

**The Effects Of An Audience Response System On Quiz Scores In A Physical And Occupational Therapy Neuroscience Course.** Razey NK, Rubin RL & McKiernan BJ.  
Rockhurst University, brian.mckiernan@rockhurst.edu.

**PURPOSE:** Studies have long demonstrated that student learning is enhanced when students become more actively engaged with the material being covered in the class. Audience response systems (“clicker” systems or ARS) provide one means of making the classroom experience more active. They have been shown to improve student satisfaction and participation within the classroom. However, there are mixed results how using an ARS affects student learning. The purpose of this study was to evaluate the effect of an ARS on daily quiz scores in a physical and occupational therapy Neuroscience course. **SUBJECTS:** Fifty-seven students in their second year of Rockhurst University’s Doctor of Physical Therapy program or Master of Occupational Therapy program participated in this study. **MATERIALS AND METHODS:** A computerized ARS from TurningTechnologies (Youngstown, OH) was used in this study. In each class period, the instructor displayed 4-6 multiple choice questions on the classroom projection screen.

Questions were derived from the material being studied in that class period. Every other day, the instructor used the ARS to elicit answers to the on screen study questions (all students responded). On days the ARS was not used, the instructor used the Socratic method to elicit answers from the class. The students were given a multiple choice quiz at the end of every class period that was related to the questions asked on screen during the class. The total number of correct answers for quizzes on the days the ARS was used was compared against the total number of correct answers for quizzes on the days the ARS was not used. Students completed a questionnaire at the end of the course to rate their satisfaction with the ARS. **RESULTS:** Quiz scores for 44 students were included in the analysis (13 students were excluded from analysis because they missed one or more quizzes on the days they were originally given). There was virtually no difference between the total quiz scores on days when the ARS was used compared to the days when the ARS was not used. The average of total correct responses for the group was 37.7 (83.8%) on days when the ARS was used compared to 37.9 (84.2%) on days when the ARS was not used. **DISCUSSION:** Although the ARS appeared to have no significant impact on quiz scores, a majority of students enrolled in the class reported that they thought the ARS made the class more interesting and engaging. They also felt that using it improved their learning in the course and their performance on quizzes. **CONCLUSION:** The results from this study suggest that, when used within graduate level courses covering diverse material, an ARS has no significant impact on daily quiz scores.