

Identifying and Dealing with Students @ Risk (the 1% solution)



David Walker
The School of Civil, Environmental and Mining Engineering
The University of Adelaide

A Thought ...

“Results from past studies on classroom attendance suggest that significant absenteeism represents the norm for utility-maximizing college students.” – Marburger (2006, p148) in Journal of Economic Education

Q. What does it take to modify student utility function?

A. 1%

Problem Statement



Universities, and Schools within those universities, spend considerable time and effort in an attempt to attract students.

Published data shows around 10% leave their studies, with many doing so during, or at the end of, their first year. With nearly 200,000 first year students (1999) this represents a significant waste (time, effort, people, potential, ...).

UniStep

University Student Transition Experience Program (new in 2008):

- orientation week (academic and social activities)
- next six weeks (information on an as needs basis)
- each week has a theme (designed to help students gain skills)
- website, promotional flyers and posters

ECMS First Year Scheme

Faculty wide mentoring program that features:

- groups of 10-20 students + academic
- handbook for mentors
- handbook for mentees
- Maths I feedback to mentors
- obligation on mentors to contact poor-performing mentees.



Student Factors

Many students work and many see their life revolving around work rather than study. Students who work longer hours engage in fewer contact hours.

Attendance at formal sessions has been shown to be important for performance in examinations.

May be a need to re-adjust the utility function so that it includes key formal sessions!

Traditional Course Format

In engineering, it would not be unusual for the course to be structured as:

- lectures to assure delivery of key foundations
- tutorials (where students work on problems or watch them being solved by tutor)
- practical sessions (where students follow recipes in a laboratory to observe key behaviours)
- hand-ins (homework, designs, quizzes).

Weekly Quiz

The key to the program is a weekly quiz (1%) that all students do as part of the course.

Aims:

- embed new knowledge using “learn by doing”
- engage students in the course
- build confidence (appropriate difficulty)
- ensure foundations are set for next stage
- implement continuous assessment
- provide gentle motivation.

Quiz Sessions

The session runs in the following way:

- a pre-prepared question / answer sheet is distributed
- students have 25 mins to work on it (open book, no help, no collaboration)
- sheets are collected and the answers provided (sometimes students do marking).

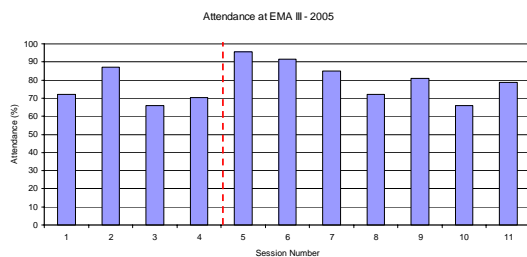
Quiz Format

Not all quizzes are run under threatening / strict exam conditions. In the semester there will be situations where:

- students are allowed to collaborate in class (they tend not to!)
- students are allowed to take quiz away (but to return in time for feedback session)
- students are allowed to mark their own and ensure they get 5/5.

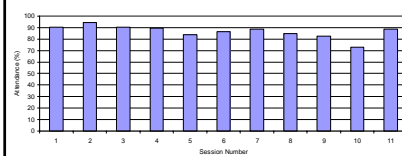
Change in Attendance Patterns

Summative quizzes introduced after Session 4.



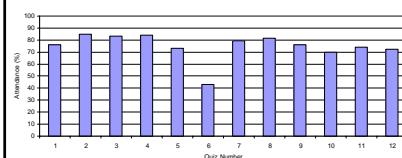
Attendance through Semester

Attendance at Water IIIA - 2006



tutorial style quizzes,
104 students in total.

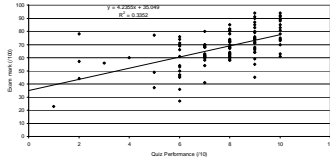
Attendance at EPAD - 2007



on-line quizzes,
373 students in total.

Quiz v Exam Performance

Performance in the quizzes is correlated to performance in the exam.



The focus of the S@R program are not the students who are not performing well, but the students who are not performing (at all!)

Students @ Risk Program

There is a second level to the program:

Students who have not attended at least 50% of sessions at the end of the first four weeks of a course are contacted once (in a very gentle way).

S@R (typical) email

Dear Water IIIA student,

I note from the Wednesday quizzes that you have been missing on a number of occasions. Now, while attendance is not compulsory and despite the fact that the quizzes are only worth a small number of marks in total, I do believe that attendance is beneficial for your study and progress in the course.

I do not expect any response and I will not be following this email up with any action. It may be that you are incorrectly enrolled or there are other reasons for your absence.

It is just a friendly reminder to say that I am concerned that you may not be making the most of your opportunities in this course.

David Walker

S @ R Program Summary

Course	Class Size	S @ R	Av. quizzes by S @ R	Av. quizzes by others	S @ R passes
Coastal Eng. (2006)	41	0	n/a	6.6 / 7	n/a
EMA III (2006)	38	4	6.5 / 11	10.2 / 11	4
Water IIIA (2006)	47	1	1 / 11	10.1 / 11	0
EP&D (2007)	373	39	5 / 12	9 / 12	30
Water IIIA (2007)	70	7	3.9 / 11	9.4 / 11	4
Coastal Eng. (2008)	93	0	n/a	in progress	n/a
EP&D (2008)	193	6	n/a	n/a	2
Water IIIA (2008)	101	4	3.8 / 11	9.8 / 11	3

Typical mark sheet

S@R	Others										
	1	2	3	4	5	6	7	8	9	10	11
1	10	10	10	10	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10	10	10	10	10
5	10	10	10	10	10	10	10	10	10	10	10
6	10	10	10	10	10	10	10	10	10	10	10
7	10	10	10	10	10	10	10	10	10	10	10
8	10	10	10	10	10	10	10	10	10	10	10
9	10	10	10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10	10	10	10
11	10	10	10	10	10	10	10	10	10	10	10

Student Feedback #1

Thank you very much for reminding me the situation and I am very appreciate to discussing what you would like to advise me.

(EP&D – 2006)

(English may not be one of this student's strong suits!)

Student Feedback #2

Thanks a lot for your email. I regret missing all those quizzes. I was actually not in Adelaide during the first two quizzes. I am an international student and had gone back for the holidays. I was supposed to come back quite early, but I missed my flight...I know this is my own fault and I am not making excuses for not turning up for quizzes. Since I came, I've been trying to catch up work from all of my subjects....But I will try my best to study for the next quiz after this, and face it nevertheless. Again I would like to thank you for your concern. I did not miss the quizzes because I thought that this subject was not interesting or anything like that. I think it's quite fun actually and I wish I had not fallen into this situation. I know I should work harder and your email encourages me to do so.

The student attended their first quiz in the following week.

Student Feedback #3

I really appreciate your concern. I had a rather rocky start to the semester in all subjects. I was considering deferring this year but have decided to press on with a few percent lost for most subjects. I am definitely dedicated to this subject and I don't think I am far behind if at all with the theory covered so far. I very much like your teaching style and enjoy your lectures and look forward to the rest of the semester.

The student went on to pass with a final mark of 58.

2007^{III} SELT Question:

What are the best aspects of the course, and why?

- ✍ Quiz. Good feedback.
- ✍ Having a small quiz each week is a good idea. It makes sure we can actually understand and demonstrate what was presented during the week.
- ✍ Quiz every week encourages better study practice and frequent revision.

In fact, in that particular survey 25 out of the 39 responses mentioned the quiz as one of the best aspects of the course.

Conclusions

Based on 3 years experience:

1. A weekly quiz is the thing students love to hate. Excellent SELT feedback.
2. Engagement is the key and the S@R program focuses on engagement rather than performance.
3. Not all students respond to the approach from the teacher, but enough do to make it worthwhile.
4. Fosters a good atmosphere of collaborative learning (teacher – student).

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