

# HOW CONNECTED TO PERSONAL ELECTRONIC DEVICES ARE MILLENNIAL COLLEGE STUDENTS?

Alexandra Hutto, Gregory S. Black, and Nancy T. Frontczak, Metropolitan State College of Denver

## Introduction

The purpose of this study is to shed light on Millennial college students' increasing reliance on personal electronic devices (e.g., laptops, smartphones, tablets, etc.) in the classroom and to demonstrate that this appears to be a generational shift from previous students' behaviors. Quantitative evidence collected from Millennials and their older classmates points to this shift. It appears that, in many cases, the majority of Millennials engage in behaviors in class that many of their older counterparts participate in less frequently, if at all, at this point in time.

The Millennial Generation, defined by Strauss and Howe (2000) as those Americans born between 1982 and 2001, started graduating from high school and entering college in the year 2000. By 2011, professors have "enjoyed" over a decade of Millennials and their ever-proliferating mobile technology in the classroom. By the middle of the last decade, they displaced Generation X'ers as the predominant student population on most campuses. Members of Generation X were born between 1965 and 1981, while the Baby Boomers who preceded them were born between 1946 and 1964.

This paper reports results of a survey of 275 undergraduate Marketing students asking the ways and frequency in which they use personal electronic devices (PEDs) in the classroom, mainly for the applications of texting, emailing, surfing the Internet, and checking Facebook. As of late, these appear to be the major distractive applications of mobile technology for students in the classroom. While students may be observed with ear buds tucked under their hoodies pulled around the faces, the former applications appear to give more distraction to professors and neighboring students. The objectives were to determine which mobile applications students used in the classroom and at what frequency.

## Literature Review

The digital language "spoken" over the Internet, via text messaging, on laptops and tablets, via videogames, cell phones and the like is a tongue in which college students are fluent. By the time a typical student arrives on campus, he or she will have spent tens of thousands of hours in the company of electronic devices vs. comparatively little time with printed materials such as books and newspapers (Prensky, 2001).

Their small size, light weight, and ever-increasing functionality make cell phones and smartphones especially attractive to carry around and to get in the habit of “being connected.” Individuals, most notably young people, feel disconnected when they are without their personal electronic devices. This generation was practically born with technology tools in hand, is very facile with them, picks up new tools quickly and has an intuitive understanding of digital language (Black 2010; Prensky 2005/2006). This generation prefers multitasking and visuals to graphics and text; are interconnected via cell phones and social networks; thrive on instant gratification, and prefer games to work (Black 2010). These students do not remember and cannot envision a world without digital technology (Frand 2006).

Many college professors are frustrated by what Price (2011) refers to as “student incivility,” exhibiting behaviors “unproductive to the learning environment” (p. 11) with students often oblivious to the fact that these behaviors are perceived poorly and not cognizant of the negative impact they may have on the learning environment. Belch et al. (2011) describes the use of PEDs in class as “weapons of mass distraction” (p. 70) and Taylor et al. (2011) talks about the distractive nature of technological devices.

All of the above background and more lays the foundation for the following study. The researchers chose to study the frequency with which Marketing students were using PEDs, both in and out of class, to look at the pervasiveness of their connectedness to these gadgets and to discern whether professors’ perception that these devices were multiplying in the university setting at an exponential rate was real or imagined. By gauging the attachment to these devices and technologies, the researchers thought it could assist Marketing educators to more productively manage the situation by either setting down policies at the beginning of the course dictating how such technologies should be handled or incorporate them more seamlessly into the curriculum when and where it makes sense.

## Hypotheses

The preceding discussion leads to the following two sets of hypotheses. H<sub>1</sub>: Millennial college students are likely to engage more frequently in the following activities than their older classmates (here, Generation X and Baby Boomer College students are combined into “other” as the focus of this research is on Millennials): H<sub>1a</sub>: multitasking; H<sub>1b</sub>: texting in class; H<sub>1c</sub>: emailing in class; H<sub>1d</sub>: surfing the Internet in class; H<sub>1e</sub>: checking Facebook in class.

H<sub>2</sub>: Millennial college students are likely to engage more frequently in the following activities than their older classmates: H<sub>2a</sub>: on Facebook; H<sub>2b</sub>: on Twitter; H<sub>2c</sub>: on MySpace; H<sub>2d</sub>: on other social networking activities; H<sub>2e</sub>: using personal electronic devices.

## Methodology

The researchers administered 296 electronic surveys to undergraduate student enrolled at a large urban university in the West between December 1, 2010 and September 27, 2011. They were enrolled in a variety of upper-division Marketing courses. A total of 275 surveys were fully executed, delivering a response rate of 93%. Over 90% of the respondents were upper-classmen. Marketing majors made up nearly half of the sample. About 55% of the sample was male.

## Results

The authors found a statistical difference to the .01 level in the behaviors studied between students in the Millennial generation and other students with respect to all of the hypotheses tested in the first group ( $H_1$ ). With respect to the second group of hypotheses ( $H_2$ ), there were fewer differences.

Additional Chi-Square analyses were run to determine if there were any differences in multitasking or texting, emailing, surfing the Internet, or checking Facebook in class by Millennial men vs. women. With one exception, checking Facebook, which was done more frequently by Millennial women, there were no statistical differences. This highlights how pervasive these behaviors are by both genders. Further, the researchers ran Chi-Square analyses comparing younger and older Millennial college students to see if maturity appeared to have an impact on these behaviors, but it yielded no statically significant differences either. Therefore, the generational divide looks to be real.

The respondents who did so (162 Millennials and 15 Generation X and Baby Boomers) were asked to express how many hours they spent each day engaged in Facebook, Twitter, MySpace, and other social networking activities. All respondents were asked how many hours they spent daily using personal electronic devices. They were able to answer in hours and/or fractions of hours. The researchers ran independent samples t-tests looking at the mean hours spent on these activities by Millennial vs. other college students. The results are displayed in Table 1.

Table 1: Results of Hypothesis Testing for  $H_2$

Variables	Test Statistic
Time spent on Facebook	0.227
Time spent on Twitter	0.199

Time spent on MySpace	0.075*
Time spent on other social networking activities	0.020**
Time spent using personal electronic devices	0.062*

\*\*Significant at  $p \leq .05$

\*Significant at  $p \leq .10$

### Conclusion

Most of today's college students come to class armed with a text-capable cell phone or smartphone at the very least. It is becoming increasingly common for them to also have a laptop or tablet as well. The best scenario as a professor is to come to the first class prepared to either formulate jointly with the students a mutually agreeable policy on what is acceptable etiquette for using PEDs in a particular course (Price 2011) and/or to incorporate their use into the curriculum. Do not assume the Millennial college students understand why professors get annoyed over the use of PEDs in their classrooms. Note that positive and appropriate uses of these technologies can be encouraged (e.g., using laptops to take notes or explore concepts that peak students' interests) and that may be the best compromise going into the future.

References Available Upon Request