POTENTIAL BENEFITS AND COMPLEXITIES OF BLENDED LEARNING IN HIGHER EDUCATION:
The case of the University of Botswana

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ABSTRACT

Blended/hybrid learning is dominating news in higher education as a training and educational delivery method of choice. It is seen as a link between instructors, learners and classrooms located in different places to enhance learning. Based on the interviews with 15 faculty members and one administrator that had direct experience with this form of delivery at the University of Botswana (UB) the findings suggested two major themes that dominated faculty members 'accounts: potential benefits and challenges of blended learning. The study was guided by the Diffusion of Innovation theory.

The potential benefits of blended learning included improved pedagogy; engagement in learning; and added flexibility in the teaching and learning to mention a few. Faculty members perceived complexities such as lack of students' readiness to use the course management system, slow network and breakdowns; lack of computers for students and lack of time. The article concludes by suggesting future directions for blended learning (BL) at the UB.

Keywords: Blended learning; complexities; benefits; hybrid courses; benefits; diffusion of innovation.

INTRODUCTION

Blended learning (BL) and the use of computer-mediated communication (CMC) tools are fast growing in popularity in higher education contexts. This concept has become somewhat a buzzword and a bit ambiguous in higher education. However, the adoption of this medium in the teaching-learning process has quickly outpaced our knowledge on how it might be best utilized for optimum learning. Blended learning has been defined in a number of ways. According to Graham, Allen and Ure (2003), the three most common definitions are those by Bersin & Associates (2003) and Thompson (2002) who see blended learning as learning that combine instructional modalities. Driscoll (2002) and House (2002) see blended learning as combining instructional methods. Other scholars see blended learning as a combination of online and face-to-face instruction (Reay, 2001; Rooney (2003; Young, 2002).

The first two definitions reflect the debate on the influence of media versus method of learning. Both positions look at blended learning in a much broader way that encompasses all learning systems.

The two definitions do not capture the essence of what blended learning is and why the scope of blended learning is so intriguing to many people. The third definition accurately reflects the historical emergence of blended learning systems.

The author prefers the third definition because it reflects the introduction and practice of BL at UB. It emphasizes the central role of computer-based technologies in blended learning (Graham, 2004). It is essential that we understand how to create effective blended learning experiences that incorporate both face-to-face and computer-mediated (CM) elements. For the institution to be engaged in blended learning there must be a concerted effort to enable the learners and the faculty members to take advantage of both worlds. Faculty members play a significant role in the diffusion of any new innovation in learning. Therefore, there is much to learn by delving into the perspectives and experiences of faculty members and administrators who are involved in this mode of delivery. Understanding blended learning experience from the faculty members and administrators' perspectives provide important insights on how blended learning environments could be better designed and facilitated. Consequently, the purpose of this inquiry was to identify faculty members' perceptions on using blended learning approach.

CONTEXT

The study was conducted at the University of Botswana (UB) the sole national university with a student population of over 12, 000. Like other tertiary institutions worldwide, UB is going through transformation to take advantage of the rapid emergence of technological innovations that have had a huge impact on the possibilities for learning in the distributed environment. There is "pressure to deliver well-trained and skilled workers to meet the increasingly sophisticated demands of the workplace."(Mutula, 2002, p.99). E-Learning (a subset of blended learning) as one of the ICTs in particular brings new levels of connectivity to the teaching-learning process. Students are connected to other students, students and to global resources through the World Wide Web (WWW). Therefore, UB explores the connectivity in blended teaching learning processes. UB is currently using a Learning Management System ((LMS) where courses are offered via the Web Course Tool (WebCT). The university also has an eLearning Support Center using wireless computing. The Educational Technology Unit (Edu-Tech) carries out the training of academics in the effective and appropriate use of educational technologies. Every staff member has a Pentium computer, printer or access to a printer, access to the Internet and E-mail.

WHY THE UNIVERSITY OF BOTSWANA

The size of Botswana is about Kenya, France or Texas in the United States of America. The total land mass is 582,000 square kilometers (National Development Plan: 2003/04-2008/09). This land mass is populated by 1,680,863 people. The average population density has increased from 2 persons in 1991 to 3 persons per square kilometers in 2001. Given this vast mass of land with small population, it means that people are sparsely scattered throughout the country; hence it is very hard for the government to reach them and provide education.

Therefore, distance education is viewed as a mode that is capable of transcending geographical barriers to provide education to the people who are scattered over vast distances.

The development of distance education in Botswana can be traced historically from pre- and post-independence periods. However, the development of distance education institutions took place in the post-independence era. Institutions in Botswana have opted for distance education because of the existing demand for education programs at different levels. There is a high demand for basic, secondary and tertiary education in Botswana. Nevertheless, it has never been possible to meet the demand for educational opportunities through the existing programs. One of the major strategies advocated by the government of Botswana as a way to reach out-of-school youth and people in employment is using distance education and eLearning (National Development Plan 9:2003/04-2008/09).

BLENDED LEARNING AT UB

The UB has included in its vision statement "lifelong and open learning approaches" as focal points for the institution. The university also identifies student-centered learning as key component in its vision, which is one of the important features of online learning. In his speech at the 2004 official launching of eLearing at UB, Dr Mokopakgosi (deputy vice-chancellor: academics at the time) reiterated that:

> *The university has been undergoing a renewal and transformation period in which a new vision, mission and values have formulated and one of the values calls for development of 'student centered 'intellectually stimulating and technologically advanced teaching, learning and research environment while another stresses the importance of extended access to higher education through utilization of information and communication technologies, within the framework of life-long and open learning (University of Botswana Newsletter, September 2004; p. 6).*

The UB has therefore emerged as one of the leading players in eLearning in Botswana (University of Botswana Newsletter, September 2004; p. 6). Distance education at the UB has been provided through correspondence in the past supported by occasional face-to-face interaction. However, starting around 2001 online learning emerged as the vehicle through which instructional technologies can be used to teach courses online. It is hoped that the adoption of such technologies will create new avenues for learners to access educational opportunities both on and off campus (Uys, 2003).

The rationale for using advanced learning technologies such as eLearning at the UB includes increasing the quality of learning; creating students success rate; supporting new research opportunities; relieving academic staff from administrative and teaching duties; supporting academic freedom and freedom of speech through free information flows and making teaching more rewarding and exciting (Molelu & Uys, 2003). eLearning if well designed could provide flexibility in learning whereby students study at their own pace, place and time.

The purpose of this study was to qualitatively examine factors that influence faculty members' decision to use blended learning at the UB. While the delivery of online courses in Institutions of Higher Learning (IHLs) is growing, faculty have to play the key role in its successful implementation (Betts, 1998; Rockwell, Schauer, Fritz & Marx, 2001; Wolcott, 2003). It is upon the background that institutions should recognize faculty perceptions, attitudes and concerns wherever they confront a new innovation.

One way of understanding these aspects is to examine factors that motivate and influence faculty participation in using new technologies to promote learning. Investigating factors that motivate and/or deter faculty participation using new technologies in teaching in light of social, economic and political factors that underlie innovations such as blended learning at UB could shed some light on faculty participation in blended learning. The information provided could help update decision-makers on the current needs and concerns of faculty that use blended learning so that effective blended learning can be fostered. The findings of this study could inform university administrators to better plan for new educational innovations. Furthermore, the study could provide evidence of the application of diffusion of innovation theory to blended learning in IHLs.

THEORETICAL FRAMEWORK

This study was guided by Rogers' (2003) research and theory of Diffusion of Innovation. Rogers refers to diffusion as a social process. An important factor regarding the adoption rate on innovation is its compatibility with the values, belief system and past experiences of individuals in the social system. There are four elements that impact the rate of adoption in the innovation-decision process. The elements are; innovation, communication channels, time, and the social system.

"Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system"(Rogers, 2003; p.11). According to Rogers, an innovating is more likely to be adopted if potential adopters have favorable perceptions of the innovation in regard to, relative advantage, compatibility, complexity, observability and trialability. This study focused on the role of perceived attributes in faculty decisions to participate I blended learning (an instructional innovation).Diffusion activity has as its central purpose, ultimate acceptance of the innovation by adopters. Rogers (2003) defines the perceived attributes on innovation as follows: relative advantage is "the degree to which an innovation is perceived as being better than the idea it supersedes" (p. 15). Compatibility "is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters"(p. 15). Complexity is "the degree to which an innovation is perceived as difficult to understand and use" (p. 16). Trialability is "the degrees to which an innovation may be experimented with on a limited basis" (p. 16). Observability is "the degree to which the results of an innovation are visible to others" (p. 16). Based on these characteristics, chances of adoption are increased when the innovation is perceived to be better than the idea or practice that preceded it; when it is consistent with the adopter's needs, experiences, and values; when it is easy to understand or use; and when it can be tried or experienced on a limited basis; and the results can be seen.

METHODOLOGY

Study Sample
The method of sampling used was purposeful (Bodgan &Biklen, 2003) where participants that were involved with blended learning were identified for interview. Other participants identified for the interview included faculty members who have never been involved in teaching blended courses. There were fifteen participants in this study grouped into two categories: adopters and non-adopters. Adopters were faculty members who taught one or more blended courses. Non-adopters did not teach any blended course.

There were seven adopters, seven non-adopters and one administrator of the Edu-Tech. Among the adopters, seven were male and one female. With regard to their qualifications, five had doctorate degrees while three had masters' degrees. Among the adopters, three were senior lecturers, three were lecturers and one was a professor. One participant was an administrator in Edu-Tech. The Edu-Tech carries out the training of academics in the effective and appropriate use of educational technologies at UB. Of the seven non-adopters, four were male and three were female. There were three senior lecturers and four lecturers. A demographic survey was sent via email to the participants to invite them to participate in the study. Completion of the demographic survey was taken as an indication of the interest and consent to participate. The demographic survey solicited participants' gender, qualifications, years of teaching experience at UB; number of BL courses taught and Faculty/Department.

Table 1

Blended Learning Adopters Profile Matrix

Participant	Owen	Baker	Motsamai	Oluchi	Maseko	Ndubuisi	Edeoga	Rand
Gender	Male	Male	Male	Male	Male	Female	Male	Male
Qualifications	Ph.D	Masters	Masters	Ph.D	Ph.D	Ph.D	Ph.D	Masters
Technological Competency*	I	I	I	I	I	I	I	E
Years of Teaching Experience at the University of Botswana	30	4	14	1	21	7	10	2
Number of Courses Taught Online	6	3	0	1	2	1	2	1
Faculty/Department	Education	CAD	CAD	Social Sciences	CAD	Education	Education	Science

*N= Novice, I=Intermediate, E=Expert

Design

The study used a qualitative case study approach. One of the many advantages of a case study approach is to be able to watch people in their own natural context and interact with them on their own terms (Gall, Borg & Gall, 1996). Using a qualitative case study enabled the researcher to gain a deep understanding of the context, the participants, and the interaction among them (Luetkehans, 1998).

Each participant engaged in semi-structured questions; the purpose of which was to discover motivating and deterrent factors from teaching blended courses. The individual interview lasted from 40 minutes to 1 hour.

The interviews were audio-taped with the participants' permission and then transcribed verbatim. Follow up interview was conducted via email to clarify issues emanating from interview data for better representation of their responses.

Data Collection Procedures
The three instruments used to collect date were interviews, documents and observation. The researcher prepared an interview protocol that consisted of semi-structured questions describing faculty participation in BL at the UB.

All interviews were done face-to-face. They were conducted in English. Document reviewed were from the following sources: political, administrative and educational. Political documents included government documents describing administrative issues and policies. Administrative and educational documents included all documents obtained internally (in the university). Some documents were from the Department of Printing Services for the Government of Botswana. These included but are not limited to the following: The National Development Plan (NDP) and The Long Term Vision for Botswana-Vision 2016.

Other documents analyzed included scholarly papers by the UB faculty on online and BL learning (Eyitayo & Giannini, 2003; Lee, Giannini & Nkosi, 2003; Molelu & Uys, 2003; Uys, 2003). The scholarly papers contained adopters 'experiences of teaching BL courses but were not limited to benefits, challenges and suggestions for improvements. The researcher observed one faculty member conducting a BL course and attended a number of workshops on training faculty members in using WebCT. The BL syllabi were also examined.

Data Analysis
The analysis process for this study was the constant comparative method. The first rule of the constant comparative method is that while coding and incident for a category, compare it with the previous incidents in the same and different groups coded in the same category.

> *"This constant comparison of the incidents very soon starts to generate theoretical properties of the categories..thus the process ...stimulates thought that leads to both descriptive and explanatory categories"* *(Lincoln & Guba, 1985; p. 341).*

Initially the researcher used open coding of responses to determine trends in the data. The researcher drew upon tacit knowledge in making this initial judgment for early category formulation. Colored markers were used to differentiate participants' themes so that the data would remain in context and provide visual indication of emerging themes. Direct quotations were used throughout the report to preserve the voice of the participants. Pseudonyms were assigned to maintain the participants' anonymity. The findings were then interpreted based on the perceived attributes of innovations (relative advantage, complexity, compatibility, trialability and observability).

FINDINGS

The findings of this study support and expand work by Artman (2003), Betts (1998), and Rockwell, Schauer, Fritz, and Marx (2001) who reported that distance education faculty state intrinsic incentives for participating in distance education. The adopters were more intrinsically motivated to participate in BL than non-participators. Based on these analyses, it is evident that intrinsic factors have a greater influence on faculty adopters in BL than extrinsic factors. The two major themes that dominated faculty members' accounts were benefits and challenges of teaching blended courses. The adopters noted the potential benefits of blended courses among others as:

- ➢ **improved pedagogy;**
- ➢ **engagement in learning; and**
- ➢ **added flexibility.**

Both the adopters and non-adopters indicated some challenges to teaching blended courses. The challenges included four major themes:

- ➢ **Formal faculty development program for teaching blended courses;**
- ➢ **Allocation of the necessary time for faculty members to redesign traditional courses into blended courses;**
- ➢ **Preparing students to learn effectively in blended courses;**
- ➢ **Infrastructure**

POTENTIAL BENEFITS

All the adopters and some non-adopters were positive about blended learning. They believed that blended courses had potential benefits for both students and the instructor. In blended courses, students are motivated to explore related topics on their own, and develop critical thinking skills. Students readily access information from online technology and enhance their learning. Learners become self-directed and in the process develop lifelong learning skills. Some benefits for faculty members from teaching blended courses included (but not limited to) fulfilling a personal desire to teach; opportunities for scholarship; providing innovative instruction and intellectual challenge. Following are some of the adopters' comments:

> *Dr Owen pointed out that blended learning had*
> *Direct pedagogical advantages, the role it can play in developing generic lifelong learning skills which are essential; the potential it has for us to expand access off-campus-and even...large education classes are very efficiently using online learning on campus to reach better the large student groups...I see it as a key future direction for our institution.*

> *Dr Oluchi concurred that it*
> *...seemed a logical extension; ...my pedagogical approach was learner-centered, involved discussion, group work and projects, etc. The Internet and the online components ...extend and build on that kind of approach. I was always seeking how to improve teaching and this fitted in with* **the approaches I liked and the direction I was already taking.**

ENGAGEMENT IN LEARNING

The adopters reported that students develop critical thinking skills and become independent thinkers through blended courses. Dr. Maseko (Media Studies lecturer) believed that students developed skills to use even when they leave the university. He noted:

> *When you design a course---after putting links, people can go beyond the classroom instruction...lifelong learners—you get lifelong learning skills even if you leave here.*

There is also improved interaction between the learners and the instructor and among themselves. Students form a community of learners through discussion fora.
One of the adopters, Dr Edeoga asserted that "...learning is more interactive and...they [students] take a more active role in their learning process."

FLEXIBILITY

The online segment of a course tends to be asynchronous, thus allowing students to work on their own schedule in different locations. Students also enjoy the best of both worlds-direct contacts with their teacher and the convenience of online technology. Following are some of the adopters' comments: The advantage of using WebCT is that the material is always available for the students. They can access it any time.

> *I have been able to do a lot more than I was able to do outside the online. Traditionally there has been a limit to how much I could give the students or make available to the students to interact but now I think with online there is far greater volume of work that can be done.*

COMPLEXITIES OF BLENDED LEARNING

There was a slight contrast between adopters and non-adopters perceptions regarding the challenges in teaching blended courses.

Non-adopters noted extrinsic motives as motivators for teaching blended courses while adopters stated intrinsic motivators. However, all the participants identified four major challenges in teaching blended courses:

- ➢ **Formal faculty development program for teaching blending courses**
- ➢ **Allocation of the necessary time for faculty members to redesign traditional courses into blended courses**
- ➢ **Preparing students to learn effectively in blended courses**
- ➢ **Infrastructure**

FORMAL FACULTY DEVELOPMENT
FOR TEACHING BLENDED COURSES

The most critical variable in blended courses should be student learning (Koohang & Seymour; 2006). The design of hybrid/blended learning value rests with sound and appropriate instructional design.

The medium of classroom lecture notes or other instructional materials can not be directly transferred to the web. The web as a different delivery medium requires different strategies for effective communication.

Training of faculty members plays a significant role in supporting the transition from instructor-centered learning to a student-centered model. The faculty members in this study identified training as one of the key factors that could influence them to participate in blended learning.

The participants considered ongoing training, a reliable network, and students' access to computers as essential elements.

ALLOCATION OF THE NECESSARY TIME FOR FACULTY MEMBERS TO REDESIGN TRADITIONAL COURSES INTO BLENDED COURSES

Designing, developing and teaching a blended course takes a significant amount of time. The process includes among others: amount of student-to-faculty contact; student engagement in activities hence seeking more assistance; managing a large class and getting students online to view instructional materials; properly downloading and configuring software and comfortably working from a web based learning platform (e.g. WebCT); and using available course management tools that lead to more work.
Dr Oluchi (Sociology lecturer-adopter) sums faculty members' perception on added workload:

> *You have to do a lot of thinking and planning. But when you have done all these, assembled all your resources and the links, and your start the course, the work is lighter.*

PREPARING STUDENTS TO LEARN EFFECTIVELY IN BLENDED COURSES

Students' readiness to participate in blended courses could add to the success of online learning and could be influential to faculty participation. The time demands of blended learning could be exacerbated by the relatively poor technological skills of the students. Some faculty members believed that computer literacy of students was a challenge.

A good number of students were not ready for online learning when it was implemented at UB. Dr Ndubuisi noted, "some of my students actually dropped out of class last semester and even this semester because they couldn't cope."

The issue of training for students came up repeatedly during the interviews. Mr Teedzani (Sociology lecturer/non-adopter) commented: it has to be demonstrated to the learners---to the people that...benefit more from using it."

INFRASTRUCTURE

Teaching in a technology-mediated environment posed a number of challenges for the adopters. One of the most frequently mentioned point related to the technology infrastructure (physical and human). Faculty members are clearly influenced by the capability and reliability of the systems in place for online learning delivery, and faculty members credit the leadership of the university with the quality or lack of quality of the technological infrastructure. They would prefer to have a technician handy to help them whenever they encounter a problem. Mr Rand (Computer Science Lecturer-adopter) expressed his frustration with network, "there is a problem with the network or the computers not functioning properly." Instructors wanted to be able to count on the system working even though they knew that every system has its potential breakdowns. Dr Maseko (Media Studies lecture-adopter) lamented, "Whenever you get a chance so that the students can practice---sometimes the computers are not working." Dr Edeoga (Special Education lecturer-adopter) shared the same sentiment "giving them [students] links and asking them to look up...sometimes you find that the system is very slow and the student suffer...at peak time...you find that you have difficulties downloading certain things. It could take hours.". There were inadequate computers for students and access to existing computer labs was minimal. Dr Edeoga (Special Education lecturer-adopter) noted:

The computers are really inadequate for students...because they don't have personal computers, they either go to the library or to the Special Education lab to use computers and at times its full and they have to wait for their turns. They can go to the library but many of them claim that before they come to lectures the library is already full so they are not able to use it as much as they would want to.

Dr Owen (Adult Education lecturer-adopter) shared the same disappointment:
We know that our system is very slow. This can be quite a problem when you are trying to exemplify something or provide information very quickly; there are delays because the system is slow. It takes a while for things to come on.

Mr Malomo (Mathematics lecturer/non-adopter) who was involved in the initial inception of blended learning stopped participating out of frustration. He decried:

I pulled off because I didn't believe ... (in the direction we were taking); when we started this elearning process, the whole idea was that the university was going to provide...computers for students...That was the goal...but...I found that it was a waste of time because there were no computers—nobody seems to care about what is going on.

DISCUSSION

We used Rogers' Diffusion of Innovation theory to interpret the findings. The findings are discussed within the five perceived attributes of Innovation: (relative advantage, compatibility, complexity, trialability and observability). It should be note that due to the interaction of these attributes, many points of discussion span more than one element.

Relative Advantage
Relative advantage "is the degree to which an innovation is perceived as being better than the idea it supersedes" ("Rogers, 2003:15). Both adopters and non-adopters 'perceptions of the relative advantage of blended learning as an innovation were well within a positive range and generally verify the attributes of relative advantage identified by Rogers (2003). The evidence from the semi-structured questions with regard to this attribute reflected less of an interest in economic benefit as an indicator that Rogers suggests. Even though there was high potential for blended learning innovation to satisfy faculty need, in that the adopters recognized that the innovation (made learning more accessible and flexible to the students; enhanced learning and faculty developed professionally), some limitations were noted by some non-adopters. Limited time and other teaching priorities collided with the perceived opportunities of this innovation. However, the findings essentially correlate with Rogers' generalization that perceived relative advantage is the degree an innovation represents an improvement over past ideas.

Compatibility
Compatibility "is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters" (p. 15). Adopters believed that the online aspect of blended courses was complementary to their face-to-face instruction.

The findings are consistent with Rogers' (2003) general view that compatibility is perceived as positive related to the rate of adoption. On the contrary, some faculty members believed that online learning was not compatible with their teaching because it added more workload. Non-adopters pointed out that they had other responsibilities thus, did not have time for training and preparing for teaching blended courses. Additionally, they expressed concern for insufficient resources that could facilitate blended learning. Furthermore, they argued that the innovation required too much of a shift of priorities, in use of time and energy, from other needs, pressures, and perceived responsibilities related to teaching.

In Rogers' paradigm listing variables determining the adoption rate, reference is made to strategies operative within the organizational system related to types of innovation decisions, communication channels and the nature of the social system itself. Analysis of the data showed that organizational conditions (imperatives) that were present prior to the innovation's trial, or those that developed concomitant with innovation, appeared to have had an impact on this new idea, and they have apparently affected the participatory energies and commitment of some users.

Complexity

Complexity "is the degree to which an innovation is perceived as difficult to understand and use" (p. 16). The data indicated that the innovation was easy to use. For non-adopters, online learning was a rather complex undertaking since they did not have training. This suggested that the less complex an innovation is perceived to be, the more likely it is to be adopted.

Comparison and analysis of the data in this category with findings of the compatibility category suggest a strong relationship between the difficulty, (perceived by non-adopters) in using the innovation (complexity), and compatibility with the users' ability to innovate and utilize the innovation. For non-adopters, the innovation appeared too demanding of their time and energies.

Trialability

Trialability "is the degree to which an innovation may be experimented with on a limited basis" (p. 16). The findings of this inquiry clearly support the presence of trialability as a characteristic of an innovation as identified by Rogers.

Examination of the data suggested that blended learning has unrealized potential at UB, specifically because the trial or use of the WebCT learning management tool has not been utilized to its maximum. The environment in which the innovation has been developed has not adequately facilitated faculty members' experimentation.

Dr. Ndubuisi (adopter) lamented that some features of WebCT like "chat" were not activated. He added that multimedia features were not active. Consequently he could not use video for "dance" in an English literature class.

In general there was an inadequate and poor condition for trial. Concurrent programs generally took precedence over blended learning. Time to use and understand the innovation was seriously limited. There was a relatively high interdependence between trialability and complexity. There was also a relationship between reduced complexity and increased trialability.

Observability

Observability "is the degree to which the results of an innovation are visible to others" (p.16). Faculty members' responses to observability were generally weak. This is in contrast with prior studies such as Hahn (1974) that used Rogers' theory.

The majority of faculty members did not believe that the innovation must be seen in order to be understood. These findings do not corroborate Rogers' hypothesis of observability, which states, "the observability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption" (Rogers, 2003; p. 258). The majority of the adopters of online learning did not view observability as an important issue.

Limitations

The present study is not generalizable because the sample was small, hence not representatives of other settings. Furthermore, the researcher exercised no experimental control over the participants in the study. Therefore, cause and effect relationships were not confirmed.

In this study, the researcher believes that the four favored attributes (relative advantage, compatibility, complexity and trialability) of an innovation provided valuable insights into the thought processes, emotions and feelings of the participants.

RESEARCH QUESTION:
WHAT CONCERNS DO FACULTY MEMBERS HAVE ABOUT BLENDED LEARNING?

Both adopters and non-adopters expressed concerns regarding blended learning which included the following: lack of equipment or inadequate equipment, large classes, workload, the need for time for learning and integrating technology, the lack of technical support and training, technical problems, the quality of instruction, lack of incentives, poor management, students 'technological abilities and students 'access to computers, and lack of policy for online/blended learning.

Both groups (adopters and non-adopters) shared concerns about technical breakdowns (Internet and email). The adopters were particularly concerned about lack of space (Smart Classrooms), students' access to computers outside the lab, lack of students' technological abilities, and limited technical support. Non-adopters shared some concerns that more time was needed to learn how to use WebCT. Concerns about equipment or student access to computers and space recurred in both groups.

RESEARCH QUESTION: HOW ARE FACULTY MEMBERS
REWARDED OR MOTIVATED TO PARTICIPATE IN ONLINE BLENDED LEARNING?

The faculty members from both groups reported that there were no reward structures at UB for faculty members who participated in blended learning. They suggested varied ways for rewarding and motivating faculty members to use blended learning. Some suggested co-teaching, additional training and technical support, access to computers for students, and the addition of using blended learning for instruction to constracts renewal and promotion. Others felt that blended learning was one of the many innovative teaching methods that they were using; hence, they did not believe that faculty members who taught blended course should get compensation or extra credit for promotion as a result.

Both groups believed that members needed to work collaboratively to learn how to use technology and develop courses together. The faculty members suggested that the university administration should upgrade available computers, buy the necessary software and continue to market blended courses to the university academic staff, and evaluate existing blended courses for improvement.

RESEARCH QUESTION:
WHAT SOCIAL FACTORS AFFECT THE IMPLEMENTATION OF BLENDED COURSES?

Social factors may include but not limited to the following: university culture, setswana culture, language, and teaching styles. The faculty members did not see any of the social factors that could affect the implementation on blended learning. However, many of the adopters believed that faculty members benefit from collegial sharing and peer coaching. They suggested that future faculty development sessions should be designed as hand-on workshops in non-threatening environments and these workshops should include demonstrations and time for faculty members to collaborate and work on projects that related to their content and courses.On the other hand, some adopters envisaged a problem if the technology capacity is not increased at UB.

They attributed this vision to technical problems they encountered as well as lack of access to computers for students. These comments implied that social factors might affect faculty participation in online/blended learning.

RESEARCH QUESTION:
WHAT POLICIES AND SYSTEMS ARE IN PLACE REGARDING BLENDED LEARNING AT UB?

Both groups repeatedly mentioned policy in the interviews. However, their views on policy differed. Some faculty members believed that UB had an online/blended learning policy while other either did not know or were not sure if there was a policy or any system in place for blended learning. Despite the uncertainty regarding institutional policy, the participants offered suggestions and recommendation for important components of an online education policy. It is important note that teaching blended courses at UB is voluntary. Therefore, faculty members chose whether or not to teach blended courses. Some participants hoped that the university could set up a policy that makes teaching blended courses mandatory. Dr Mae (English lecturer-adopter) lamented, "I would have hoped by now that Senate would have pronounced and had the position on elearning at UB-and with that we see not it will have assumed the policy context, but it is voluntary.

The statement echoed by the participants clearly implied that UB has no current policy for online learning or teaching blended courses. Therefore, lack of policy could impede faculty participation if they feel that there is no structure in place to inform this new innovative teaching.

FUTURE DIRECTIONS FROM BLENDED LEARNING AT UB

Implications for Practice
Instructors may not be fully ware of the capabilities of the course management system, and how it can be used to facilitate peer cooperation. Dillon and Walsh (1992) stated that even if instructors' self-efficacy using technology is high they might still need pedagogical skills that bring the technology and course content together.

Providing faculty with technical and instructional design support there fore could increase their familiarity with vital knowledge and the limitations, if any, of teaching in a technology-mediated environment. Faculty members' use and application of technology tools available in the course management system (WebCT) was limited. Most faculty members failed to activate tools for managing group activities, online discussions, file sharing and digital drop box (for collecting written assignments), and chat which would have facilitated collaboration and communication in a more convenient manner while documenting every activity. This implies that there needs to be more instructor support and technical guidance.

Generally the participants had positive attitudes toward blended learning. Non-adopters were positively inclined to adopt blended learning but they had some issues. This suggested that if the UB could address these issues, non-adopter might adopt blended learning.

These results supported Rogers' idea that any new innovation will be adopted and diffused at different rates throughout an organization. The underlying assumption of this study was that administrators at UB can increase participation and acceptance of blended learning by including the potential faculty members' adopters in the decision-making process.

Faculty members on the other hand need to be fully aware of the capabilities of the technology and how it can be used to facilitate teaching and learning. As educational models for delivering instruction change and learners' needs continue to evolve, there is need for continuous training and support. As the UB expands its online programs, it will need to show commitment to address the issues of resources to assure faculty continual participation in blended learning.

Barriers to participation such as access to computers for students, insufficient smart classrooms, lack of training for both students and faculty and lack of release time all have a negative relationship with the decision to participate. Conversely, institutional support such as reduced teaching load and other responsibilities, compensation, and technical support all were identified as factors that could have a positive effect on the level of participation.Administrators and faculty at UB should work together to make the BL program successful. Understanding each other's perspectives would make the difference between a successful program and one that is either marginal or weak. It is easy to concentrate on technical training and financial rewards, which cater to the extrinsic and personal scales, and ignore the intrinsic scale that appears to motivate faculty to explore new ways of teaching and learning.

Implication for Policy

There seems to be some discrepancy between what instructors aspire to have and what the administration is providing for BL at UB. The discrepancy significantly lies in lack of BL policy at UB as reported by the faculty members.

At present, BL at UB is voluntary, so some faculty members do not view it as part of their job responsibility. That might be the reason why there is inertia in participating in BL. Some faculty members suggested that BL be mandatory so that more or all faculty members would start participating. If the demand for BL continues, there will be subsequent demand for more BL instructors. The UB should identify factors that facilitate BL teaching, and then adopt strategies that empower instructors to become better BL teachers.

CONCLUSION

The need to reform existing educational programs and implement new ones requires the understanding of faculty members and administrators' beliefs concerning blended learning.

Faculty may be reluctant to attempt new avenues, especially when they must continue their ongoing responsibilities and are not receiving additional compensation for their new responsibilities. There is need for faculty training and university faculty development centers. A designated university-wide faculty development center with a learner-centered philosophy is essential to the success of any technology-based distance education program (Bakutes, 1998). Additionally, issues such as merit, faculty workload and the changing role of the faculty member need to be revisited and revised as needed based on the new high education needs. Faculty promotion and online learning policy need to adapt promotion criteria based on the learning paradigm.

There is need for paradigm shift form the university management, to faculty members and students in order to actively participate in further development of BL to support the vision of equitable education and a move toward improved teaching and learning. Institutional planning, strategies leadership and decision making is needed for strengthening measures that are likely to promote uptake of BL.

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