AbstractID: 10314 Title: Peer instruction in the teaching of an introductory medical physics course

Peer instruction in the teaching of an introductory medical physics course

Abstract

Purpose:

The purpose of the present work is to describe how the peer instruction teaching methodology (E Mazur. *Peer Instruction: A User's Manual*. Prentice Hall, Upper Saddle River NJ 1997) was incorporated into the teaching of an introductory medical physics course.

Methods and Materials:

Peer instruction focuses on concepts, rather than on information or on problem solving. The technique uses a series of "ConcepTest" questions to present a set of concepts in each classroom session. When presented with a ConcepTest question, students propose answers to the question, discuss their answers among each other in small groups, and finally discuss their answers with the entire class. One principle behind peer instruction is that students who more recently achieved understanding of a concept are in a better position to overcome the barriers to understanding the concept than the faculty member, who has understood the concept for a long time. Prior to each class, students are expected to download and listen to an AVI file consisting of a recording of the class lecture. Following class, students are assigned problems based on the class material, which are discussed in separate problem sessions.

Results:

In the discussion of the ConcepTest questions, students who did not understand the concept being tested were unable to provide a convincing argument justifying their selection, whereas students understanding the concept were able to convince their colleagues that their selection was correct. After discussion, when retested on the ConcepTest question, almost all students were able to get the correct answer.

Conclusions:

Students involved in peer instruction took an active role in class participation. Student feedback regarding this mode of instruction was very positive.