



Open Access Curriculum Study: Can We Improve the Way Medical Students Learn?



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Anatomy of the Study

Open Access Curriculum (OAC) study: A randomized controlled trial designed to assess the impact of team training, information training, and accessibility of supplemental resources at the point of need on the learning environment and academic performance of medical students

Vanitas skeleton carved from a single piece of ivory, circa 1650



Image provided courtesy of the Trent Collection,
Duke University Medical Center Library & Archives
Photo: Bill Bamberger

Setting: Duke University School of Medicine (SOM) and Medical Center Library, Durham, NC

Funding: Grant from the Duke Endowment, Charlotte, NC (not affiliated with Duke University)

Subjects:

- ◆ Two cohorts of medical students in their first-year gross anatomy course (Phase One) and second-year obstetrics/gynecology rotation (Phase Two) who elected to participate
- ◆ First cohort entered Phase One of the study in the Fall of 2005; second cohort will complete study in Fall of 2007

Methods:

- ◆ Students were randomized into a full intervention group, a partial intervention group, and a control group
- ◆ The full and partial intervention groups received training in team building conducted by the SOM; the full intervention group also received training from the Library in information management, use of selected electronic resources related to anatomy and ob/gyn, and evidence-based medicine (EBM) concepts
- ◆ Evaluation of the program is based on the following: performance on examinations; observation of team behaviors; tracking of computer-based information resource use; standardized measures of student satisfaction, stress, and anxiety; and feedback from students and faculty

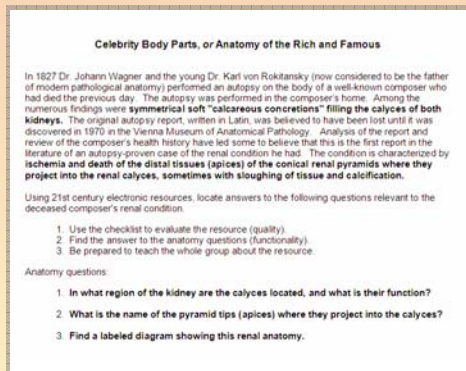
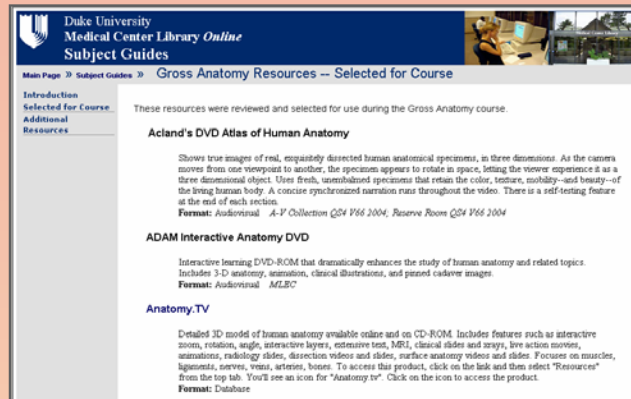
Library's Involvement

◆ Collaborated with SOM faculty to select multimedia and Web-based resources relevant to gross anatomy and ob/gyn

◆ Developed subject guides of electronic and print resources

◆ Worked with SOM IT support staff to ensure that resources were available in gross anatomy lab and ob/gyn clinical rotation sites

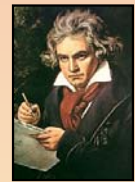
◆ Conducted initial sessions with the students in the full intervention groups related to assessing an information need; selection, appropriate use, and evaluation of knowledge-based resources in general; and use of specific electronic resources selected for the study



➤ Librarians provided a brief description of the selected resources and their important features

➤ Students worked in teams to evaluate and discuss the quality of the resources using a checklist of criteria such as authority, scope, currency, purpose, accuracy, and usability

➤ Teams used a specific resource to answer scenario-based questions developed by the librarians (e.g., "Celebrity Body Parts") and then taught the resource to the other teams



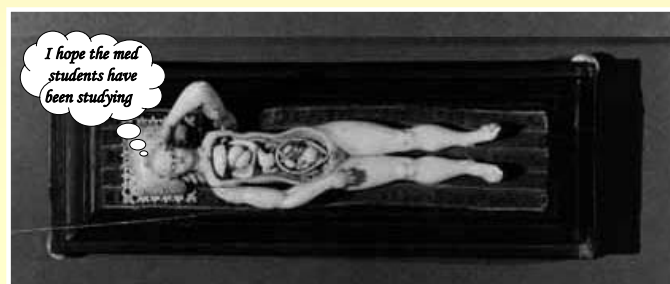
Name that composer...



Male kidney, from the *Four Seasons: Autumn*, 17th century
Image provided courtesy of the Trent Collection,
Duke University Medical Center Library & Archives
Photo: Bill Gage

◆ Held follow-up sessions with the students to discuss their experiences using the selected resources, identify useful resources they found on their own, and give them additional questions to answer based on the case scenarios, using other electronic resources (such as textbooks and images) available from the Library

◆ Provided EBM training that included the evidence cycle, forming a question, searching PubMed, and critical appraisal of an obstetrics study



Female ivory anatomical manikin,
17th or 18th century European

Image provided courtesy of the Trent Collection,
Duke University Medical Center Library & Archives

Outcomes

Preliminary analysis of data from the first year of the study indicated that the group receiving both team building and information management training scored higher on the gross anatomy exam than the other groups, suggesting that the Library interventions made a difference in their academic performance. Data analysis is ongoing.

Feedback from students:

- ◆ Exposure to and hands-on practice with the electronic resources selected for the study and others available from the Library Website were very beneficial
- ◆ Initial training enabled them to find and evaluate other resources on the Web, some of which they considered more useful than the resources selected by faculty

Obstacles:

- ◆ Faculty did not easily reach consensus on the resources to make available, slowing the acquisition process and preparation of support materials
- ◆ Make-up sessions had to be scheduled for several students in order to maintain the validity of the study
- ◆ Students in the Library intervention group shared information with students in the other groups, confounding the analysis of data

Benefits for the Library:

- ◆ Enhancement of the Library's role in curriculum development in the SOM
- ◆ Library seen as an important partner in a prospective study with implications for medical education
- ◆ Librarians recognized for their ability to develop instructional content outside the traditional realm of database searching
- ◆ Casual observation indicates that participating students have become frequent users of the Library

Anonymous bookplate of skeleton reading,
drawn by John Comstock

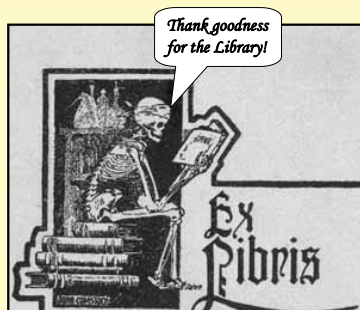


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