Developing medical students' information skills through online self-paced learning

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StudySmart is an online course designed for second year medical students at the University of Otago. This course was designed to replace a two hour library and information skills lab, and comprises a series of topics, tasks and quizzes. The course was built within the existing learning management system (LMS), Moodle. The content was made up of resources developed in-house as well as appropriate OERs from external sources. The online course was run as a pilot in 2012 and has involved three stages of evaluation: evaluative questions in the topic quizzes; post course reflective evaluation; and a focus group session. This poster presents the findings from the implementation and evaluation of this self-directed online course. The online course was designed to support the development of information skills in order to assist students with a significant summative assessment. The majority of students who completed the course reported a gain in knowledge and understanding about the topics covered, and reported that aspects of the course enhanced their ability to complete their assessment.

Keywords: medical education, medical students, information literacy, online learning, e-learning, library skills, LMS, OER

Background

This online course replaced a series of four, two hour labs run at the start of the second year programme. A variety of reasons lead to this decision including: an increase in student numbers meant there was a lack of rooms big enough to take four labs and the placement of the programme at the start of the year meant that the course was asynchronous with the students' needs, that is, in preparing for their first significant written assessment. A proposal for an online solution was tabled and passed at the Early Learning in Medicine [ELM] Medical Education Committee [MEC] in September 2011. The course was developed and launched in May 2012 and remained open until 15 August 2012, just prior to the due date of their assessment.

Participation

The course was made available to all students enrolled in second year medicine. The course was voluntary. Students were informed of the course through in class visits and online communication via Moodle.

- A total of 154 students completed at least one topic in the course (54%)
- A total of 111 students completed the course in full (39%)

The entire class (n=287) was surveyed to evaluate the online course. This evaluation included questions aimed at students who did not attempt the course.

- 76% of the class completed the evaluation
- In addition, five students took part in an hour long focus group to further discuss aspects of the course

Findings

The majority of students responded favorably in terms of their perceived gains in knowledge and understanding of the topics covered in the course.

> I thought this was really helpful as I have often struggled to find papers that have been referenced for us to read quickly and easily, which hopefully now shouldn't be a problem. Showing us how to use the databases is a VERY good idea I believe as this is an important skill, especially for the lifelong learning in medicine and being able to access journals readily.
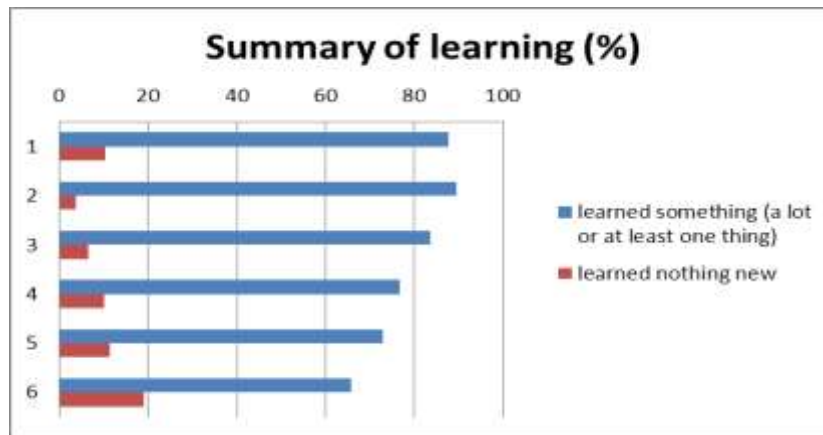
Figure 1: Level of learning reported by students on a three point likert-scale. The blue bars show the collapsed ratings for the top two points on the scale. The red bar indicates the proportion of responses to the lowest rating on the scale. Respondents indicated the level of learning achieved for each of the six topics (y-axis)

Most valuable aspects

Finding out about the databases the library subscribes to, Summon (discovery layer search tool), how to reference, and how to find full text articles using article linker were the most commonly quoted aspects of being of value to the students. The following are drawn from qualitative comments given by students completing the survey:

- "Everything was useful even though I had some knowledge before."
- "Very well laid out programme, easy to use etc. Good work!"

Least valuable aspects

There were fewer comments addressing negative aspects, but in general they included:

- Students commented that they had issues with the length of time it took to do the course. Students were not asked about the length of time taken to do the course but it is evident from Moodle how much time was spent. The course was designed to take no more than two hours. Preliminary data suggests much less time was spent on this course than the two hour lab it replaced.
- Many students found aspects of the first topic too basic, other comments mentioned some tasks had been covered already in prior learning.
- Students who had entered the course with a pre existing degree(s) found some material repetitive.

Conclusions

In the vast majority, students reported a gain in knowledge and understanding of concepts raised in the course. Students appreciated the ability to do the work at a time that suited them. This pilot suggests the course is a worthwhile development in teaching and learning in the medical curriculum at the University of Otago.

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