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ABSTRACT

A number of faculty have barely grasped the technologies developed in the late 20th century. Moving into the 21st century has been problematic for many. Concepts such as Wikis, Blogs, Alerts, Widgets, and Text messaging are ways of using the Internet in which they are neither familiar nor comfortable. Moreover, with an ever increasing, culturally diverse, international student population, classroom interaction has decreased as many of these students are reticent to ask questions. Each year the gulf between a technologically savvy student population and faculty has increased. We propose a text messaging system based on short messaging service (SMS). The ease of use of this system makes it readily attractive to faculty, while the interactive, real-time questioning capabilities improve students' classroom experiences utilizing their mobile devices.

Keywords

SMS, Web 2.0, pedagogy, text messaging

TEXT MESSAGING IN THE CLASSROOM

In a traditional classroom environment, the instructor is solely responsible for interaction with the students. The instructor chooses to ask questions and decides which students are allowed to comment on the lecture. Faculty who prefer high levels of interaction encourage students to ask questions. However, students differ on their learning approaches (Karabenick 2003). Cultural differences may result in many students reticent to ask questions (Shen, Wang et al. 2008). General personality traits often limit certain students in their capacity to interact with either the instructor or their peers (Barkhuus and Dourish 2004). With larger classes, interaction is much more problematic (Barkhuus 2005).

Can the omnipresence of students' mobile devices be leveraged to use SMS in a subject-directed manner? Rather than attempting to stop students from using the technology, can instructors co-opt their current usage pattern into a more positive, curriculum-oriented approach? Most attempts reported earlier have been done on a small-scale with a minimum of scientific rigor. With the exception of Shen, et al. (2008), the scale of past studies has been limited to a few classes with a particular academic department.

THE PARTICIPANTS

The initial inspiration for this study came to this author as an epiphany while attending a professional hockey game. Between periods, the scoreboard showed "live" text messages to the arena audience. This concept is at the heart of Web 2.0. I.e., leveraging technology to increase social presence to a wide audience and improve communication within that audience. This is a technology in which most readers are familiar. If this technology can be used without any instruction or training to focus hundreds of thousands of audience members to scoreboards in a myriad of sporting venues, then why should this same concept not find success in the classroom?

The author contacted the company providing this technology to the sporting venue. This company provided this same SMS service to most professional sporting teams in the United States. A partnership was established between this leading provider of SMS applications and a large southeastern university in which the author held an appointment. The benefits to the SMS provider was a new market to exploit with their existing suite of applications modified for the educational market. The benefit to the university was free services customized to a enhance communication between instructor and student.

THE SMS SYSTEM

One of the main goals in modifying this system for classroom use was to maintain the ease-of-use found in the original application…for both the student and the instructor. The new system, dubbed TQS™ (Text Questioning System), allows a student to text a question to an SMS number. The question must be prefixed with the course's unique computer number. This computer-number is then parsed in the database to distribute the correct series of questions from the correct section. Besides maintaining a database of student questions, the host SMS server also sends out an RSS feed based on the section number. In turn, each course section, hosted by the Microsoft SharePoint portal, includes an RSS feed reader Web used for

displaying the questions from the class. As the student's question is broadcast in a scrolling banner at the bottom of the classroom display screen, it is also simultaneously being stored and displayed on the Web which allows for students and faculty to review at a later time. Moreover, each section includes an SMS group study wiki for students to discuss the class questions. The wiki is monitored by the instructor by utilizing an "alert."

CURRENT STATUS

As of the spring semester in 2010, most of the testing for the SMS system has been completed. A very simple, step-by-step, training manual has been published for faculty (the manual only requires a few pages of instructions…including graphics). Technical issues, reporting issues, security issues, FERPA-compliance issues, legal liability issues, and university infrastructure approval have been resolved. The implementation plan has begun with a pilot program using faculty. The pilot testing phase continues through the spring 2010 semester. The purpose of this pilot is for ascertaining proof-of-concept, discovering flaws and weaknesses in the system, and enhancing the overall operation by suggestions elicited from faculty and students. By the fall 2010 semester, the system will be available to all 30,000 university students.

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