

GIFTS: Teaching with Top Hat: Increasing engagement and propagating a growth mindset for learning.

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Great Ideas for Teaching Students (GIFTs): Teaching with Top Hat: Increasing engagement and propagating a growth mindset for learning.

Introduction

In engineering, students with a growth mindset are better equipped to handle challenges and solve difficult problems as they believe that mistakes are an opportunity for change and improvement, while students with a fixed mindset believe mistakes are tied to a lack of ability and don't believe their hard work will translate to success. Engagement with course materials is an important element for encouraging a growth mindset in engineering. There are many new tools to connect students with learning materials, both online and in the classroom. In 2021, the university adopted the tool Top Hat for instructors to incorporate into their instructional course designs. This short paper discusses the Top Hat tool as well as providing the reader with brief contrast regarding other available engagement tools Socrative and Kahoot.

Discussion

Top Hat is a partner tool that integrates with the university learning management system and includes access to polling, digital textbooks, and attendance. Instructors using Top Hat can directly connect these resources to their course shell for students to access and utilize, free of charge with their university institutional account. In the course, Top Hat was used to provide instant feedback from lecture polls and discussion questions presented in class to give the instructor an instant temperature reading of the success of their students. Top Hat was used to enhance the content in a primarily lecture-based course. Results from polling using Top Hat were presented as bar graphs or right/wrong percentages that are anonymized to allow students and the instructor to gauge the success of the class with that particular topic or question. The course instructor also received a weekly breakdown of questions and answers that helped to highlight struggling students or class difficulty with a particular topic presented that week. There are similar free tools that allow for quizzing of students such as Kahoot or Socrative, however, these tools do not provide breakdowns of student success by question, nor do they allow the student to return and create stacks of previous questions with which they have struggled. By allowing students to see their results in relation to the class as well as highlighting struggling students, Top Hat helped to increase engagement and growth mindsets within the course as well as to encourage struggling students or those with fixed mindsets by presenting them with direct in class feedback to build their confidence. Growth mindsets were also encouraged by Top Hat as students could review the in-class questions following the lecture to enhance their engagement and confidence with the course material. Top Hat also integrates directly with the university learning management system, which allows for students using a single sign on token to access learning resources, in contrast to other free learning tools such as Socrative or Kahoot. Students reported that engagement with Top Hat enhanced their learning within the course as they could easily review questions with which they struggled during the semester as well as to compile lists of questions to study for exams and quizzes. This session will highlight and contrast the features of Top Hat with other available tools such as Socrative and Kahoot. It will also present data from a Spring 2021 course taught using the Top Hat tool, including additional student feedback about Top Hat in contrast to previous courses taught with other tools. If time permits, demonstrations of all tools shown with the session will be provided to interested attendees.