“I Was Able to Have a Voice Without Being Self-Conscious”: Students’ Perceptions of Audience Response Systems in the Health Sciences Curriculum

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Audience Response Systems (ARS or “clickers”) are becoming a popular addition to the college classroom. Instructors are using this educational technology to elicit feedback from students, to determine students’ knowledge of content before or during lectures, and to increase participation in the classroom. The purpose of this study was to examine first-year allied health students’ perceptions of the impact of clickers on participation during an introductory health professions course. **Method:** At the mid-point of the course, students completed a survey that assessed their perception of classroom participation. During the second half of the course, clickers were introduced to classroom activities. The survey was re-administered at the end of the course; students also had the opportunity to write a narrative comment. **Results:** Students felt that clickers increased their level of interaction with the instructor and participation of the class as a whole. **Conclusion:** Clickers may be a practical way to increase student participation in first-year allied health courses. J Allied Health 2013; 42(3):e75–e80.

AUDIENCE RESPONSE SYSTEMS (ARS or “clickers”) are being used in higher education with increasing frequency.1,2 Clickers allow faculty to obtain instantaneous feedback from students during the course of a lecture. Clickers can be used to assess students’ knowledge, attitudes, and values.3,4 Clickers provide a means of compiling ongoing formative evaluation data from a course5 and may also be used for summative assessment.6 They can meet the needs of students with different learning styles and can be used to provide feedback to an instructor about a variety of issues such as effective teaching style, unanswered questions, and student misconceptions. Clickers can also be used to facilitate peer assessment and to assist in initiating discussion in the classroom. Preliminary evidence suggests that clickers are an effective means of increasing classroom participation.6 Additionally, in a 2006 study of the effects of clickers on student interaction in a management course, Siuau, Sheng, and Nah7 demonstrated a statistically significant increase in classroom interactivity with clicker use.

Previous studies have shown that clickers are generally well accepted by college students.8 Students appreciate the opportunity to compare their answers to other students’ answers.8,9 In a study comparing student responses to controversial questions, students who used clickers demonstrated more variability in responses than students who cast their opinion by raising their hand, suggesting that students answer more honestly with clickers than with a show of hands.10 The anonymous nature of the clickers may also allow students to freely express their thoughts and opinions.11,12

The purpose of the present study was to investigate the impact of an audience response system (ARS) or “clickers” on students’ perception of active participation during an introductory health professions course.

**Audience Response Systems**

A clicker system is comprised of several standard components: the individual clickers, a receiver unit, and proprietary software. Clickers are small handheld devices, similar in size and shape to an electronic remote control. Each contains an alphanumeric keypad for response selection. A status light indicates when a vote has been transmitted. Advanced systems may include an LCD display that allows the user to see the response and receive confirmation that the system has received the vote. Recent advances in ARS technology incorporate the use of students’ personal smartphones or tablet-style computers to submit responses. The receiver unit connects to the main computer through a standard Universal Serial Bus (USB) port. Modern clicker systems utilize radiofrequency (RF) signals for communication between the clickers and the receiver unit.

When students select a response, their clicker broadcasts a unique RF signal to be collected by the receiver unit. The

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