Teaching BA100 (Business Applications) at Taranaki Polytechnic: Using the Technology

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ABSTRACT

The challenge for the tutor has been how to take what has been not a particularly popular course and (with the use of current technology) re-package it presentation to overcome students initial negative opinions.

Given the motivation of no suitable textbook, decreasing class contact and increasing class sizes, three potential areas of development (Use of Acrobat Reader to deliver content, EXCEL spreadsheets to practice book keeping transactions, TRIVIA to practice areas requiring rote learning) were identified.

Over a period of 4 years, 30 hours of student learning has been developed and packaged onto a CD ROM. This has enabled students to take more responsibility for their own learning, resulting in a greater satisfaction rating for the Module from both students and tutor perspectives.

1. INTRODUCTION

BA100 is a compulsory CBC Module. Leonie has tutored this module for over ten years. It has been obvious for years that it was not the most popular of modules and that many of the students arrived in class with negative baggage, either about content or in their attitude to learning. Students came with a range of ages, ethnic origins, academic ability and work experiences. Some students have studied accounting on other courses or at school, with varying degrees of success.

Leonie began playing with the use of technology to aid learning about seven years ago. During that time there has been a definite increase in the numbers of students with PC's at home, and in the last few years, access to the Internet. This opened the door to the use of e-mail as a very powerful communication tool outside class times.

2. THE PROBLEM

♦ Teaching computing students who were not really interested in this management and accounting stuff
♦ Decreasing class contact due to changes in the political climate
♦ Increasing class sizes due to changes in the political climate
♦ Students not particularly interested in reading, the TV generation??
♦ No suitable textbook.
♦ Feeling like a tape recorder at times, answering the same questions again and again.

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3.   THE OPPORTUNITY

♦ Increasing numbers of students with access to computers at home
♦ A relatively stable knowledge base in these subject areas, so I felt there would be a payback for the large development efforts required in certain areas
♦ More powerful hardware and software available
♦ The arrival of cheap CD-ROM writers.

4.   AIMS AS A TUTOR

♦ Try to design independent learning with as much activity as possible on the computer.
♦ Try to lead the students to be more independent learners, by supplying questions and answers to learning exercises
♦ Focus on the technology as a tool to support learning
♦ Use the computers ability to easily and cheaply display colour and graphics.

Three potential areas were identified, where a computer tool would help the students and the tutor. This strategy has evolved over the last few years. The software applications used have changed over the years as newer versions were released or upgraded.

5.   ONE STRATEGY FOR SUCCESS

♦ Use of Acrobat Reader to deliver content
♦ Use of EXCEL spreadsheets to practice book keeping transactions
♦ Use of TRIVIA, a DOS based shareware game package to practice areas requiring rote learning.
♦ All files were available via a read only directory on our network server.
♦ All files were available on a CD-ROM which the students could have issued to them from the library.

6.   ACROBAT

6.1   Why use Acrobat?

The reader is free, and available over the net. Acrobat will accept work developed in many other applications, eg Powerpoint, Word, Smartdraw. It is very easy to use, novices pick it up very quickly, especially if they have used the Internet. There is control over formatting and layout.

6.2   How was Acrobat used?

♦ As a learning support tool, not as a standalone computer based training application.
♦ As an electronic book, in that content was provided, but only in a summarised form, and wherever possible diagrams replaced words.
♦ Clipart was used where pictures helped interpretation.
♦ Colour was very important.
♦ Quick quizzes to review content were created, and key answers were added.
♦ Revision exercises based on past test questions, and key answers were added.

6.3   Points to ponder

A lot of time was spent in the initial creation or conversion to an electronic format. A lot of time was spent playing with fonts, colours, graphics, layouts etc. Design and layout were very important yet difficult not to get wrong for non design experts. Landscape format was used when creating pages to check visual layout on the screen. Acrobat has a fit to screen option which is great. From a tutor perspective only five minutes of instruction was necessary before students could follow the logic of the design, and navigate the work. Positive responses were received from a wide range of students.

7.   EXCEL SPREADSHEETS

7.1   Why use a spreadsheet?

Originally a manual worksheet was used, but students with poor arithmetic skills, spent all their time chasing lost zeros, and reworking totals, they lost track of the aim of the exercise which was analysing business transactions. Use of formula allowed the spreadsheet to do most of the adding and totalling. Column and row totals were used to show the transactions balanced, both vertically and horizontally.

7.2 How was the spreadsheet used?

♦ Each exercise was put on a separate sheet
♦ Answers were created and saved in another file
♦ Colour was used to highlight different aspects of the learning
♦ Each exercise was designed to fit within one screen width
♦ Appropriate column names and headers were entered for the students.

7.3 Points to ponder

It was important to check that all students were comfortable with simple use of spreadsheets. Students only needed a few minutes of instruction to begin using the worksheets. If the student really messed up, they could delete their work and start again. For the early exercises some students opened up a second window with the answers displayed, so they could follow the necessary logic until things began to click. It worked really well and we got through the exercises in less class time.

8. TRIVIA GAME

8.1 What is TRIVIA?

A free shareware application downloaded from the Internet. It creates games, based on questions you submit. It is a DOS based application.

8.2 Why use TRIVIA?

TRIVIA allowed random display of questions. Questions could be created and edited in a word processor and then imported into TRIVIA. This made editing much easier. Questions could be entered for T/F, complete the sentence or multi-choice format. Multi-choice questions may have from two to four possible answers. Points are awarded for each correct answer. You can choose the number of questions in each quiz. You can choose the number of student attempts allowed. The correct answer is displayed before continuing. The students "go for gold". You choose the numbers of points they must earn to get their medal. Students can exit after any question. DOS meant it could run on most student owned computers back in 1995.

8.3 How was TRIVIA used?

Separate games were created for each topic area. Some topics were divided into two levels of difficulty. Students were encouraged to play little and often to aid in memorising key facts.

8.4 Points to ponder

ANSI needs to be loaded to display screen graphics successfully. Game instructions were simple and students picked up the idea very quickly. Younger male students loved the competitive aspect to TRIVIA. One surprise for me was to see two or three students in a group debating answers. Many students only needed to play for a few days to achieve the learning outcomes desired.

9. RESULTS TO DATE FOR THE STUDENTS

Going great, with positive feedback from students. Students appeared more receptive when we had to do classroom based work. Different students like different tools. Students having difficulty with certain topics could spend more time at home practicing. They could check their own work for immediate feedback.

10. RESULTS TO DATE FOR THE TUTOR

10.1 Technical issues

The module flowed better if the tutor gave a simple overall view of the tools at the beginning of the course and explained where the files could be located. Each specific tool was reviewed when it became relevant to the topic as we progressed through the semester. Some students needed more specific help when copying and using files on their own machines. Fellow students were a great help here. Some class time needs to be scheduled in computer rooms.

10.2 Learning issues

Learning occurred with less effort from the tutor, especially in the area of book keeping transactions. Content appeared in assignments and tests. There were fewer problems for the tutor if students missed class.

Less tutor time was spent on repetition of the basics to different students at different times, so more time was available for trouble shooting. Kinaesthetic students showed great enthusiasm.

11.   CONCLUSION.

Student response has been very encouraging. Leonie is currently working on a first year compulsory paper with a third year project student, and working with a colleague in the area of accounting software.

Generally this work is very rewarding and worth the hours spent at the keyboard. I have found the low tech applications just as effective for students as the more glamorous work. The key is to focus on what you want the student to learn, then to look for an appropriate tool.