Title: Student Response Systems as a Motivation Tool in Large Lecture Sections

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Abstract:

Student response systems (SRS) are an emerging technology in higher education, developed as a tool to help improve attendance and increase student performance in large enrollment lectures. Student response systems typically have three components; handheld devices that students use to answer questions, a receiver that collects information sent by the student devices, and software that works with a presentation system to store response data, and control the interaction between student devices and the receiver.

The SRS can be used in the context of large lecture sections to create an interactive dialogue with students. The instructor can ask questions, and students then use their SRS to respond. The SRS software collects and instantly analyzes the student responses, and students receive immediate feedback. The SRS gives all students a voice, instead of limiting involvement to those few students brave enough to answer questions in a large lecture setting. The SRS benefits students by helping them recall their prior learning, helping scaffold their current learning, and enhancing the transfer and reinforcement of long term learning (Gagne, et al., 1992).

The SRS has been shown to improve attendance in these large lecture courses. In addition to providing students with an effective method of answering questions, the SRS can measure attendance. Increased attendance may be one factor that leads to student achievement large lecture sections (Moore, 2003, Griese & Kenney, 2003).

The SRS may also increase student motivation in large lecture sections. Keller (1987) described an instructional design theory that leads to more motivational instruction. Keller's ARCS model describes four fundamental ways to increase motivation in learners: A-attention, R-relevance, C-confidence, and S-satisfaction. It may be possible that these variables could be affected with the use of the SRS in conjunction with a questioning strategy.

This presentation will focus on the initial implementation of an SRS in large enrollment lecture sections of an introductory biology course, analysis of the pilot study for motivation and attendance, and plans for the long term assessment of the SRS benefits in the classroom.

There are a variety of questions that will be answered about the SRS during the paper presentation:
- How effective are the Student Response Systems?
- How does the SRS affect student performance?

- How does the SRS affect attendance?
- How does the SRS affect motivation (ARCS)?
- Who benefits the most from the SRS in terms of attendance, motivation, or performance?

References:

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Moore, R. (2003) *Attendance and performance*. Journal of College Science Teaching, 32(6): 367 – 371.