

Enhancing Academically Diverse Students' Learning and Interest in an Undergraduate Anatomy Course via Innovative Teaching Measures

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ABSTRACT

A challenge of the undergraduate anatomy course at the University of Michigan Medical School is the diverse educational background of students taking the course. Students taking this course belong to kinesiology, Literature, Science & Arts, dental hygiene, biomedical engineering, and pre-pharmacology and other graduate disciplines. Questionable motivation and poor course performance of more than 50% of our students caused us to introduce innovative teaching measures during the Fall 2002 semester. These measures included: 1) regular quizzes, 2) frequent visits to the gross anatomy lab, 3) specific lecture objectives handed out before lectures, 4) PowerPoint® lecture presentations that sometimes included animations of basic anatomical concepts, 5) a "Coursetools" web site that contained lecture objectives and presentations, schedules, announcements, and a discussion forum, and 6) mandatory modules that utilized plastinated specimens and covered essential course concepts. Student questionnaires were administered and analyzed to evaluate the effectiveness of these methods. The aim of introducing survey questionnaires during the semester was to focus attention on specific emerging issues that needed prompt management during the course. Results showed that the majority of students favored the weekly quizzes, lab visits, PowerPoint presentations, and lecture objectives. Also, there was a statistically significant improvement in students' performance from all disciplines during the final examination compared to the first and second examinations following the introduction of the measures. Although these teaching techniques have not significantly raised students' mean performance in relation to previous years, the results showed that they were welcomed by the majority of students and that performance was positively enhanced. These measures will be re-implemented during the next semester and their effectiveness further evaluated.
