Do Weekly Online Revision Assessments Enhance First Year Student Pass Rates?

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Why the study?
Figure 1: Increased failure rate particularly since 2006
Taught on two campuses (Stream 1 and Stream 2)
First Year First Semester Life Science Course in Anatomy and Physiology.

How do we assess?

- Typically content driven
- Typical university assessment:
  - 1 Assignment = 20%
  - 1 Test to indicate progress = 20%
  - Final exam = 60%
Figure 2: Test failure since 2003 mirrors final grade/exam failure

Test - Failure Rate of Students Taking a First Year First Semester Life Science Paper 2003 - 2008
What have we done?
Since 2003 support for student learning by way of revision sessions at end of course and introduction of written study assistance: “How to Revise and Complete Exam”, “How to Write and Exam Essay” and “How to Write a Paragraph Answer”.

However: Failure rate continues to increase.

In 2008 Introduction of weekly web based ‘quizzes’ made up of:

• 10 mcqs,
• 10 mcqs with feedback
• and reflective student comment.
Those doing fewer weekly online quizzes tend to achieve lower grades.

Figure 3 (the obvious)

The Relationship Between Final Grade Achieved and the Average Number of Online Quizzes Completed by Cohorts 1 and 2, 2008.
Quizzes overwhelmingly endorsed by students

• “The online quizzes are very helpful revision”
• “Definitely find weekly quizzes a great idea for ongoing revision”
• “Don’t really like webCT in general”
• “The efficient replies to the mail or discussion postings makes studying a lot easier as the material can sometimes be hard to understand”
• “I particularly like the quiz component because it is helping me a great deal to remember important facts”
The quality of the paper and teaching is recognised by the students as being of a very high standard.

• “The lecturers have been excellent and seem more than happy to help”
• “The online quizzes, study guide and great lectures have helped me learn so far”
• “The study guides have been fantastic so have the quizzes”
• “The components of the course work really well together”
• “The self tests on Web CT are good. Really enjoying the labs”
Concern expressed about the volume of content in the paper – not changed during time of study

• “I think there is a lot of information to learn and not enough time to learn it in.”
• “There is a lot of work and reading in this paper. It was overwhelming.”
• “There is a large amount of information covered and so many new words.”
• “A lot of content to learn”
• “Huge amount to learn but really interesting.”
Reasons for failure:

- Shortened semester for Stream 2 in 2008
- Introduction of 40% minimum mark in final exam in 2006
- Introduction of paragraph section in 2006 and exam extended from 2 – 3 hours
- Change in examination schedule in 2007; many students taking 3 exams in two days of first week of exams
No matter what you think about the educational value/relevance of a final exam something is going on that is failing students in this traditional form of university assessment. Possible factors:

- Change in exam format
- Ability of students to transfer knowledge across question types
- NCEA
- Ability of student to learn content driven knowledge
- Dislocation of assessment format from school to university – Figure 5
Figure 5 Dislocation of Academic Assessment and Technique from the 1970/80s to the 2000s
Possible factors (continued):

• Change to the academic profile of student (academic elite/academic able) entering tertiary education and the academic skills these students bring to their study

• Revision, baby boomer lecturers, generation X and generation Y students – changing attitudes

• A lowering of educational standards (?)
There is no correlation between failure rate and did not complete rate.

Figure 4

Did Not Complete Rate for Students Taking a First Year First Semester Life Science Paper 2003 - 2008
Where to next?
Will pass rates be enhanced and why?

• Provide students with tutorials to enhance knowledge and assessment technique
• Change assessment to 50% internal and 50% final exam
• Continue with enhanced online ‘quizzes”
• Investigate methods of delivery to enhance the learning of generations X and Y

Will this bring success? More later……