Comparison of Five Systems that Use Mobile Cellular Phones, Tablets, or Internet Browsers for Immediate Student Response.

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Abstract

Most students carry wireless mobile devices, such as a cellular phones, tablets, iPads, or laptop computers. These devices often accompany each student during classroom instruction and in other learning environments such as online, web-based or remote instruction. Thus the wireless device presents a low cost opportunity for student-teacher interaction, real-time response and instructor feedback.

The features of five different student response systems (SRS) were evaluated in a survey of select Ohio State University faculty members. The desirability of thirteen different attributes of each SRS was measured. Responses ranged from absolutely essential to unnecessary. Features ranked as absolutely essential included the ability of each student to use their own mobile device to answer questions, and the ability of the instructor to know how each student answered. Fairly important was integration with an existing internet course management system. Faculty responded it would be nice if students could respond to long answer queries, could send questions, could get feedback on self-assessments, could rank-order items, could use it for homework, could mark a location on an image, and could interact with other students. Less important was use as a discussion board. The ability of each SRS to accomplish each desired attribute was determined and comments from each SRS vendor were compiled.

The student response system on the web at Polleverywhere.com was further evaluated in both a quarter and in a semester senior level course at Ohio State University. Students were given a choice of participating or not by text messaging, by web browser, or by Twitter tweet responses. The ability to integrate within Microsoft PowerPoint presentations to provide binary, multiple choice and open ended text responses is reported. The student ratings for ease of use and of engagement were measured. The majority or 80% of students in both quarter and in semester classes preferred cell phone text messaging via SMS (Short Messaging Service) over other response technology options.

Primary advantages to the Poll Everywhere SRS are ease of integration, wide access via SMS, and speed, as response time from student input to PowerPoint display was consistently 1 to 2 seconds. Primary disadvantages are lack of integration in course management systems and the inability to rank items or mark map locations. Reliability was high, as during a one year period involving 68 polls there was only one instance where the system did not work as expected.

SMS is the most widely used data application in the world and this poster has a list of SMS enabled nations. Within Europe this list includes Italy, Greece, France, Belgium, Czech Republic, Hungary, Austria, Germany, Netherlands, Portugal, Spain, Sweden, Turkey and The United Kingdom. An international SMS test page is available. SRS with Powerpoint integration can expedite learning in classrooms where a text messaging, web browsers or Twitter is enabled.