

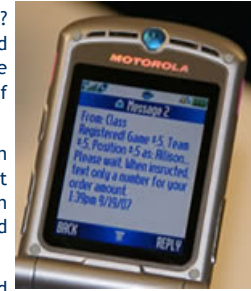
BAUER BITS & BYTES

VOL 3, FALL 2007 | VOL 2, SPRING 2007 | VOL 1, SPRING 2006

New Age Student Supply List: Cell Phones

When you think about student cell phones in your classroom, what emotions do they evoke? Distracting? Intrusive? Perhaps downright evil devices, the use of which needs to be curtailed by carefully drafted policies in the syllabus? Well, not for one intrepid Bauer faculty, who is rethinking the role of these ubiquitous, cheaper and portable devices in the hands of our increasingly “texting” generation of students.

Dr. Jamison Day, Asst. Professor, DISC is establishing new rules of engagement in his Supply Chain Management class this semester. Using **SMS text messaging** to facilitate classroom experiments that mimic transactions within and between organizations in a supply chain, he is bridging the gap between the subject matter of supply chains and the real world, otherwise feasible only within fully networked laboratory environments, and almost always out of reach of large lecture classes.



The extant practice of conducting such classroom experiments is to do so by hand, using pencil and paper. Students record their decisions on papers handed in and analyzed manually. This is both time consuming and inefficient. Individual level feedback can be cumbersome, even for groups of fifty students, and near impossible in large survey classes. A solution to the challenge of assembling student responses in an electronic format amenable to efficient processing, and to report feedback on results at aggregate levels has been around for a while with Audience Response (read Clicker) technologies, however they do not permit feedback to be sent back to students on an individual basis. Mobile phone messaging technology holds that potential.



In Dr. Day’s classroom, students use their own phones to text message input to a designated phone number, which connects to a gateway from the mobile phone network to his website on the Internet. Incoming messages over the Internet are received by a server, where an application is run to process student input responses and record interactions between students based on their responses. Return text messages are generated for each student to inform them of their outcome in the experiment and these are uploaded back to the gateway for broadcast to students’ phones. The collected information can be used to generate graphs and summary performance measures in real-time to help the students learn.

For example, a popular supply chain management simulation called “The Beer Game” requires teams of four students to produce, distribute, and sell their product. Each student takes on the role of a firm in the beer supply chain (i.e. factory, distributor, wholesaler, or retailer) and must decide how much inventory to order each period from their upstream partners. Several lessons are learned from this simulation. Computer programs have been created to automate the simulation, but not all students bring laptops to class and using a computer lab often places unrealistic limits on the number of students that can participate. Typically, the game results recorded with pencil and paper by each student had to be collected and tallied before the results could be shown. Dr. Day has drawn upon students’ cell phones to bypass pencil and paper, collect data from large numbers of students, ensure proper calculations are made, provide real-time student-specific feedback, and leverage immediate learning from experiments.



Also, unlike the traditional paper based exercises, all the feedback to individual students and display of results is automated. Since individual students’ cell phones are used for data entry, no specialized hardware investment is required and such experiments hold potential for any classroom from which the instructor can access the Internet.



We will be reporting back in future editions of this newsletter, on this promising “expedition”. Stay tuned!