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Xiaomei Gu

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How to Turn Two Hour-long PubMed Lectures Into One "TED" Talk in the Classroom

Xiaomei Gu, MSLS, MS, BDS

Clinical Education Librarian, Hardin Library for the Health Sciences, The University of Iowa Libraries
Assistant Professor, Department of Pharmacy Practice and Science, The University of Iowa College of Pharmacy

Objective

- To describe the redesign of PubMed instruction and its outcomes.

Background

- Pharmacy Practice Laboratory (PPL) Course Series are required courses for PharmD students to practice the use of scientific and clinical knowledge in patient care. The course meets three times per week for two lectures followed by a laboratory session.
- PubMed and many other tertiary and secondary resources are taught in PPLs.
- TED Talks are videos produced by TED Conferences, LLC. They are short yet highly engaging. Speakers are only given 18 minutes. See more at www.ted.com.

Prior to the Redesign

- In addition to lab sessions, PubMed was taught in two 50-minute lectures.
- Clicker (audience response system) questions were used.
- Many aspects of PubMed were covered.

Reasons to Redesign

- It is a constant challenge to teach 108 students hands-on skills like searching PubMed in a traditional classroom with no computers.
- Author's self-reflection on previous year's teaching experience.
- Changes in organization and sequencing of PPL course content.

Redesign Process

Things Considered

- How to engage students.
- What are the most important things about PubMed that P2 students need to know.
- How to ensure students are prepared prior to lectures and labs.

Lecture

- Lecture shortened to 18 minutes, the length of a TED talk.
- Storytelling and demonstration of abstracts concepts using tangible objects
- Three key points: Google and PubMed comparison, Search Details, and Medical Subject Headings (MeSH).

Labs and Assignments

- Pre-lecture: review PubMed online tutorial from National Library of Medicine and complete a quiz that tested some of the content in the tutorial (administered through online course management system)
- Pre-lab: review topics for lab activities; detailed instructions were provided.
- Lab activities: 3 PubMed searches with each addressing one teaching point (30-minute)
- Post-lab assignment: short self-reflection due in 2 weeks.

Results

- Students' self-reflections after the lab: 88 out of 92 students commented on at least one of three key points covered in the lecture.
- Objective Structured Clinical Examinations (OSCEs) at the end of the semester: the majority successfully executed PubMed searches; only 3 out of 108 students struggled.

Discussion

- Many PubMed instructors face the dilemma of too little time and too much to cover. It is tempting to try to teach everything one knows about a subject in a single class session.
- It is important to keep in mind that the students will not become an expert searcher right away. Focus on what is really important for them right now.
- Future assessment will include data from course evaluation.
- More needs to be done to ensure all students are prepared prior to lab discussions.

Conclusion

- Limiting the amount of information, while assuring good understanding improved the students' performance on using PubMed
- By using various engaging classroom techniques, a lecture on PubMed and MeSH was successfully delivered in 18 minutes.