

Electronic voting system improves student experience in lectures

K. Farrand, Physiology, School of Molecular & Biomedical Science, University of Adelaide, Adelaide, SA, Australia.

Lectures are a major component of most university courses as they provide an efficient means of dispensing a large amount of information to a large number of students. The unidirectional flow of information in lectures, however, maintains students in a passive state of absorption and provides little, if any, feedback to the lecturer or students on the level of student understanding of the lecture material. Active learning has been shown to increase student understanding, recall and the ability to apply new information. Therefore incorporation of an electronic voting system (EVS, also known as a personal response system), that immediately collects and displays responses of the entire class to questions posed during lectures, is likely to increase the interactivity of lectures, and hence, student understanding. EVS was used in a series of eight cardiovascular lectures delivered to second year Human Physiology students at the University of Adelaide. During lectures, students provided responses to questions which tested information recall and application to novel contexts. EVS was also used to obtain student evaluations of the expected, and perceived, impact of EVS on their lecture experience in first and last lecture, respectively. Statistical analysis of the evaluation responses indicated that students believed the EVS increased their understanding of lecture material significantly more than expected. Specifically, students indicated that stopping to answer questions and getting immediate feedback increased their activity, interest and understanding during lectures. While over 90% of students had never used EVS in lecture before, over 80% recommended the EVS be incorporated into other lectures. This study has successfully incorporated EVS into a series of basic physiology lectures and demonstrated an improvement in student experience of the lecture paradigm.