went on. The process of planning proved to be tedious and full of challenges for user-designer as they grappled with understanding both the process of designing the system and the processes of the distance education system. Eventually the sessions stalled. However, the need for a clearly defined system had been established and there was no going back. Experience in the day-to-day running of the affairs of the department kept on turning it back to the issues of clearly articulated processes and the impact that would have on the smooth running of the core business of the department. The "should be" of the distance education process, how is done and who does what, was a constant reminder of the unfinished business. This led to a decision to go back to Palapye for a workshop to complete the task.

Step Two—Consolidation, Palapye II

The workshop to review work done that far, took place on 3rd-9th June 2007. This was a weeklong workshop because the department had come to appreciate the magnitude of the work involved. This time only staff members of DDE participated.

This time facilitators were expected to come with a draft of the pre-assigned operational system and its processes. Participants had been on the journey for quite some time and the level of understanding of the assignment was more advanced though not quite complete. What seemed to have been a major deficit in this whole process were complete conceptualization of soft systems from the systems theory and of systems approach. This deficit however has not stopped the department from moving on with the task. The workshop accomplished a lot by way of identification of operational systems and their processes. The process involved collective decision-making and consensus. A lot of debate went on at both group discussion and plenary sessions. As such, user-designers had a fair understanding of the discussed processes of the UB distance education system.

The outcome of the workshop was a comprehensive report with operational systems and processes as identified, discussed and modified at Palapye. The department decided to have a one-day workshop to review the work after incorporating comments from the workshop.

Step Three: Review of Palapye II input

The review workshop took place on 4th December 2007 at UB Library. The workshop provided additional feedback on processes and procedures as worked out at Palapye in June of the same year. The secretariat of the 2007 workshops was left with the task of compiling the final report.

Step Four: Final outcome and implementation: an outline of the UB DE

From the workshop reports the processes and procedures were to be teased and presented in a user-friendly format for reference by the department, the final version for implementation and dissemination. This is the version that will be circulated and discussed by faculties and departments, and for final approval by the university. The lesson was well learnt from the lackadaisical manner in which earlier versions of the UB distance education systems were never made official.

INSTITUTIONALIZATION OF THE DESIGNED SYSTEM AND ITS IMPACT ON INCREASING ACCESS TO UNIVERSITY EDUCATION

The university enacted the UB distance education mainstreaming policy in 2005. The policy provides a framework for institutionalising distance education. However, the policy does not outline the system of distance education even though it touches on some aspects of the system. The policy would be richer if it were preceded by a well-articulated distance education system. The designed system should thus close any gap that exists in the mainstreaming process. Indeed an institutionalised system would provide an official complement to the policy.

The impact a well-articulated system will have on the provision of education at a distance is clear. Actually the decision to design the distance education system by DDE was motivated by the felt need of the difficulty of working within an unclear system. Practitioners wanted to know the processes, why they are done, how they are done or should be done, who does what or should do what and what the disconnects or gaps were, what caused the gridlocks and how they could be closed. The area that has created a problem situation especially is the demarcation line between learner support office activities and those of programme coordination. It is hoped that the completion of the exercise will greatly improve workflow, performance and output for the department and the university goal of increasing access through offering an a array of distance education programmes will be realised. Furthermore, respect for the department by other academic units will improve when its operations are well understood by the university community.

REFERENCES

Banathy, B. A. (1996) *Designing social systems in a changing world*. New York: Plenum Press.

Banathy, B. H. (1992). Comprehensive systems design in education, *Educational Technology*, 32. (1), 33-35.

Jenlink, P. M. (1995) Systems theory: An Approach to redesigning education. In P. P. M. Jenlink (ed.) *Systemic change: Touchstones for the future school*. IRI/Skylight Training and Publishing, Inc. Palatine Illinois

Tau, O. S. (2002) *An Analysis of Distance Education at the University of Botswana from a Systems Perspective*. (Unpublished doctoral dissertation Northern Illinois University. UMI Dissertation Services Ann Abor, Michigan

University of Botswana, (1990). *The Development of the Centre for Continuing Education During the NDP 7 Period, 1991-1997*. A Discussion Paper Institute of Adult Education. Gaborone