Abstract

The prevalent nature of cell phones in college classrooms creates positive and negative issues. Concerns about the effects of using cell phones in class led researchers to administer a questionnaire to 805 students in a college of education regarding their perceptions of in-class cell phone use. The objectives for this qualitative study were to determine participants’ perceptions how cell phone use affects learning, and whether or not cell phone use in class affects professionalism.
Introduction

Across the nation, today's college students are more wired and connected than ever before (Gee, 2003; Prensky, 2006; Rideout, Foehr, & Roberts, 2010; Trilling & Fadel, 2009); the ability to surf the web for the latest news, text their roommates to make plans for dinner, and call home to let their parents know they survived Math 101, all from the same mobile device, show the pervasiveness and the prevalence of cell phones and mobile technologies for today's college student. The ubiquitous nature of cell phone technology allows this to occur with shocking regularity in multiple venues. From supermarket lines to college classrooms, students use their personal mobile devices to "live their life".

The multiple dimensions of mobile technology allow one to see just how dynamic they can be, as well as allowing one to see potentially just how distracting they might be. The following vignettes paint a portrait of two very different student uses of mobile phones in classroom situations. In an Intro to British Literature class, a student quickly opens up a webpage on his mobile device to get a brief explanation and deeper understanding of the concept his teacher is speaking about. He quickly reads the information, clicks on another link, is taken to another page where he views some more details and examines some photographs of the region being talked about. He then raises his hand to ask the professor some questions about what the professor has stated and what he has read and viewed on his mobile device. These questions deepen the class discussion, and a dialogue ensues about the topic, allowing more class members to gain a richer understanding and conceptualization of the topic. Meanwhile, in Algebra I across campus, a student tunes out the professor and opens her mobile device. She goes to Facebook and sees that two of her best friends are on. She pings them (a term for alerting a friend who is online that you want to chat with them) and carries on a conversation about what they should do that evening. She giggles as she carries on the conversation, and the students sitting on either side of her become distracted by her actions. Class ends, and she has not gained any of the new concepts for math and two of her classmates are disgruntled at her distracting behavior. In both situations student learning was affected. In one scenario students create a classroom community of dialogue and debate based on the wealth of information at one's fingertips; in the other, the student's use of a mobile phone in the class meant that she not only left class with no further understanding of the concepts discussed that day, but her distracting behavior also affected her peers. These scenarios are strikingly similar to actual conversations between students and the researchers for the following research project.

Cell Phones in the Classroom

In a survey of business students, Braguglia (2008) found that over half of the students use their cell phone in some manner during every college class. Some researchers compare the digital experiences of today’s students to the paradigm shift caused by the advent of the printing press (Harnad, 1991). These digital natives who have been immersed in technology from childhood often talk about not being able to imagine themselves without their cell phone (Bennett, Maton, & Kervin, 2008). It’s a part of who they are, a blurring of human and machine (Thompson & Cupples, 2008). Additionally, researchers, like Prensky (2006), indicate
that one of the most important tools for current students is not the computer, but the cell phone. The possibilities of the use of cell phones in educational settings are considerable and ever changing (Braguglia, 2008). It is now possible for mobile technology to facilitate mobile education. Lehner & Nosekabelo (2002) define mobile education as a situation in which a learner gains electronic information and educational content irrespective of setting and time. According to Vavoula and Sharples (2002), learning can be considered mobile in terms of space, different areas of life, and time. Today, learning activities can be completed even when the learners and the teachers are both mobile.

Even as constructive uses of cell phones in class continue to emerge, detrimental effects of cell phone use persist (Thompson & Cupples, 2008). Negative consequences and concerns about cell phone use include poor spelling, bad grammar, and distracted attention. Additional anxiety is related to “sexting” and the breakdown of face-to-face social interactions. Such apprehensions lead some faculty members to ban cell phones from class. However, Rosenberg (2009) suggests that only concentrating on the negative results of cell phone use might be shortsighted. He warns that:

We need to actively teach students right from wrong - regardless of technology, but perhaps more carefully because of the power of technology. Will we prevent all problems? No. But blaming the technology is not the answer. If a terribly mean-spirited, student-composed note were intercepted by a savvy teacher, you wouldn't ban the pen, would you? (p. 95).

Banning cell phones from classrooms, therefore, may be counterproductive to learning environments. It is just this conundrum and a lack of research in the discipline of education that led us to investigate the cell phone use and perceptions of students and in our college of education.

For the purpose of this study the researchers examined the attitudes, perceptions, and use of cell phones by education students within classroom settings. Further, we explored how cell phones might affect student learning. To collect this data, the research team developed and used a questionnaire.

The Study

We discovered during conversations with faculty members that there were considerable differences between the perceptions of faculty and those of students regarding the use of cell phones in class. Additionally, there was a lack of a consistent policy about cell phone use in our college and university as a whole. These two considerations guided the design of this study about cell phone use in the college classroom.

To determine the questions to include in our questionnaire, six education students were selected purposively to take part in a focus group discussion of cell phone use in education classrooms. The Metaplan Approach (Schnelle, 1979) guided the focus group discussions. This method allows a facilitator to promote effective cooperation within group discussions in which
key issues are recorded and displayed, and the participants can put forward their ideas. In this manner, each participant can have a voice in the discussion. Using the focus group findings, researchers developed a questionnaire on cell phone use that included both yes/no and open ended questions. Then the research team administered the questionnaire about cell phone use to 805 undergraduate students in a college of education in a rural regional university in the South.

Based on the literature review, one overarching research question guided this study: What are students’ perceptions of texting in the college classroom? A qualitative methodology was used to answer this research question because qualitative research investigates the why and how of decision making. (Denzin & Lincoln, 2005). For this study, purposive sampling was used to focus on education students because this approach emphasizes selection of participants based on a criterion (Patton, 1990), and we wanted to investigate the perceptions of future educators regarding cell phone use in class. Based on the entire college of education class schedule, 10 sections from each department were randomly chosen to participate in this study. A total of 805 undergraduate students were surveyed from various year levels and classes in three departments in the college of education. Students were given a brief explanation about the research project and content on the questionnaire. Then they were given the opportunity to voluntarily complete the questionnaires. Those students that decided not to participate in the study were not given a questionnaire. Students that did participate signed an informed consent form and were told that all responses would be kept confidential.

Data from questionnaires were analyzed using both qualitative and descriptive methods. The descriptive data were tallied for yes/no questions and percentages were calculated. Any qualitative data from “why” and “how” questions were analyzed using the constant comparative method (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Frequency tables were also created for the major themes that emerged from the data. While the frequency with which a theme is mentioned is important to give some indication of the commonality of the themes, sometimes themes that are less frequently reported are equally informative. Although all participants might not bring up a common theme, it may be articulated particularly well and with emotion by one person in the questionnaire. As often as possible, actual quotations that capture the themes particularly well were pulled from the questionnaire to illustrate in the participants’ own words the points being made.

Descriptive Results

Answers to questions that had a yes/no response were tallied to determine the extent to which students use cell phones, whether they thought it was professional, and whether cell phone use interfered with learning. See Figure 1 for the percentages of the yes/no responses regarding students’ cell phone use in class.
The majority of students admitted to texting for personal reasons while in class, but they seemed to have a negative opinion of this action. The questionnaire results indicate that 73% of students consider any form of texting while in class to be unprofessional and also state that it interferes with learning.

Qualitative Results

As part of the qualitative analysis process, and using the constant comparative method of coding (Glaser & Strauss, 1967), data from open ended questions were coded in conjunction with the research question. Two overarching themes emerged along with sub themes.

Professionalism

One overarching theme evident in the data was the concept of professionalism. It is worthy of note that while 79% of the students responded that they text in class, 73% stated that texting in class is unprofessional. The fact that students believe that personal texting in class is unprofessional, but still engage in it may imply several things: that it is difficult to disengage from their phone; that class lessons are not engaging; and/or that there is a lack of an enforced class cell phone policy.

Some students perceived texting in class as rude, unprofessional and disrespectful not only to the teacher but to students in the class. Many of the student responses stated the noise other students created when texting was rude. “It’s rude because classmates have their phones on and it beeps when a text comes in. I hear them text and I can tell even the professor is distracted. It’s rude.” Other comments made were: “I don’t like the clicking or the vibrating going off,” “Professors are constantly telling students to put away their phones,” “Texting is disrespectful to
surrounding students and to the professor,” “You’re not showing respect to your teacher or to fellow peers,” and “It is unprofessional because you are being rude to the teacher and wasting her time.”

Impact on Learning

Another theme that emerged from the data concerned cell phones and their impact on learning. Seventy-four percent of the students responded that texting interferes with learning. Their reasons included interference with listening, distractions to learning, and possible cheating. The large percentage of affirmative answers about texting interfering with learning suggests that cell phone use in the classroom is an issue that needs definite attention in order to maximize learning in the classroom. Figure 1.2 shows a list of themes and subthemes.

Figure 1.2 Impact of Texting on Learning

<table>
<thead>
<tr>
<th>Students learning is impacted:</th>
<th>Students learning is not impacted</th>
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<tbody>
<tr>
<td>• By not Listening</td>
<td>• By being multitaskers</td>
</tr>
<tr>
<td>• By Distracting</td>
<td>• By needing tactile stimulation</td>
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<tr>
<td>• By Cheating</td>
<td>• By being bored</td>
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Negative Impact on Students’ Learning

To the questions, “Does texting interfere with learning,” and “If so, how?” Three themes emerged from the 74% who responded “yes” to this question: 1) Students are not listening or paying attention to the teachers; 2) it can be a distraction to other students in the class, and 3) it can be a source of cheating.

Not listening

Some students replied, “You can’t listen and text at the same time,” or “When I text I am not focused on what the teacher is saying; I am focused on what I am texting.” Other students responded to the fact they did not think they could multitask: “You can’t multitask. It’s hard to learn and text at the same time,” and “There is no way to pay full attention to the speaker or the activity going on while texting.” These remarks indicate the difficulty some students have with attending to class content while texting.

Distracting

Many responses dealt with the distraction that texting could cause in the classroom. Students commented they might not be paying attention to the teacher or they were watching their classmate text. “I’m watching this guy or girl next to me, rather than what the teacher is talking about.” Other comments were “Causes a distraction,” “Students miss crucial lecture points that could be on the exam,” “Could distract a person sitting next to the one who is texting,” and “Texting can be distracting to other students. Also it gives the illusion that what you’re texting about is more important than the class.” One student summed it up with, “I get distracted by them being distracted.”
Cheating

The last theme that emerged about texting during class interfering with learning is one of cheating. While it had the lowest percentage of responses stated, students were very emphatic about the possibility of cheating and texting. Some student responses were: “Students could text another student in the same class or in another class that had taken the same exam for the answer.” “Cheating facilitates academic dishonesty.” “If teachers let students text all the time and do not address it in class, how do they know we’re not cheating on an exam?”

Negligible Impact on Students’ Learning

Three main themes emerged in exploring how texting did not impact learning. The following themes emerged from the 20% of students who responded that texting does not interfere with learning: 1) Texting as Multitasking; 2) Texting as Tactile Stimulation; and 3) Texting as Boredom Reliever.

Multitasking

Many students stated that they believe they can multitask, and that texting is not distracting to them for that reason. One student stated, “People can multitask, and if you can’t multitask, then it’s your problem.” Another stated, “If you are able to multitask, then texting doesn’t interfere.” Another student stated, “It enhances my ability to multitask and be alert and aware of my surroundings.” One student summed it up by stating, “Because as such a busy society we have learned to be great multitaskers.” Several responses revealed that one student’s multitasking can be another student’s distraction.

Tactile Stimulus

Some students compared texting to doodling, saying that they needed to be doing something tactile in order to pay attention. One student said, “I am the type of person that has to be doing something while I listen, so texting helps me.” Another stated, “It is just like a student doodling. You can still hear everything going on.” Still another student responded, “Most people I know, including me, learn more when my hands are doing something.” One response was, “I’m ADHD and need something else to do. It helps me listen better.”

Relief from Boredom

Many students stated that even if they text messaged, they could still pass the class—they could get the notes online or from a peer. Other responses to the question included, “I’m not learning anyway,” and “Because most class lectures are posted online along with assignments, I can still pass my classes and get all the info.” Other students responded, “You can always review on your own what the professor said,” and ”If you already know what’s going on in class, why listen to it further?” Several students claimed that texting in class kept them from becoming bored, or that they did it when they were bored or to stay awake in class. One response was, “It keeps you awake instead of falling asleep.” Another student responded, “Because if you decide to text in
class then you choose to not pay attention. For me, I only text when I am bored, so if the teacher sees that maybe they can change their teaching styles.” One student also argued, “Sometimes class can get too boring so being on your phone can be some sort of stimulation to stay awake.” Another stated, “I can listen and text at the same time. It keeps me from getting bored.” Still another said, “Most of the time I text because I am bored, so I was not learning to begin with.” The responses in this category were connected to the teaching that occurred in the class. If students have a passive role as learners, texting may provide the active involvement that is missing.

Using Cell Phones for Emergencies

A final thread that emerged from the data was that many students were concerned with emergencies that happen during class and require their immediate attention. One student said, “I feel much more at ease knowing I can text or call to check on my children if there is an emergency.” One student stated, “If a student is waiting to hear back from a family member, it’s much easier to text than to leave class to answer a call.” Still another student responded, “It is quick and if it is an emergency then it is something that has to be handled.” Another student pointed out, “You can text for emergencies instead of calling.”

Conclusion

This study examined students' perspectives of the use of cell phones in university classrooms. The objectives for this qualitative study were to determine 1) participants’ perceptions of the ways in which cell phone use affects learning, and 2) participants’ perceptions of whether or not cell phone use in class affects professionalism. Results reflected the diverse attitudes towards cell phone use by 805 undergraduate education students.

From personal experience, we know students in our classes are using their cell phones. But ultimately, what does this mean for the ways we conduct our classes? Should we ban cell phone cell use in our classes all together? Should we ignore cell phone use in our classes? Or should we accept the fact that students will use cell phones in our classes and recognize the possibilities of using this technology to enhance instruction? These questions suggest a teachable moment. Students cannot be expected to act in a professional manner unless they know what “professional” is. As instructors, we model what professionalism is through our words and deeds. In addition, instructors need to communicate their expectations of professional etiquette of cell phone use from the very beginning. It may be advisable for students and instructors to collaborate and create a policy together. It would be even more effective if there were a standard policy that was used in a department and even a university, so that students understood expectations in every class.

This study also provides a teachable moment for us. The marvel of mobile technology in our classrooms need not cause fear and loathing. What we can learn from our students about the way they learn may help us deliver our instruction more effectively. Cell phones connect us to each other and to the world. It is worth our time and effort to explore the possibilities of using this ubiquitous form of technology to positively influence learning.
References


