



Elearning Adoption at UB: Constraints and Challenges in Crossing the Chasm

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UB: Historical Background

- ❖ Origin in 1964 as part of a tri-nation consortium, known as the University of Basutoland, Bechuanaland & Swaziland (UBBS)
- ❖ Since 1966, as the University of Botswana, Lesotho and Swaziland (UBLS)
- ❖ Since 1982, as the University of Botswana (UB)




UB: The Present

- ❖ Six Faculties & a School of Graduate Studies (SGS), all headed by a Dean
- ❖ The Centre for Continuing Education (CCE)- a multi-disciplinary and inter-faculty outreach arm of UB
- ❖ The Centre for Academic Development (CAD)




UB: CAD

- ❖ To act as a key enabler of academic excellence and innovation in teaching, research & professional service.
- ❖ CAD Comprises five key Units:
 - ✓ Teaching and Learning Unit (TLU)
 - ✓ Educational Technology (EduTech)
 - ✓ Communications and Study Skills (CSSU)
 - ✓ Affiliated Institutions (AIU)
 - ✓ Academic Programme Review (APRU)



UB Learning and Teaching Philosophy


- ❖ Originally a traditional teaching University
- ❖ A dual mode (with the inception of CCE in 1991)
- ❖ Since 2000, efforts to introduce a new learning and teaching culture- a student-centred, technologically advanced learning environment
- ❖ To extend access to HE through the utilisation of ICTs
- ❖ With commitment to self-directed, lifelong & Open learning



UB Learning and Teaching Policy


Envisaged Graduate Attributes

- ❖ ICT knowledge and skills
- ❖ Self-directed, lifelong learning skills
- ❖ Critical and creative thinking skills
- ❖ Problem-solving skills
- ❖ Communication skills
- ❖ Entrepreneurship and employability skills
- ❖ Organisational and teamwork skills
- ❖ Research skills and information literacy
- ❖ Social responsibility and leadership skills
- ❖ Interpersonal skills



Impact of Emerging Technologies


- ❖ Recent rapid advances in web-based technology have caused the biggest change in HE since the advent of the printed book in the mid-15th century
- ❖ The digitization of our cultures is providing with access to a breadth of intellectual and cultural resources far greater than ever before
- ❖ Networked digital technologies are fast becoming the standard technologies for interaction, communication, and collaboration not formerly possible
- ❖ New, tools for inquiry and investigation



Impact of Emerging Technologies


“New” generation of students:

- ✓ Most university students today are younger than the microcomputer;
- ✓ the advent of the WWW, Web 2.0 technologies, Cell phones, etc have had great impact on their learning styles and needs;
- ✓ To them, keyboard is preferable to paper;
- ✓ multitasking is a way of life;
- ✓ staying connected is essential, and
- ✓ there is zero tolerance for delays.




Impact of Emerging Technologies

- ❖ They process information differently from their previous generations & look up on their teachers to create & structure their learning experience;
- ❖ Their needs of information skills and lifelong learning skills to continue studying independently in order to remain competitive in a fast-changing work environment cannot be overemphasized;
- ❖ Professionals need to stay abreast of trends, training, and education in their field. (In many areas what was considered cutting-edge ten or even five years ago is obsolete today);
- ❖ Teachers must align instructional approaches with their students' changing outlook and information-age mindset.



Blended Model: A New Approach at UB

- ❖ Appropriate blending of f2f and elearning;
- ❖ A synergistic effect: maximises the strengths and minimises the weaknesses of each component;
- ❖ Multifaceted approach: diverse in its techniques as the students themselves resulting in individualisation of learning (preferred styles, needs & MI);
- ❖ Flexibility (format, anytime, anywhere, ODL, etc);
- ❖ Richer learning contexts (In learning resources & development of new skills);



New Approach: Blended Model

- ❖ ICT to activate & enhance learning processes by motivating & engaging learners in exciting ways;
- ❖ Interaction is critical for active learning;
- ❖ People appear to *think in conjunction or partnership* with others and with the help of culturally provided tools and implements (e.g., Salomon 1993);
- ❖ Motivational feedback & online scaffolding can encourage engagement & active learning;
- ❖ Positive emotions influence the learning process and increase comprehension, retention and critical thinking skills;

New Approach: Blended Model



- ❖ Able to handle large classes more effectively.
- ❖ Fully online doesn't suit all learners (*also for some lecturers who feel more comfortable teaching from handouts, yet using emails to interact with students*)

Evolution of elearning at UB



- ❖ UB started investing significantly in elearning infrastructure in 2001;
- ❖ Went online in 2002 with the launching of a few pilot online courses on WebCT;
- ❖ Six years old;
- ❖ Passed through several phases and processes.

Evolution of elearning at UB



LMS: WebCT 6.1.1

- ❖ Organizes the learning environment into content, communication, evaluation, etc.
- ❖ Personalized delivery capability to diverse student populations

The LASO Model (Leadership, Academic and Student Ownership and Readiness)

- ✓ A holistic technological transformation approach
- ✓ Integrates top-down, bottom-up, and inside out initiatives
- ✓ These initiatives tie in corresponding academic staff and student ownership and readiness

Technologies & Related Facilities



- ❖ Basic computer training for all staff
- ❖ WebCT Training
- ❖ Workshops for training in the pedagogical use of eLearning technologies
- ❖ Video-conferencing (POLYCOM)
- ❖ eLearning Support Centre
- ❖ Student Help Desk
- ❖ Elearning Certificate course

Technologies & Related facilities



- ❖ Smart Classrooms (6 Nos)
- ❖ Technology-enhanced classrooms (50)
 - ✓ Data Projector (Ceiling-mounted)
 - ✓ Projection Screen
 - ✓ Desk Top Computer
 - ✓ Document Camera
 - ✓ Sound System
 - ✓ VCR/DVD Player
 - ✓ Podium

Progress so far



- ❖ Currently 190 courses are using WebCT, out of which 159 are to support or supplement the on campus f2f approach and 31 are for distance learners.
- ❖ Currently about 17% of the academics make use of elearning.

Innovation: Theoretical Framework

Everret Rogers

The 17% covers the *Innovators & Early Adopters*.

Moore's Concept of Chasm

- ❖ Cracks in the adoption curve, between each phase
- ❖ Each crack represents a transitional difficulty
- ❖ The largest crack- the Chasm between the EA & EM
- ❖ Many technology ventures fail while trying to make it across this chasm: a critical life-or-death situation!

Crossing Moore's Chasm

EA & EM have very different characteristics and expectations. They make the adoption decision based on totally different criteria.

Early Adopters:

- ✓ Are enthusiasts and visionaries
- ✓ Try out new ideas & make judicious innovation decisions
- ✓ Start out with a pilot project
- ✓ Have a great role in organisation-wide innovation adoption

Crossing Moore's Chasm

Early Majority care about:

- ✓ quality of the product,
- ✓ support structure and its interfaces, &
- ✓ reliability of the service they are going to get.

Further, they:

- ✓ Meditate for sometime whether to adopt or not
- ✓ Need solid anecdotal evidence
- ✓ Don't want to take risk
- ✓ Want references from other EM members from their own organisation (*but not from innovators and early adopters- This leads to ignorance & hence the chasm*)

Crossing Moore's Chasm

In order to cross the chasm, Moore's suggestion is to

- ❖ focus attention on a single market, meaning a faculty, a department or a programme,
- ❖ achieve success and use it as a model with other units.

He further suggests that change agents must:

- ❖ demonstrate to them the benefits of adoption;
- ❖ demonstrate the validity of their competitive claim;
- ❖ establish why a change is critical;
- ❖ be patient, understand & be conversant with adopters' concerns, by thinking through their perspectives;

Crossing Moore's Chasm

Change Agents must:

- ❖ Develop a strategy customised for an individual / a Unit with their concerns & needs in mind;
- ❖ Collaborate with them in their own small needs analysis and the design of new learning environments;
- ❖ Use an application such as WebCT;
- ❖ Have earned a reputation for quality and service;
- ❖ Not leave to the clients' likes & dislikes, if don't want to be a failure at chasm crossing.

Crossing Moore's Chasm



Discussion

Student Survey: Findings



- ❖ Most students find WebCT as a valuable tool but they don't want it to replace f2f approach
- ❖ WebCT is desirable, but not essential for passing the exam
- ❖ Yet it has certain other gains that are useful later
- ❖ They particularly support online group discussion and self-assessment tools
- ❖ They preferred content delivery in digital format to copying notes from BBs in the classroom
- ❖ They expect to use technology in all their courses
- ❖ They wondered why some teachers don't utilise it

Staff Survey: Positive Perceptions



- ❖ WebCT is a valuable teaching tool
- ❖ Helped to establish better rapport with students
- ❖ Opportunity for timeous need- or performance-based feedback; no need to wait "until we meet next", thus extending learning beyond the classroom doors
- ❖ Possibility for more meaningful student-teacher as well as student-student interactions
- ❖ Possibility for diagnostic self-tests and formative evaluation of teaching
- ❖ Enables peer tutoring (Teachers may not see some learning difficulties from student perspectives)- social skills & self-esteem

Staff Survey: Concerns



Concerns-Based Adoption Model (CBAM) approach

- ❖ Increased workload associated with online teaching
- ❖ Lack of acceptable policies on the ownership of elearning content
- ❖ Lack of reference to the use of technology on the end-of-course evaluation form (SECAT)
- ❖ Lack of recognition for elearning adoption in the promotion and tenure processes
- ❖ Lack of enough time to learn new technology skills
- ❖ Lack of recognition of collaborative initiatives

Staff Survey: Concerns




- ❖ Some students skip lectures as content is online
- ❖ Low bandwidth issues
- ❖ Occasional unexpected WebCT outage
- ❖ Inability to access WebCT off campus
- ❖ Lack of support from 4:30 pm to 8 am the following day
- ❖ Lack of shared vision for elearning adoption
- ❖ Lack of an official elearning strategy document
- ❖ Lack of a standardised online course evaluation tool

Innovation: Constraints




- ❖ Assumption that f2f teachers will naturally know how to teach online
- ❖ Teachers tend to "repack" traditional model into digital format because some are unaware of the importance of instructional design.
- ❖ Some teachers attend workshops, but generally remain reluctant towards technology integration
- ❖ Techno phobia
- ❖ Lack of will, not of understanding: Some with good technology skills shy away from technology adoption

Innovation: Constraints



- ❖ Resistance to change from long-embraced traditional approaches; Most teachers in HE tend to teach the way they were taught
- ❖ Some staff's difficulty to adapt to the changing roles
- ❖ Inability to cope with WebCT approach
- ❖ Lack of skills on how to appropriately integrate eLearning
- ❖ Lack of stable and supportive IT infrastructure
- ❖ Inadequate analysis and addressing of staff concerns
- ❖ Lack of team approach in managing change management strategies


Innovation: Critical Success Factors



Based on surveys & the relevant literature

- Technology innovation is a process and not an one-time event: The road to success is always under construction.
- An organization does not change until the individuals within it change.
- Facilitating change is a team effort.
- Appropriate interventions reduce the challenges of change & are key to the success of the change process.
- The Early Adopters are pillars to effect change through an inside out / horizontal strategy.
- For change to be sustainable, it needs to be collaborative


Innovation: Challenges



May be categorised into:

- ✓ Pedagogical
- ✓ Technological
- ✓ Social
- ✓ Cultural
- ✓ Ethical
- ✓ Economical
- ✓ Accountability: ROI


Technology Innovation: Challenges



Three common objectives of elearning & how to achieve them:

- ❖ Widening access to educational opportunity;
- ❖ Enhancing the quality of learning; and
- ❖ Reducing the cost of higher education.
 - ✓ Large classes and distance learning
 - ✓ Enhanced student-centred interactive learning environments
 - ✓ By collaboratively preparing pedagogically sound learning objects reusable in a variety of contexts
 - ✓ elearning is an educational investment


Technology Innovation: Challenges



Return on Investments (ROI)

- ❖ Biggest thrust to change education is to meet the changing styles & needs of students in the information age that is characterized by a knowledge economy;
- ❖ Society expects HE students to be critical thinkers, team players, problem solvers, etc (Historically, HE has prepared students for the world of work);
- ❖ For HE institutions to remain competitive, students expect their teachers to be techies and the learning environments to be networked and interactive as it is in most other daily activities.


Innovation: Critical Success Factors



How to address issues and Challenges:

Management Support


- ❖ A team of change managers knowledgeable about the dynamics of both diffusion and resistance to innovation in a given culture and context;
- ❖ Resistance is normal; so never label individuals with personal concerns as resisters or laggards;
- ❖ Appropriate interventions reduce the challenges of change; Knowing *how* to change is the real key;
- ❖ Facilitating change is a team effort;



Innovation: Critical Success Factors

Management Support


- ❖ Visible initiatives, participation and support from the leadership in order to create a conducive environment for change such that teachers will feel at ease and be relieved of anxieties if they are to express real commitment to elearning
- ❖ Technology implementation requires research, a lot of time and commitment: Establish satisfactory ways of recognising it and compensating for it;



Innovation: Critical Success Factors

Management Support


- ❖ Usual concerns of intellectual property rights and ownership of materials must be addressed;
- ❖ Ongoing formative evaluation at various stages;
- ❖ Shared vision for elearning;
- ❖ Strategic plan for elearning implementation.



Innovation: Critical Success Factors

Staff Training & Support


- ❖ Change is people-centred; individuals decide whether to change or not: change must come from the teacher being the key person in the adopting process;
- ❖ Identify each individual's concerns (from their own perspective) & address them prudently;
- ❖ Well-planned inspiring training sessions: the first step towards adopting a new technology is to learn about it and then to form an attitude towards it;
- ❖ Studies indicate that teachers' technology literacy and technology training impact their pedagogy.



Innovation: Critical Success Factors

Staff Training & Support


- ❖ John Keller's ARCS Model of training is suggested: (**A**ttention, **R**elevance, **C**onfidence & **S**atisfaction);
- ❖ Train of teachers in small groups;
- ❖ Identify active technology users from the *innovator* and early *adopter categories* & utilise them as resource persons in workshops;
- ❖ Individualised post-training follow up & support;
- ❖ Instructional Designers for each faculty for more effective and personalised support to academics.



Innovation: Critical Success Factors

Collaborative Efforts

- ❖ Encourage collaborative approach towards online course development & team teaching
- ❖ Learning objects usable in various contexts
- ❖ Faculty/Department-based elearning teams
- ❖ Elearning Newsletters to disseminate best practices
- ❖ More action researches on elearning best practices



Innovation: Critical Success Factors

Technology Support

- ❖ Availability of reliable and adequate technology infrastructure and timely technical support (24/7)
- ❖ High speed access to WebCT on campus as well as off campus (24/7)
- ❖ Availability of learning support / help desk (24/7)
- ❖ Availability of course materials on CDs for students in order to reduce online download time

Innovation: Final Comments



- ❖ The current UB elearning environment can be described as in transition;
- ❖ Improvements are needed in several areas;
- ❖ Requires recognition of elearning as an innovative teaching approach that every teacher has to adopt to be credited as a scholar in the teaching profession;
- ❖ With incoming students expecting technologically-literate teachers and access to technology-enhanced courses, a change is crucial before students insist on it as their right.

QUESTIONS?



He who is afraid to ask is afraid of learning.
– Danish proverb



"The road to success is always under construction."
by Author Unknown

Thank you

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