



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

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Abstract

StudySmart is an online course that was designed for second year medical students at the University of Otago. This course was designed to replace a two hour librarian-taught face-to-face information skills lab, and comprises a series of topics, tasks and quizzes. The course was built within an existing learning management system (LMS), Moodle. The content was made up of resources developed in-house as well as appropriate open educational resources (OER) from external sources.

The online course was designed to support the development of information skills in order to assist students with their first significant summative assessment. It was piloted in 2012 and has involved three stages of evaluation: evaluative questions in the topic quizzes, an end-of-course survey, and a focus group session.

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. This poster reports on the development of the course, as well as initial findings from a mixed-methods evaluation of the pilot course.

Objectives

- To address a logistical problem with face-to-face teaching sessions in second year medicine
- To contextualise librarian-taught information skills instruction by aligning it with summative assessment in the medical curriculum
- To demonstrate the importance of research skills as a part of the medical curriculum
- To evaluate the course using a mixed methodology
- To provide feedback to staff and students

Course Design

The course outline was planned in September 2011 and was built over the summer of 2011-12.

- The course was made up of 25 tasks that were grouped into six topics
- Tasks included: text based activities, videos, games, and links to external tutorials, websites and worksheets. They were built in-house, or sourced from high quality external OER
- Students were required to pass each topic by 80% before progressing
- Quizzes tested each task and included qualitative and quantitative evaluative questions

Participation

This voluntary course was made available to all students (n=287) enrolled in second year medicine. Students were informed about the course through two in-class visits, posters, online communication via Moodle and via Power Point™ advertising on plasma screens in a popular teaching, learning and recreation space.

- 54% (n=154) students completed at least one topic
- 39% (n=111) completed the course in full
- 76% (n=217) completed the end-of-course survey (Note: this also included questions aimed at students who did not attempt the course)
- Five students took part in an hour long focus group

Evaluation and Findings

Four sources of data were used to evaluate the course:

- Qualitative comments from the quizzes describe real life benefits of the course (see Fig.1)
- Quantitative results, drawn from the evaluative question in each quiz (see Fig. 2)
- End of course paper-based survey data provided information about what students found to be "most valuable" and "least valuable"
- A focus group session was used to validate and supplement initial findings



Fig 1. Representative qualitative comments

The combined qualitative and quantitative data indicate that the majority of students reported a gain in levels of learning and understanding about information skills. Some students specifically reported that skills they had learned from StudySmart had been applied in undertaking their summative assessment.

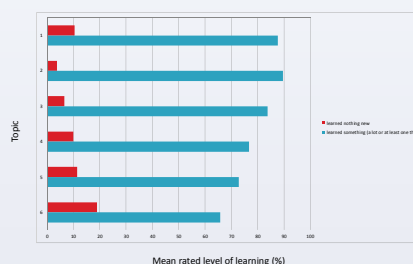


Fig 2. Level of learning reported by students on a three point Likert-scale. The blue bars show the collapsed ratings for the top two points on the scale. The red bars indicate the proportion of responses to the lowest rating on the scale. Respondents indicated the level of learning achieved for each of the six topics.

Most valuable aspects

- Finding out about the databases the library subscribes to
- How to use Summon for find course readings in full text (discovery layer search tool)
- How to reference using Vancouver citation style
- How to find full text articles using article linker

Least valuable aspects

- Many students found aspects of the first topic too basic, or reported some tasks had been covered already in prior learning
- Students who had entered the course with a pre existing degree/s found some aspects repetitive
- Issues with the length of time it took to do the course

Focus Group

- Reinforced qualitative and quantitative data
- Provided suggestions that have helped with refining course content and structure

Feedback

It was important to give feedback to both the Faculty of Medicine staff and to the students. Feedback to Faculty included presentations at the Medical Education Committee and the Early Learning in Medicine Assessment Sub Committee. Feedback to students was delivered by a Power Point™ presentation embedded in Moodle, and also displayed on plasma screens in a Popular teaching, learning and recreation space (see bitly.com/RJZPnO).



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. Post evaluation, the course has been accepted as a terms requirement for 2013. This pilot suggests the course is a worthwhile development in teaching and learning in the health sciences curriculum at the University of Otago, and a feasible way of teaching research skills to medical students.

References

Cartoon illustrations by ISD Group <http://designcomics.org/>

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