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Getting wired

Experiences of a course development team and learners in a multimodal teaching and learning environment

Getting Wired

- Introduction
- Context of the research
- Strategies guiding the research
- A new teaching and learning strategy
- A recommended weekly learning path for students
- Enhanced engagement with course content through online quizzes
- Adding a social dimension to the course

Getting Wired

- Results
- Data analysis and interpretation
- Quantitative data analysis
- Qualitative data analysis
- Conclusion and the future

Introduction

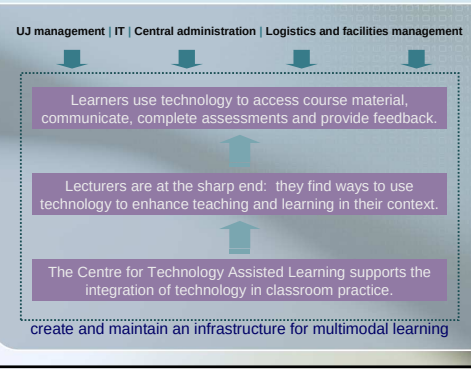
- Ives (2000) in *A Survival Handbook for Teaching Large Classes*, argues that:
  - "[i]t doesn't take a rocket scientist or a poet laureate to know that teaching a large class is a very different set of challenges than we typically face in our other classes".
- There is a global need to meet the growing demand for higher education (King, 2004) and South Africa is no exception.
- In 2008, 3326 students were enrolled for the course Business Management 1A (Module 1 and 2) at the University of Johannesburg, with approximately 630 students in a class.

Context of the Research

The goal is to continuously improve the teaching-learning strategy with the aim to:

- Involve students in the learning process;
- Engage students with course materials;
- Assess students on an ongoing basis;
- Use on-line assessment to pace the learning experience;
- Provide continuous learning and assessment feedback;
- Address learning needs and improve teaching through eliciting student feedback;
- Personalise the learning environment by establishing a lecturer presence and lecturer-student interaction.

Who are the role players?



Research problem

This paper addresses the following research problem:

The increasing need of other learning mediums such as eLearning technologies in large class teaching and assessment to address the need for enhanced student engagement learning and throughput.

Research background

- The research reported here concentrates on practical blended learning strategies with the aim of contributing to the innovation of teaching practice.
- The research reported here is guided by the principles of action research, with improved practice as primary focus.
- It is believed that some of the success of the teaching-learning innovation described here can be attributed to planning before action, followed by critical analysis.

New teaching-learning strategy

The approach followed:
"enhanced engagement and assessment"

Online learning technologies were implemented to help students engage with course material, lecturers and other students in the following ways:

- Additional resources, such as lecture outlines were made available, which encouraged students to come to class prepared.
- More assessment opportunities (with immediate electronic feedback) were provided in the form of online quizzes, without adding to lecturers' marking load.
- Student feedback on the teaching-learning process was conducted over a three year period, which resulted in continuous improvement
- Channels of asynchronous online communication were created to facilitate interaction and collaboration.

A recommended weekly learning path for students

The objective of the student-learning path was to establish a weekly rhythm of:

- class preparation,
- class attendance,
- engagement with course materials
- reflection on the teaching-learning process.

Enhanced engagement with course content through online assessment (quizzes)

- 4 on-line quizzes (1 "mock/trial" + 3 formal assessments – Module 1 & 3 formal assessments – Module 2)
- A Formal quiz (assessment) covers 2 learning units
- 20 Minutes on-line & 10 MCQ questions randomly selected from a database
- Open book assessment opportunity
- Two opportunities per assessment
- 20% contribution to final mark

Social presence

- The strategy includes the creation of a social dimension in the on-line course environment
- Maintaining the online social presence required:
  - Update the course home page every week with concise and informative text and visuals, which were linked to an important learning outcome for that week.
  - Encourage students to debate subject-related issues in the discussion forum.
  - Contribute to discussions.
  - Provide immediate feedback on on-line assessments

Student Background

- Change in learning environment in the last decade
- 1995-800 learners ⟶ 2008-3326 learners
- Shift in the language of teaching preference
  Afrikaans to English
  75% -1995 (Afrikaans) ⟶ 92% (2008) English
- Increase in group size demanded larger learning facilities
  275 (1990) - 630 (2008) learners attending a contact session

Multimodal and CFL

(Computer Facilitated Learning)

- Introduction of the multimodal approach
  - Aim: integrate Learner Course Management system and Computer Facilitated Learning - address the inadequacies of limited contact time, demands of Outcomes Based Education and limited effectiveness of large group learning and facilitation
  - Facilitation and assessment of large groups require creativity that must ensure fair assessment and establish competencies

Business Management and online-learning

- Department introduced in 2003 the multimodal learning system
- It allows for interactive learning and assessment and communication
- To facilitate assessment use - Web CT electronic assessment introduced in 2005

Research Objectives

- Primary Objective

The use and effectiveness of the assessment tool in the online environment for learning effectiveness and student throughput.

CFL problems

- Number of students 3000+
- Content – one learning unit a week
- Difficulty of assessment with large numbers
  NB: **Assessment must be authentic, fair, valid and reliable**
- Feedback – important component of CFL

CFL problems

- Keeping of records
- Slides- learners using slides to study for tests and exams
- Not using textbook effectively
- Negative perception of Business Management

Findings

2005-2008

Questionnaire to establish effectiveness of assessment

Aspects considered were:

- Establish the optimal usage of resources
- Establish the value added in terms of the course
- Establish the extent to which multimodal was being used
- Establish the extend of the online learning experiences
- Establish the effectiveness of assessment

Why a WebCT survey questionnaire?

- We could collect information quickly from a large number of learners.
- Respondents could remain anonymous.
- Learners had access to the survey anytime/anywhere.
- Survey results were recorded automatically.
- Statistics on closed questions were available immediately.

Research sample

Learners Registered	2005	2006	2007	**2008**
Sample	2787	2881	3166	**3326**
Response	1522	1836	1828	**2468**
Response rate	54.6%	63%	58.7%	**74%**

Business Management Assessment results

Description	2006	2007	2008
Average mark for on-line quizzes	56.1%	58.2%	56%
Average term mark	50.6%	62.9%	59%
Throughput	**58%**	**80%**	**87%**

Questionnaire feedback

2008 Data analysis

QUESTION 1
Does the online environment (Edulink) have a positive impact on your learning?

Descriptor (2008)	N	%
YES	2293	**92.91**
NO	76	3.08
UNSURE	81	3.28
NOT ANSWERED	18	0.73
TOTAL	2468	100

QUESTION 2
If yes which elements positively impacted on your learning?

Descriptors	N	%
Assessment Tool	2047	**82.94**
Discussion Tool	273	11.06
E-mail Tool	141	5.71
Notice Board	867	35.13
Not Answered	59	2.39
Total	3387	137.24

QUESTION 3
Would you like us to continue making the online environment available?

Descriptors	N	%
Yes	2091	**84.72**
Yes, but with certain changes	307	**12.44**
No	44	1.78
Not Answered	26	1.05
Total	2468	100

QUESTION 4
Any suggestions for improvements to the online environment in general

- A large majority of the respondents indicated that they were satisfied with the present situation although individual students indicated issues that were problematic for them.
- Problematic issues included:
- problems with the lockdown browser;
- need for more computer labs and access to computers;
- and download time (Edulink slow).

QUESTION 5
What, if any, obstacles did you encounter with Edulink?

- The majority of the students did not encounter any major obstacles. Those respondents that did experience obstacles referred to logistical and physical limitations including:
- the lack of space in the computer labs
- the use of the lock down browser
- load shedding (impact of Eskom)
- the system being down .

QUESTION 6
Did the online interaction (discussions) assist you in learning about the subject?

- The majority of the students indicated that the discussions proved to be a source of information as well as a learning opportunity.
- Some students indicated that they did not participate because they perceived some of the discussions to be irrelevant to the subject.

QUESTION 7
To what extent did the “muddiest point ” assist in your learning of the content ?

- The question is not relevant to the focus of the paper.
- Brief references indicated that the students were divided in their perception on the use and benefit of the muddiest point.

QUESTION 8
Did the online/Edulink assessments assist you in learning about the subject?

Descriptors	N	%
To a large extent	1383	**56.04**
Somewhat	960	**38.90**
To no extent	80	3.24
Not answered	45	1.82
Total	2468	100

QUESTION 9
Were the instructions to access and complete the online/Edulink assessment clear?

Descriptors	N	%
Yes	2241	**90.80**
No	173	7.01
Not answered	54	2.19
Total	2468	100

QUESTION 10
Was the feedback timeous in terms of your online/Edulink assessment results?

Descriptors	N	%
Always	1410	**57.13**
Most of the time	849	**34.40**
Seldom	169	6.85
Not answered	40	1.62
Total	2468	100

QUESTION 11
Are there any recommendations to improve the online/Edulink assessments?

- The majority of the students indicated that no improvements were required.

QUESTION 12
Did you take Business Management/Economics or related subjects at school?

Descriptors	N	%
Yes	1245	**50.45**
No	1175	**47.61**
Not answered	40	1.62
Total	2468	100

QUESTION 13
If yes. Do you think it contributed to your understanding of the content? Motivate your answer

- A large majority of the students indicated that by taking commercial subjects at school contributed to their understanding of the content:

QUESTION 14
If No. Do you think it affected your understanding of the content? Motivate your answer

- The response to this question came with many variations . The responses range from no impact to high impact.

QUESTION 15
Do you feel you were challenged with the course content and application exercises?

Descriptors	N	%
Yes	1994	**80.79**
No	417	16.90
Not Answered	57	2.31
Total	2468	100

QUESTION 16
Please motivate whether the challenges were just right to keep your interest in the subject going, or whether we expected too much of you.

- The majority of the respondents indicated that the challenges were just right, however some students reflected that the challenges were either to high or not a challenge at all.

QUESTION 17
Any other general comments that you would like to add?

- In general positive feedback was provided although no further value than those already discussed were addressed in this question.

Questionnaire feedback

Suggestions to improve the on-line environment

2005

- Satisfaction with status quo: 42.97%
- Suggestions to improve:
  - Time constraints
  - Feedback
  - Variety of questions
  - Technological problems
  - Lecturer interaction

2008

- Satisfaction with status quo: 97%
- Suggestions to improve:
  - Time constraints
  - Technological problems

Conclusion on 2008 data

- Responses indicate that while technology is not an isolated contributor to student success, it can play an important role in students' perceptions of the quality of the teaching-learning experience and seems to contribute significantly to student throughput.
- These research findings have practical implications for the design, development and facilitation of modules and learning strategies in large classes.

Future research

- Evaluating the group of 2009
- Multi-campus implications
- Increasing depth of study
- Introduction of newer technologies podcasting etc

What are your questions?

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