Multi-disciplinary Medical Case Study Development For First Year Medical Students

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History

- The existing medical informatics course was a 2-hour presentation of concepts and a demonstration of the resources required to complete two required online case studies.
- All first-year medical students were required to complete the two case studies on their own within two weeks.
- The case studies were developed using a combination of HTML and Oracle database programming, to track student progress and collect answers to the questions posed during the case.
- In Fall of 2003, the first-year curriculum changed to a systems-based learning model of education.
- Free tutorials were assigned four groups of 10-12 first-year medical students to facilitate in Problem-Based Learning exercises, some of which included library/journal research activities.
- A third case study was designed for students to complete and the two existing cases were redesigned to use the Blackboard Learning Community framework, with each student offering personal feedback on responses.
- Handouts and tutorials were developed to help students learn on their own.

Process

- The Dean of the Medical College challenged the Curriculum Committee to consider current, best teaching practices in medical education and change the curriculum if indicated.
- The Library Education Services Director is a member of the Curriculum Committee and participates in course reviews and planning. The committee saw an increased need for case-based learning experiences and believed the students would benefit from searching and evaluating medical literature. Participation in this committee helps keep the library and technology services in step with changes in UGME, GME, and CME.
- Librarians were assigned the role of “Library Liaisons” to support small groups during the case-based learning assignments.
- We contacted and recruited faculty who were impressed with our library workshops to help us write case studies (PowerPoint, Reference Manager, etc.).

Experience

- The following proved to be challenges:
  - Finding physicians to develop credible case studies (we also got help from a nurse practitioner and dietitian).
  - Adapting the case studies to a commercial course management system.
  - Grading answers from 232 medical students.
  - Providing personalized feedback at least 3 out of 14 questions per student.
  - Dealing with technical issues (such as access problems).
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  - Providing personalized feedback to at least 3 out of 14 questions per student.
  - Grading answers from 232 medical students.

Project Goal

To teach medical informatics skills to 232 first-year medical students using three online medical case studies developed with the collaboration of librarians, physicians, and instructional designers.

Abstract

The first formal medical informatics class at Jefferson Medical College was created in 1987. Initially, a traditional combination of lectures and hands-on workshops, the course was redesigned in 1996 to be a single two-hour lecture and 9 self-paced computer-based learning hours.

In 2003 the Jefferson Medical College curriculum was changed from a traditional core study in the basic sciences during the first year to a system-based model. At this time many free-standing courses such as medical informatics were integrated into a new course, Medical Practice for the 21st Century. The content presented in the new course included medical informatics, medical ethics & humanities, biostatistics, health policy, and clinical history and examination skills. Each of these courses presented relevant content in synch with the body system functions of the new combined gross anatomy, histology, biochemistry, and physiology course, Human Form and Development.

This poster will describe the history of the medical informatics course and the process of designing the case studies to fit into the new course management system, and will review the experiences of the librarians involved.

Lessons Learned

- Network to recruit physicians to help develop case studies (through the Curriculum Committee, by contacting physicians who attended past library workshops, etc.)
- Improve the process of writing test questions. Try to ask questions without ambiguity (or with less!).
- Try to understand and manage the wide range of information literacy skills of the students.
- Meet the challenge of constructing realistic case study exercises with the limited range of features and imposed structure of a course management system.

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