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## **Gen Z and Digital Distractions in the Classroom: Student Classroom Use of Digital Devices for Non-Class Related Purposes**

(BEA Paper Submission)

The author would like to acknowledge the instructors across the United States and Alberta, Canada who encouraged their students to participate in this survey. Thanks to Dr. William E. Rogge, in the Department of Mathematics at the University of Nebraska-Lincoln, who helped with weighted analysis on select survey responses in this study.

### **Abstract**

A 2019 survey of college students examined classroom-learning distractions caused by their use of digital devices for non-class purposes. The purpose of the survey, part of an on-going study, was to learn more about students' behaviors and perceptions regarding their classroom uses of digital devices for non-class purposes. The survey included 986 respondents in 37 U.S. states and 47 respondents in Alberta, Canada. A significant feature of the study was its measurement of frequency and duration of students' classroom digital distractions as well as respondents' motivations for engaging in the distracting behavior. Respondents averaged 19.4% of class time using a digital device for non-class purposes. The average respondent used a digital device 9.06 times during a typical school day in the 2019 survey for non-class purposes. On a weighted average, survey respondents indicated they would turn-off all non-class digital distractions if their instructor gave them 7.8% extra credit on their final class grade.

### **Introduction**

Change is in the air as Generation Z students step onto center stage in my latest survey of digital distractions in the classroom. Two previous digital distractions surveys (McCoy 2013 & 2016) focused on Millennial Generation college student's classroom use of digital devices such as smart phones, laptops, and tablets for non-class purposes. They used their devices an average of

10.93 times during a typical school day in 2013 for non-class purposes. In the 2016 survey, the student average rose to 11.43 times in a typical school day with a class distraction time of 20.9%. This latest survey primarily focused on Generation Z students. It found student digital device usage for non-class purposes dropped to an average of 9.06 times in a typical school day with 19.4% of students' class time distracted by a digital device.

Interestingly, the decline in frequency and duration of student classroom digital distractions may point to a shift in the ways Generation Z students use digital media.

These findings and other Phase III survey results point to some distinctive behavioral differences between current Generation Z students born after 1996 and Millennial Generation students surveyed in previous digital distractions research.

Why is this important? Scope for one. Behavior for another. Generation Z, falls between the ages of seven and 22. Gen Z'ers are 61 million strong in the United States. According to Giammona, C., Wilson, C., & Ponczek, S. (2019) Generation Z became the biggest global consumer cohort in 2019 and is now the largest group attending U.S colleges.

Gibson (2016) cited research by the Center for Generational Kinetics predicting tens of millions of Gen Z'ers would begin entering the U.S. workforce. By 2020, Gen Z'ers will wield roughly \$3 trillion in global purchasing power. Its older members will be eligible to vote in their first U.S. presidential election (only 26 percent of them say that they trust elected officials, according to the center's research).

Behaviorally, Dimock (2019) noted unique to Generation Z is that they have grown up in an "always on" digital world. "By the time they were in their teens," said Dimock, "the primary means by which young Americans connected with the web was through mobile devices, WiFi and high-bandwidth cellular service. Social media, constant connectivity and on-demand

entertainment and communication are innovations Millennials adapted to as they came of age. For the Generation Z, these are largely assumed,” Dimock wrote.

The GlobalWebIndex audience report (2019) found Gen Z spent an average of 2 hours and 52 minutes a day on social networks and messaging services. Pedotto and Chen (2017) found smartphones dominated digital media time for 18 to 24-year-olds, who spent 2/3rds of their, more than 3 hours a day, on smartphone apps alone. With multi-networking firmly the norm, they spent their time with a range of different platforms and often multi-tasked while using them for activities such as texting while watching video.

The “State of Gen Z: 2018” survey found 95% of Gen Z ages 13 to 22 currently had a smartphone. Almost 2/3rds of Gen Z (61%) used their smartphone 5 or more hours per day and 26% used it 10 or more hours each day. One difference is when Gen Z’ers used smartphones.

The “State of Gen Z: 2018” survey noted 65% of Gen Z said they use smartphones after midnight a few times a week or more. By comparison, only 39% of Millennials said they were on their phones after midnight a few times a week or more.

Seventy-seven percent of Gen Z still use Facebook every month, but the GlobalWebIndex survey found YouTube is bigger and almost universal, with 9 out of 10 Gen Z’ers visiting YouTube at least once a month, “reiterating the importance of video and entertainment to this young audience.”

When it comes to learning, a “Beyond Millennials” survey (2018) found Gen Z’ers are more likely than Millennials to prefer YouTube (59 to 55%), in-person group activities (57 to 47%) or learning apps (47 to 41%). Millennial students' top learning preference was printed books (60 to 47%). The survey found many Gen Z’ers, so-called “Digital Natives,” valued printed materials and teacher interactions more than Millennials as part of their college experience.

In the two previous studies (McCoy 2013, 2016) 80% of college respondents admitted using digital devices during class for non-class purposes caused a distraction that risked hurting their class performance. That percentage remained unchanged in the 2019 research. Eighty percent of respondents in the 2019 survey said digital distractions in the classroom caused them to miss instruction.

Several studies have found a link between the use of digital tools and the distractions they may cause students in educational settings. Glass and Kang (2018) found divided attention caused by college students' use of digital devices reduced long-term retention of the classroom lecture, which impaired subsequent unit exam and final exam performance.

Kuznekoff, Munz & Titsworth (2015) examined student mobile phone use in the classroom and found sending/receiving text messages unrelated to class content negatively impacted learning and note taking. Dahlstrom & Bichsel (2014) found that many college students use mobile devices for academic purposes but were concerned about their potential for distraction. A phenomenological study by Flanigan & Babchuk (2015) suggested the temptation and use of social media had become a prominent aspect of university students' academic experiences, "both within and outside of the classroom setting."

Findings also involved research into human behavior and the use of digital technology. Rideout, Foehr, & Roberts (2010) found most surveyed teenagers multitask "most" or "some" of the time when listening to music (73% of respondents), watching TV (68%), using a computer (66%), and reading (53%). Wang et al. (2015) conceptualized media multitasking based on 11 different multidimensional behaviors. Wang noted, "In some sense, media multitasking exemplifies multiple challenges facing contemporary society. It is the product of too many goals and not

enough time, too many options and not enough discretion, and a building pressure to be increasingly productive."

Shan, Zheng & Prabu (2016) conducted a study examining the impacts of media multitasking on student respondents' social and psychological well-being based on motivations (social, cognitive, entertainment) tied to these behaviors. The study found student multitasking involved different, and potentially competing, types of behaviors that had differing effects (positive, negative, and null) on respondents' perceived social and psychological wellbeing.

Other research found students who multitask with a digital device during class may not be distracted from the teaching and learning taking place. Brooks and Pomerantz (2017) conducted the annual Educause Center for Analysis and Research survey of 35,760 college undergraduates. While some students reported using digital devices for non-class activities, they also reported using their devices for productive classroom activities (e.g., taking notes, researching additional sources of information, and instructor-directed activities). The ECAR survey found 79% of undergrads preferred a blended learning environment with "some to mostly online components." It marked a 5% increase over 2016.

Brooks and Pomerantz noted a more restrictive posture by faculty toward student devices in the classroom. Smartphones were the "most despised technologies among instructors." Seventy percent of students in the ECAR survey said their instructors banned or discouraged their use in class. The percentage of students who said instructors restricted the use of tablets in the classroom also rose, from about 25% in 2015 to 40% in 2017. The only contrary outcome was the percentage of students who said instructors encouraged or required laptop use in class. It was up from 30% in 2015 to 35% in 2017.

Sullivan, Johnson, Owens & Conway (2014) identified digital device uses for non-class purposes as a “low level disruptive behavior” and argue that teachers could benefit from understanding how the classroom ecology influences student engagement, rather than focusing on ‘fixing’ unproductive behavior. Gebre, Saroyan & Bracewell (2014) found students' cognitive and social engagement in technology-rich classrooms is significantly related to their professors' views of effective teaching. They stressed technology implementation in university teaching needed to incorporate faculty development programs related to changing professors' conceptions of effective teaching.

Building on prior research, the purpose of this study examines college students’ evolving uses of digital devices in the classroom for non-classroom related purposes. What impact does such behavior have on student learning? What are the perceived advantages and disadvantages of this behavior, and what policies might effectively limit classroom distractions caused by digital devices?

## **Methods**

In late 2018 and early 2019, we surveyed 982 students at U.S. colleges and universities in 37 states and 50 students in Alberta, Canada who answered 20 survey questions regarding their classroom use of digital devices for non-class purposes. U.S. respondents included freshmen, sophomores, juniors, seniors, and graduate students from Arkansas, Arizona, California, Colorado, Connecticut, Florida, Georgia, Idaho, Indiana, Iowa, Illinois, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New York, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington, West Virginia and

Wisconsin. Most respondents majored in mass communications, marketing, business, law, education, and agriculture.

Instructor observations of college students in classroom settings, a baseline survey of students, conversations with instructors at U.S. colleges, past research, and literature reviews suggest student classroom uses of digital devices for non-class purposes causes learning distractions. This sparked my on-going research, which focuses on the study of student classroom uses of digital devices for non-class purposes, and the effects such behavior may have on classroom learning.

The survey addressed the frequency, duration and intensity of non-class related digital distractions in the classroom. It looked at students' perceived advantages and disadvantages of using digital devices for non-class purposes, responses to classroom digital distractions, potential incentives and policies that may address such distractions in the classroom.

The survey's 20 questions presented respondents with a list of answers from which to choose. Some questions originated from a 2012 pilot survey of undergraduate mass communications majors (N=95) at a Midwestern university that identified frequent types of non-class related digital device behavior and use in classrooms. Other questions evolved and formed after examining student responses from previous digital distractions surveys in 2013 (N=777) and 2015 (N=675). Those responses were collected from U.S. colleges and universities.

Institutional Review Board approval was obtained before the survey's administration. It included a cover page statement informing students that the survey's completion and submission constituted their consent to participate in the study.

Classroom instructors volunteered to recruit student respondents for the survey using email and personal contacts. All respondents were given the option to complete the survey. The

survey did not ask respondents to state their name or institution, but respondent surveys were geo tagged (state and/or educational institution) by using Internet Protocol (IP) routing addresses associated with survey responses. Using SurveyMonkey.com as a data collection tool, survey results were statistically reported and compared with demographic data for gender, age, grade point average, and year in school. The analysis also examined the frequency and duration of responses. In the results below, some percentages have been rounded to the nearest 1/10 of a percent.

## **Results**

The survey's quantitative results appear first, followed by a comparison analysis on select responses.

### **Quantitative Results**

Table 1 shows results for the 20-question survey. The last four survey questions were demographic in nature. Of the respondents, females accounted for 60%, males, 39%, and 1% of the respondents answered "prefer not to say" regarding gender.

Age breakouts among the respondents included .2% who said they were 17-years-old, 16.5% said they were 18-years-old, 25.5% said they were 19-years-old, 22% were 20-year-olds, 22% were 21-year-olds, and 14% of the respondents were 22-years-old or older.

College freshmen accounted for 31.24% of the students, followed by sophomores at 21.81%, juniors at 24.46%, seniors at 21.51%, and graduate students at .98%.

When we asked students their approximate GPA, .69% said it was between 1.0 and 1.9, 16.6% said it fell between 2.0 and 2.9, 73.87% said it fell between 3.0 and 3.9, 6.58% said their GPA was 4.0 or higher, and 2.26% said they didn't know their approximate GPA.

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**DigiDistractions Q17 Phase III.pdf & DigiDistractions Q18 Phase III.pdf & DigiDistractions Q19 Phase III.pdf & DigiDistractions Q20 Phase III.pdf**

Students were asked in Question 1 how often they used a digital device during classes for non-classroom related activities on a typical school day. Of the responses, 42.5 chose “1 to 3 times” as a response, followed by 28.2% who chose “4 to 10 times.” The remaining student responses included 14.9% who chose “11 to 30 times,” 9.1% who chose “More than 30 times,” and 5.3% who chose “Never.”

When overall frequency response rates were averaged for Question 1  $((1+3)/2=2, (4+10)/2=7, (11-30)/2=20.5, 35)$  and added for each school year, combined undergraduate and graduate students used a digital device an average of 9.06 times each class day for non-class activities in our 2018/19 survey. Results from the 2013 and 2015 surveys show students using digital devices more frequently (10.93 times each class day in 2013 versus 11.43 times each class day in 2015) in the classroom for non-class related activities.

**DigiDistractions Q1 Phase III.pdf**

When Question 2 asked students to describe their various uses of digital devices during class for non-class purposes, “Texting” was the top response at 84.6%. It was followed by “Checking the time,” at 75.5%, “E-mail” at 62.3%, “Social Networking” at 56.9%, “Web surfing” at 36.3%, and “Games” at 12.5%.

**DigiDistractions Q2 Phase III.pdf**

Question 3 asked students what percentage of the class was spent using a digital device for non-class purposes. The top response was “1-10%” at 50.9%. It was followed by “11-20%” at 16.5%, “21-30%” at 9.1%, “31-40%” at 4.3%, “41-50%” at 3.3%, “51-60%” at 2.4%, “61-70%” at 2.2%, “71-80%” at 2.8%, “81-90%” at 2.5%, “91-100%” at 1.9%.

When Question 3 response rates were averaged, all students combined used a digital device an average of 19.4% of the time for non-class related activities compared to an average of 20.9% of the time for all student respondents in our 2015 survey.

### **DigiDistractions Q3 Phase III.pdf**

Questions 4 and 5 asked students to choose the three biggest advantages and three biggest disadvantages to using digital devices in class for non-classroom purposes. The top response for biggest advantage was “Fight Boredom” at 59%. It was followed by “To stay connected” at 56%, “Related classwork” at 51%, “In case of emergency” at 50% and “Entertainment” at 39%.

The biggest disadvantage to using a digital device in class for non-classroom purposes was “Don’t pay attention” at 87%. It was followed by “Miss instruction” at 80%, “Distract others” at 38.8%, “Get called out by instructor” at 37.6% and “Lose grade points” at 28.7%.

### **DigiDistractions Q4 Phase III.pdf and DigiDistractions Q5 Phase III.pdf**

We asked students in Question 6 to identify how much of a distraction was caused by their own use of digital devices during class for non-classroom activities. “A little distraction” was the leading choice at 51.9%. It was followed by “A medium distraction” at 25%, “A big distraction” at 9.8%, “No distraction” at 9.8%, and “A very big distraction” at 3.6%.

### **DigiDistractions Q6 Phase III.pdf**

When Question 7 asked how much of a distraction was caused by other student’s use of digital devices during class for non-classroom activities, the top response was “No distraction” at 45.4%, “A little distraction” at 35.8%. It was followed by “A medium distraction” at 13%, “A big distraction” at 4.5%, and “A very big distraction” at 1.3%.

### **DigiDistractions Q7 Phase III.pdf**

Question 8 asked respondents to choose the types of distractions caused by the use of digital devices during class for non-class activities. “Visual activity” was chosen by 71% of the respondents, followed by “Audio activity” at 40.2%, and “Not a distraction” at 14.7%.

### **DigiDistractions Q8 Phase III.pdf**

Question 9 asked students if digital devices should be banned from classrooms and 93.1% of the respondents said “No,” and 6.8% said “Yes.”

Question 10 asked students if their instructors have a policy regarding the use of digital devices in their classrooms. “Yes” was chosen by 74% of the respondents, followed by “No” at 26%.

When asked in Question 11 which statement they agree with “MOST” regarding classroom uses of digital devices for non-classroom purposes, 35.4% of the student respondents chose “I can freely use a digital device without it causing learning distractions,” followed by 27.5% who chose “It’s my choice to use a digital device whenever I feel like using one, ” 17.1% who chose “ I don’t use digital devices because of the classroom learning distractions they may cause,” 12.1% believe “my use of digital devices outweigh classroom learning distractions they may cause,” and 7.8% chose “I can’t stop myself from using digital devices even if they may cause learning distractions.”

Question 12 asked if it would be helpful to have policies limiting non-classroom uses of digital devices. “Yes” was chosen by 50% of the respondents, followed by “No” at 31.6% and “Don’t know” at 18.3%.

**DigiDistractions Q9 Phase III.pdf & DigiDistractions Q10 Phase III.pdf &  
DigiDistractions Q11 Phase III.pdf & DigiDistractions Q12 Phase III.pdf**

When asked in Question 13 if it would be “helpful if instructors had a brief class discussion about the appropriate classroom use of digital devices at the beginning of each semester,” 56% chose “Yes,” 34.8% chose “No,” and 9.2% said they “Don’t know.”

#### **DigiDistractions Q13 Phase III.pdf**

Question 14 asked students what an instructor should do if a student causes a disruption by using a digital device for non-class purposes, 82.5% chose “Speak to student.” Other responses were “Ask student to leave class” at 10.2%, and “Confiscate or turn-off device” at 7.4%.

#### **DigiDistractions Q14 Phase III.pdf**

In Question 15, we asked students which policy they would favor most for students caught using digital devices in the classroom for non-class purposes. “Warning on first offense followed by penalties” was the leading response at 66.9%. It was followed by “No warnings or penalty” at 31% and “Penalty each time it happens” at 2.1%.

#### **DigiDistractions Q15 Phase III.pdf**

In Question 16, we asked students: “I would turn-off all non-class digital distractions if my instructor gave me this much extra credit on my final class grade.” The leading response by 31% of respondents was “I don't think students need extra credit for something like this.” It was followed by 10% extra credit by 24.5% of respondents, 20% extra credit by 21.75% of respondents, 5% extra credit by 20% of respondents, and “Don’t know” by 2.6% of respondents.

### **Comparison Analysis**

Table 2 shows a comparison analysis of select statistically significant responses. Question 1 found two statistically significant responses involving freshmen, sophomores and juniors when asked “On a typical school day, how often do you use a digital device during

classes for non-classroom related activities such as texting, talking on a smartphone, emailing, surfing the web, tweeting or other social networking?” On the “4 to 10 times” response juniors (33.7%) were significantly higher than sophomores (22.5%). On the “11 to 30 times” response juniors (10%) were significantly lower than sophomores (18%) and freshmen (17.7%). On the “More than 30” response juniors (6.8%) were significantly lower than sophomores (12.2%).

**INSERT DigiDistractions Q1CompClass Phase III.pdf**

Question 2 found a statistically significant response involving freshmen, sophomores and juniors use of email when asked “If you use a digital device during class for non-class purposes, please describe all those purposes.” Juniors (70.6%), and sophomores (68.7%) were significantly more likely than freshmen (54.6%) to say they use their digital devices for email during class.

**INSERT DigiDistractions Q1CompClass Phase III.pdf**

Question 2 comparison analysis also found a statistically significant difference between females (N=524) and males (N=307) in their non-class related playing of games on their digital devices during class. (males, 16.3% vs. females, 10.1%).

**INSERT DigiDistractions Q2CompFemale Male Phase III.pdf**

Question 3 found two statistically significant responses involving freshmen, sophomores and juniors when asked “If you use a digital device during class for non-class purposes, what percentage of the class is spent engaging in that activity?” On the “21 to 30%” response juniors (10.4%) and sophomores (11.8%) were significantly higher than freshmen (5.7%). On the “61 to 70%” response juniors (.4%) were significantly lower than freshmen (3.5%).

**INSERT DigiDistractions Q3CompClass Phase III.pdf**

Comparison analysis on Question 7 indicate a statistically significant difference between females (58.1%) and males (48.8%) in listing some level of distraction caused by another student's use of digital devices during class for non-class activities.

**INSERT DigiDistractions Q7CompFemale Male Phase III.pdf**

Comparison analysis on Question 11 indicates statistically significant responses between females and males when asked which of these statements they agreed with: "It's my choice to use a digital device whenever I feel like using one." (female, 30.5% vs. male, 23.4%) and "I believe my use of digital devices outweigh classroom learning distractions they may cause." (male, 15% vs. female, 0.4%).

**INSERT DigiDistractions Q11 CompFemale Male Phase III.pdf**

Comparison analysis on Question 12 indicates statistically significant responses between females and males who answered "No" when asked if they "believe it is helpful to have policies limiting non-classroom uses of digital devices." (female, 29% vs. male, 36.1%)

**INSERT DigiDistractions Q12 CompFemale Male Phase III.pdf**

Comparison analysis on Question 15 indicates statistically significant responses between females and males when asked "Which policy would you most favor for students caught using digital devices in the classroom for non-class purposes?" On the response "No warnings or penalty," (female, 28.51 vs. male, 34.7%). On the response "Warning on first offense, followed by penalty," (female, 69.3% vs. male, 63.1%).

**INSERT DigiDistractions Q15 CompFemale Male Phase III.pdf**

## Discussion

The unique contribution of this study was its measurement of the frequency and duration of digital distractions in classrooms, as well as the competing justifications respondents identified for engaging in distracting behavior with digital devices that they admit may have negative learning consequences.

Research indicates the frequency and duration of classroom digital device distractions decreased 21% among Generation Z college students surveyed in 2019 compared to our 2015 survey of Gen Z and Millennial students. What has not changed from past surveys is that digital distractions are habitual and still happen frequently despite an admission by a large majority (87%) of students that this behavior hampers their ability to pay attention in the classroom.

The 2019 survey found the average respondent used a digital device for non-class purposes 9.06 times during a typical school day compared to 11.43 times in the 2015 survey and 10.93 times in the 2013 survey.

The 2019 survey respondents identified non-class related activities that included texting (84.3%), emailing (62.1%), and social networking (56.9%). The 2019 survey found the duration of such digital distractions consumed an average of 19% of respondents' time in the classroom.

Respondents said three leading advantages for using digital devices for non-class related behavior was to fight boredom (59%), stay connected (56%), and for related classwork (51%).

Respondents also admitted the disadvantages of such behavior caused them to not pay attention (87%) and miss instruction (80%) during class.

This study also expanded on the findings of two previous surveys by asking what, if any, extra credit incentives it would take for students to voluntarily turn-off all non-class digital distractions. The weighted average response to the question "I would turn-off all non-class

digital distractions if my instructor gave me this much extra credit on my final class grade” was 7.8%. To put it another way, that would be slightly less than a whole grade point improvement.

A large majority (82.9%) of respondents agreed with one of the following statements regarding their classroom uses of digital devices for non-classroom purposes:

- “I can freely use a digital device without it causing learning distractions.” (35.63%)
- “It's my choice to use a digital device whenever I feel like using one.” (27.43%)
- “My use of digital devices outweighs classroom learning distractions they may cause.” (12.15%)
- “I can't stop myself from using digital devices even if they may cause learning distractions.” (7.69%)

Such responses may explain why a growing majority (93%) of respondents, compared to past surveys, oppose classroom bans on digital devices even as they recognize the detrimental learning distractions they may cause. About half of respondents (49.9%) favor policies limiting classroom distractions caused by digital devices. A third of the respondents (31.7%) oppose such policies and 18.4% “didn’t know” how they felt about such policies. More than half of students surveyed (55.69%) said they believed it would be helpful if instructors had a brief class discussion about the appropriate classroom use of digital devices at the beginning of each semester? This suggests many students are receptive to better clarity and conversations about appropriate and inappropriate classroom uses of digital devices.

Respondents said fighting boredom (59%) in the classroom was a leading reason they used digital devices for non-class activities compared to 63% in the 2016 survey. This suggests more students recognize a need for more effective self-control techniques to stay focused on learning in classroom settings.

Results of this survey suggest more instructors are using new ways to engage college students by blending traditional face-to-face teaching methods described by Graham, Henrie & Gibbons (2014) with online learning activities to reduce boredom and disruptions caused by non-class uses of digital devices. Adams, Becker et al. (2017) identified blended learning designs as one of the short-term forces driving technology adoption in higher education in the next 1–2 years. Dziuban et al. (2018) noted it seemed clear blended learning is the harbinger of substantial change in higher education, K-12 schooling and industrial training because its flexibility "allows us to maximize many positive education functions."

Findings by Wang et al. (2015) suggested digital device distractions may be minimized by imposing multitasking behaviors in classrooms that can more strategically allocate students' cognitive resources. Related research by Davis III, Deil-Amen, Rios-Aguilar, & González Canché (2015), Oh & Reeves (2014), and Van Dusen (2014) stress the need for colleges and universities to provide adequate technology, technology support, and instructor training time. Halverson, et al. (2017) made these points:

- The instructor must adopt new tools with a new mindset and positive attitude. More time and commitment are required from instructors in preparing everything in advance and giving continuous feedback.
- Students need to be motivated to adapt new technology and feel comfortable. They also need good time management skills.
- Classroom technical support is crucial with dedicated support available to implement effectively.

One limitation of this study was the disproportionately larger sample of female respondents compared to male respondents (60.2% vs. 38.8%). Another was the small sample (N=10) of graduate student respondents. Future research might use larger samples of graduate

students and a more proportionally representative U.S. Census demographic sample of female and male (50.3% vs 50.7%) respondents to see if they result in different responses.

Research indicates student use of digital devices, primarily smart phones, as well as digital apps by Generation Z continues to grow. This was the case with Millennials in two earlier surveys. There are distinct behavioral differences though between these two digitally savvy generations in their use of technology. A part of it is defined by the predominant applications they use as well as “why,” “how,” “where,” and “when” Gen Z’ers use them.

As Gen Z’ers play greater roles in America their current classroom learning experiences will be reflected and help define how they will proceed. This should qualify for future research into the motives and perceptions that drive Gen Z behavior in today’s classrooms and their dawning futures as citizens across civic, corporate and political landscapes.

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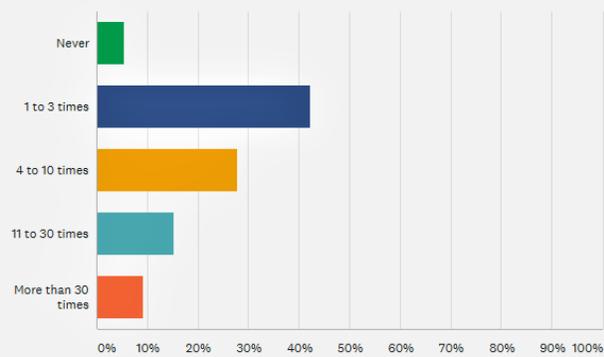
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## Table One

### DigiDistractions Q1 Phase III.pdf

Q1 On a typical school day, how often do you use a digital device during classes for non-classroom related activities such as texting, talking on a smartphone, emailing, surfing the web, tweeting or other social networking?

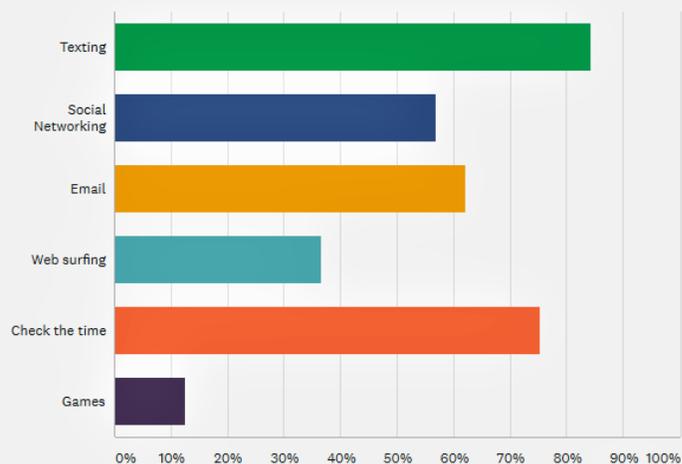
Answered: 1,032 Skipped: 114



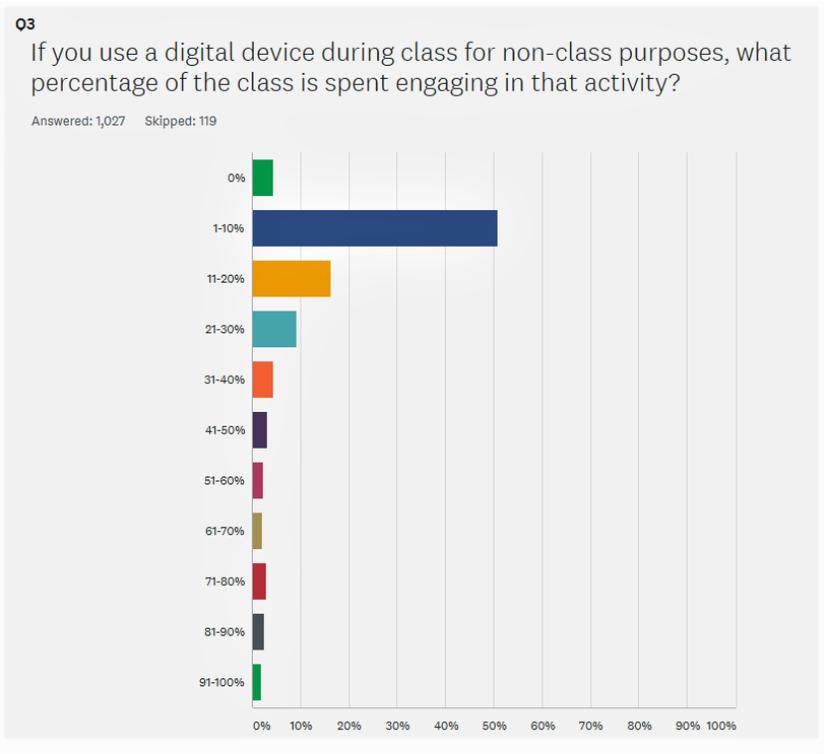
### DigiDistractions Q2 Phase III.pdf

Q2 If you use a digital device during class for non-class purposes, please describe all those purposes.

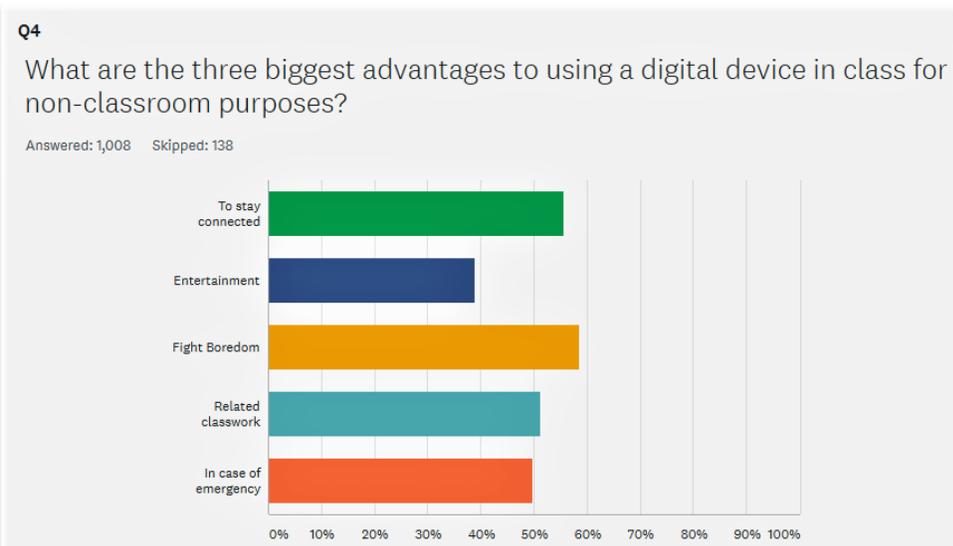
Answered: 1,002 Skipped: 144



### DigiDistractions Q3 Phase III.pdf



### DigiDistractions Q4 Phase III.pdf

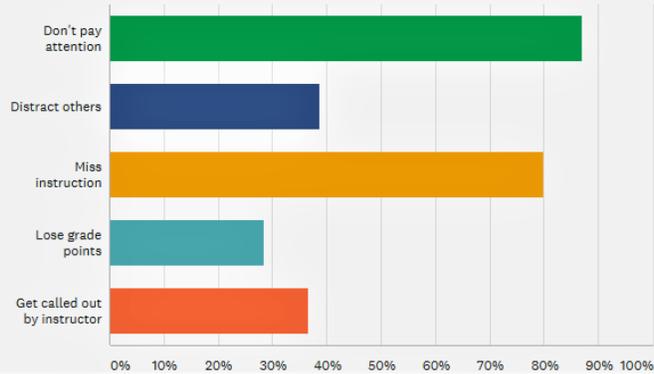


## DigiDistractions Q5 Phase III.pdf

Q5

What are the three biggest disadvantages to using a digital device in the classroom for non-class purposes?

Answered: 1,020 Skipped: 126

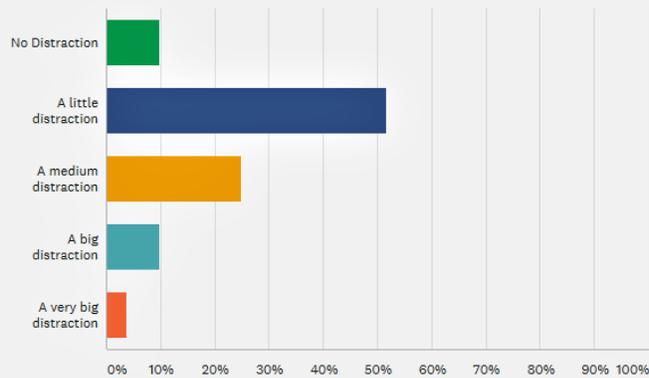


## DigiDistractions Q6 Phase III.pdf

Q6

How much of a learning distraction do you cause yourself if you use digital devices during class for non-class activities?

Answered: 1,027 Skipped: 119

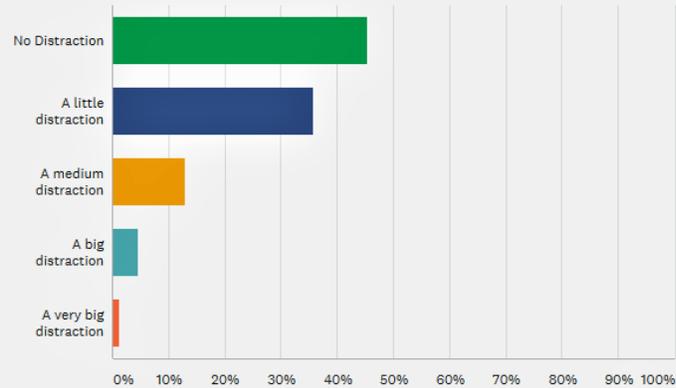


## DigiDistractions Q7 Phase III.pdf

Q7

How much of a learning distraction is it to you if other students use digital devices during class for non-class activities?

Answered: 1,033 Skipped: 113

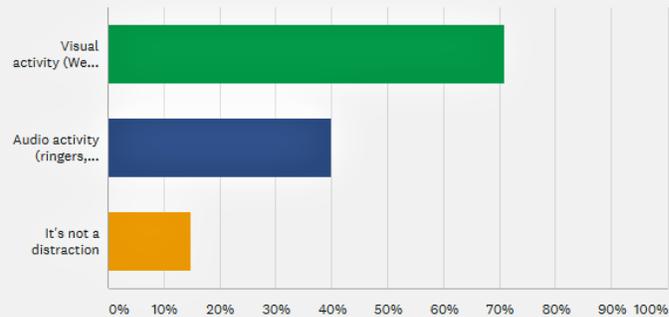


## DigiDistractions Q8 Phase III.pdf

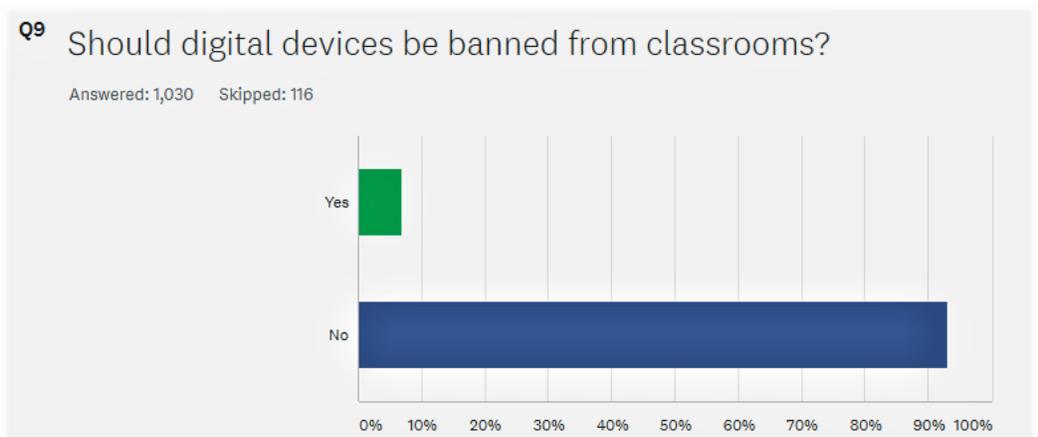
Q8

What types of distractions are caused by the use of digital devices during class for non-class activities?

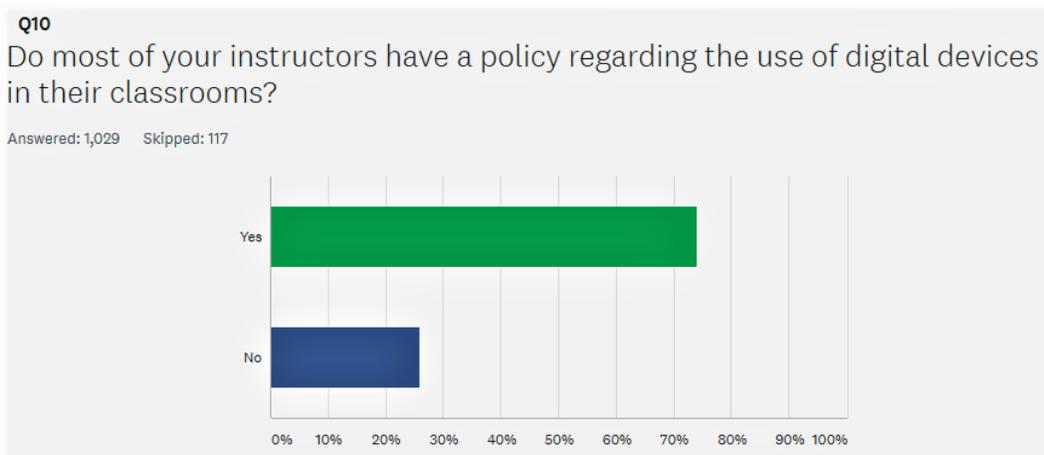
Answered: 1,026 Skipped: 120



### DigiDistractions Q9 Phase III.pdf



### DigiDistractions Q10 Phase III.pdf

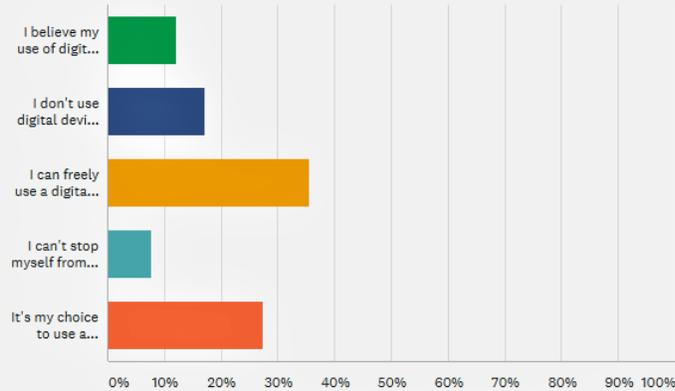


## DigiDistractions Q11 Phase III.pdf

Q11

Which of the following statements do you agree with MOST regarding classroom uses of digital devices for non-classroom purposes?

Answered: 988 Skipped: 158

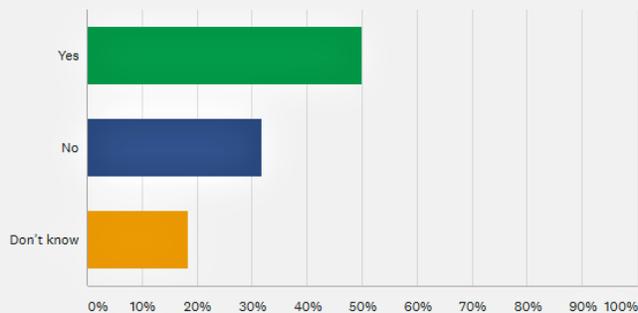


## DigiDistractions Q12 Phase III.pdf

Q12

Do you believe it is helpful to have policies limiting non-classroom uses of digital devices?

Answered: 1,028 Skipped: 118

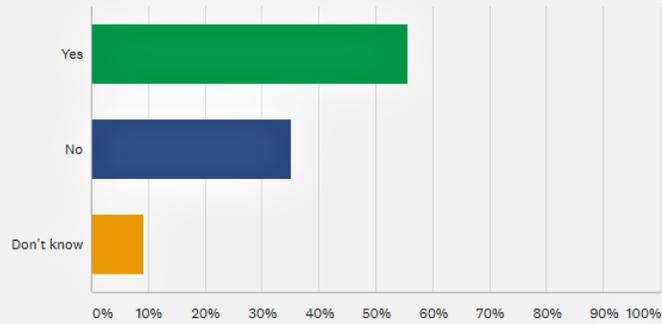


## DigiDistractions Q13 Phase III.pdf

Q13

Would it be helpful if instructors had a brief class discussion about the appropriate classroom use of digital devices at the beginning of each semester?

Answered: 1,020 Skipped: 126

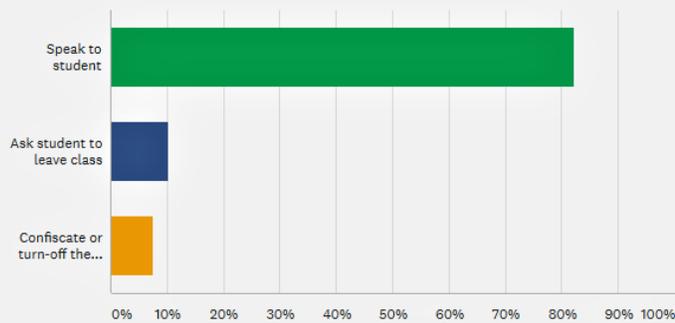


## DigiDistractions Q14 Phase III.pdf

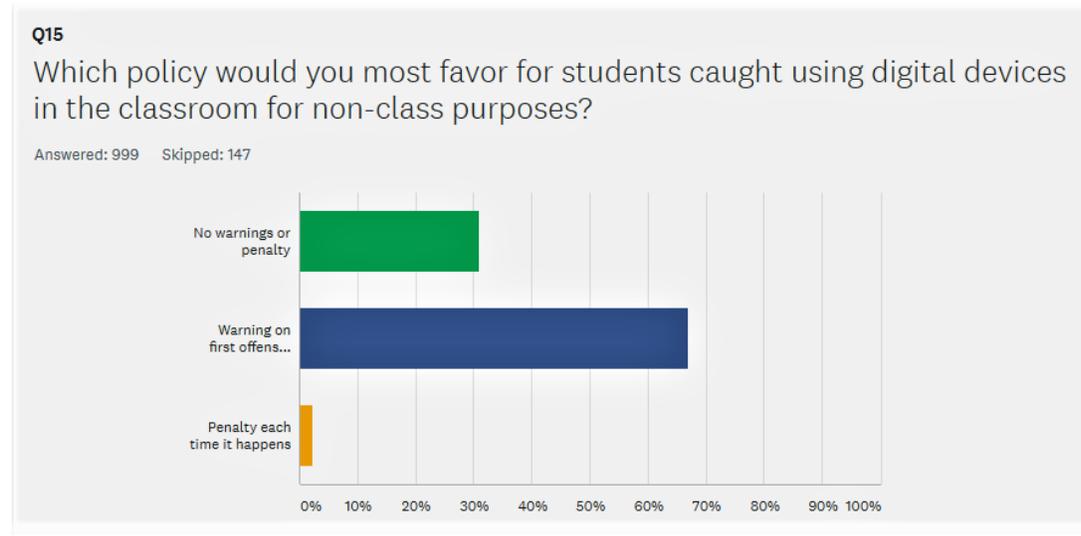
Q14

What should instructors do if a student causes a disruption by using a digital device for non-class purposes?

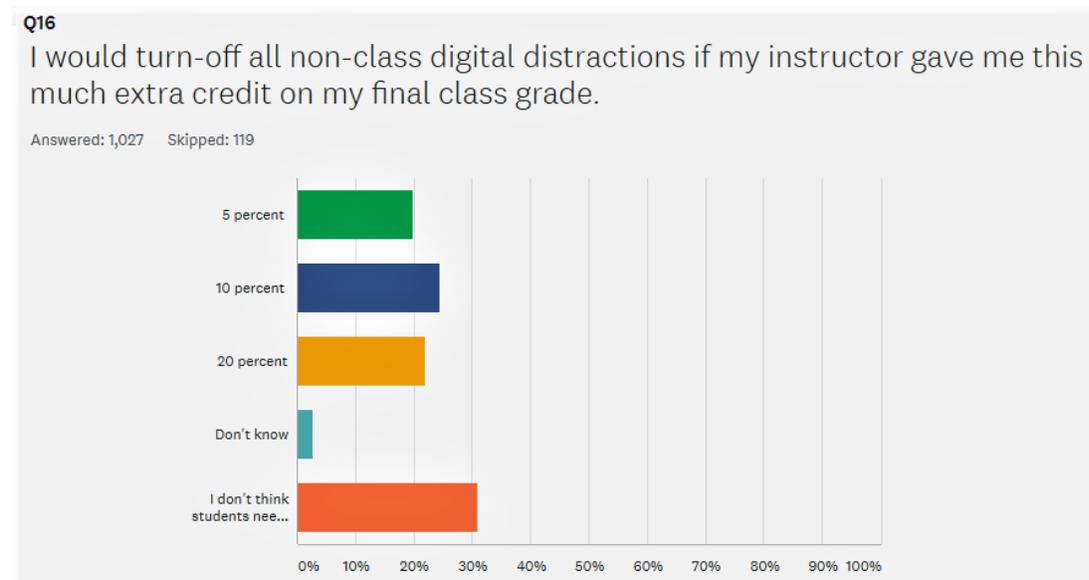
Answered: 944 Skipped: 202



## DigiDistractions Q15 Phase III.pdf



## DigiDistractions Q16 Phase III.pdf

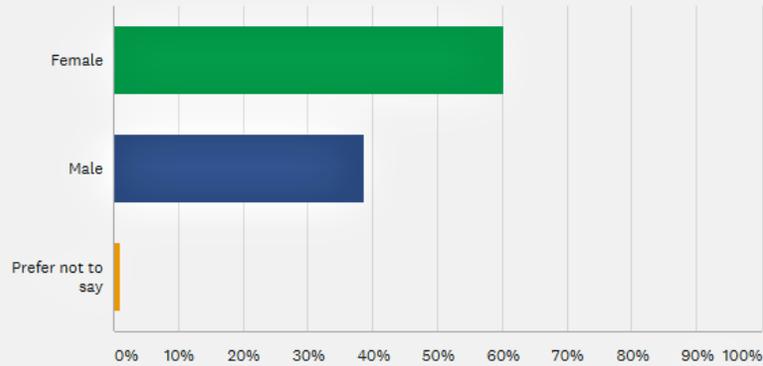


## DigiDistractions Q17 Phase III.pdf

Q17

What best describes your gender?

Answered: 1,026 Skipped: 120

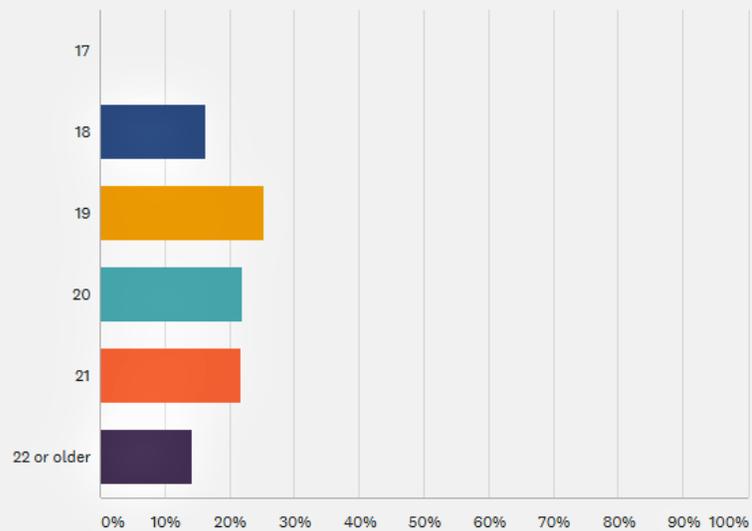


## DigiDistractions Q18 Phase III.pdf

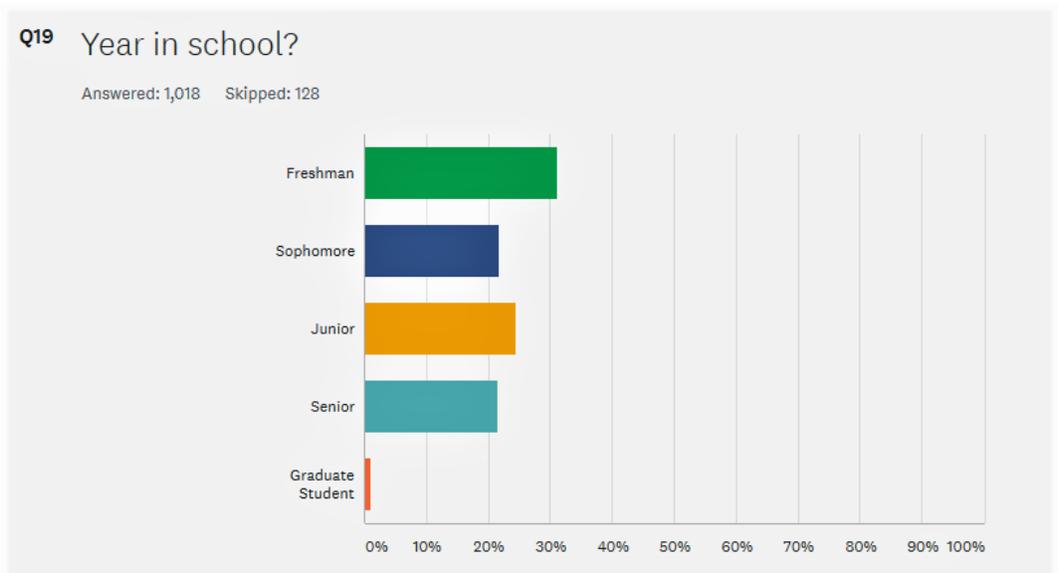
Q18

Your age?

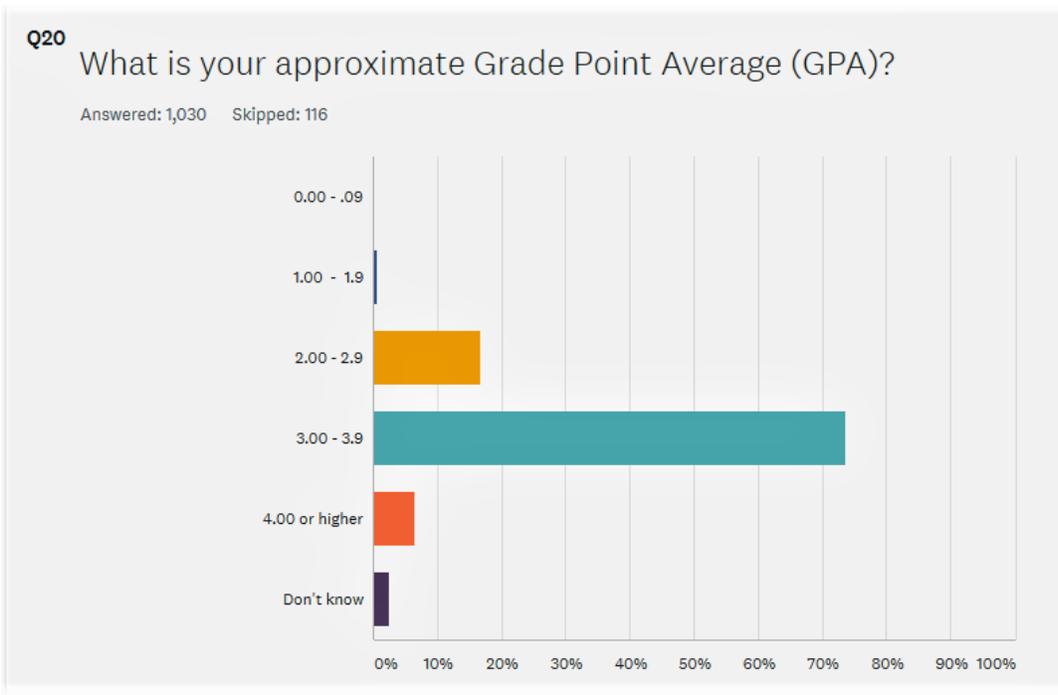
Answered: 984 Skipped: 162



## DigiDistractions Q19 Phase III.pdf



## DigiDistractions Q20 Phase III.pdf



## Table Two

### DigiDistractions Q1CompClass Phase III.pdf

Q1 On a typical school day, how often do you use a digital device during classes for non-classroom related activities such as texting, talking on a smartphone, emailing, surfing the web, tweeting or other social networking?

Answered: 1,032 Skipped: 114

	NEVER	1 TO 3 TIMES	4 TO 10 TIMES	11 TO 30 TIMES	MORE THAN 30 TIMES	TOTAL
Q19: Freshman (A)	4.42% 14	41.01% 130	26.81% 85	17.67% 56 C	10.09% 32	31.17% 317
Q19: Sophomore (B)	4.50% 10	42.79% 95	22.52% 50 C	18.02% 40 C	12.16% 27 C	21.83% 222
Q19: Junior (C)	6.43% 16	42.97% 107	33.73% 84 B	10.04% 25 AB	6.83% 17 B	24.48% 249
Q19: Senior (D)	6.39% 14	44.29% 97	29.68% 65	12.79% 28	6.85% 15	21.53% 219
Q19: Graduate Student (E)	0.00% 0	30.00% 3	30.00% 3	30.00% 3	10.00% 1	0.98% 10
<b>Total Respondents</b>	54	432	287	152	92	1,017

### DigiDistractions Q2CompClass Phase III

Q2 If you use a digital device during class for non-class purposes, please describe all those purposes.

Answered: 1,002 Skipped: 144

	TEXTING	SOCIAL NETWORKING	EMAIL	WEB SURFING	CHECK THE TIME	GAMES	TOTAL
Q19: Freshman (A)	85.62% 262	58.82% 180	54.58% 167 CD	35.62% 109	75.16% 230	14.71% 45	100.40% 993
Q19: Sophomore (B)	86.57% 187	58.33% 126	57.87% 125	37.96% 82	79.63% 172	12.50% 27	72.70% 719
Q19: Junior (C)	81.48% 198	55.56% 135	68.72% 167 A	34.98% 85	74.07% 180	10.70% 26	79.98% 791
Q19: Senior (D)	84.11% 180	53.74% 115	70.56% 151 A	36.45% 78	72.90% 156	10.75% 23	71.08% 703
Q19: Graduate Student (E)	100.00% 10	70.00% 7	60.00% 6	50.00% 5	90.00% 9	30.00% 3	4.04% 40
<b>Total Respondents</b>	837	563	616	359	747	124	989

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

### DigiDistractions Q2CompFemale Male Phase III

**Q2** If you use a digital device during class for non-class purposes, please describe all those purposes.

Answered: 1,002 Skipped: 144

	TEXTING	SOCIAL NETWORKING	EMAIL	WEB SURFING	CHECK THE TIME	GAMES	TOTAL
Q17: Female (A)	86.96% 527	57.76% 350	65.18% 395	35.15% 213	77.56% 470	10.23% 62 B	202.51% 2,017
Q17: Male (B)	81.63% 311	56.69% 216	58.27% 222	38.85% 148	71.92% 274	16.27% 62 A	123.80% 1,233
Q17: Prefer not to say (C)	66.67% 6	22.22% 2	33.33% 3	33.33% 3	88.89% 8	22.22% 2	2.41% 24
<b>Total Respondents</b>	844	568	620	364	752	126	996
	OTHER (PLEASE SPECIFY)						TOTAL

### DigiDistractions Q3CompClass Phase III

**Q3** If you use a digital device during class for non-class purposes, what percentage of the class is spent engaging in that activity?

Answered: 1,027 Skipped: 119

	0%	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%	TOTAL
Q19: Freshman (A)	3.18% 10	54.78% 172	17.83% 56	5.73% 18 BC	4.46% 14	1.91% 6	2.55% 8	3.50% 11 C	1.91% 6	2.55% 8	1.59% 5	31.03% 314
Q19: Sophomore (B)	3.17% 7	46.61% 103	17.19% 38	11.76% 26 A	4.98% 11	4.07% 9	1.81% 4	2.26% 5	3.17% 7	3.62% 8	1.36% 3	21.84% 221
Q19: Junior (C)	6.02% 15	51.41% 128	15.66% 39	10.44% 26 A	4.42% 11	3.61% 9	2.41% 6	0.40% 1 A	2.01% 5	1.20% 3	2.41% 6	24.60% 249
Q19: Senior (D)	4.59% 10	50.46% 110	13.76% 30	10.09% 22	3.21% 7	4.13% 9	2.75% 6	2.29% 5	4.13% 9	2.75% 6	1.83% 4	21.54% 218
Q19: Graduate Student (E)	10.00% 1	20.00% 2	40.00% 4	0.00% 0	10.00% 1	0.00% 0	0.00% 0	0.00% 0	10.00% 1	0.00% 0	10.00% 1	0.99% 10
<b>Total Respondents</b>	43	515	167	92	44	33	24	22	28	25	19	1,012

## DigiDistractions Q7CompFemale Male Phase III

Q7

How much of a learning distraction is it to you if other students use digital devices during class for non-class activities?

Answered: 1,033 Skipped: 113

	NO DISTRACTION	A LITTLE DISTRACTION	A MEDIUM DISTRACTION	A BIG DISTRACTION	A VERY BIG DISTRACTION	TOTAL
Q17: Female (A)	41.75% 258 B	37.54% 232	13.43% 83	5.50% 34	1.78% 11	60.23% 618
Q17: Male (B)	51.26% 204 A	33.17% 132	11.56% 46	3.52% 14	0.50% 2	38.79% 398
Q17: Prefer not to say (C)	40.00% 4	20.00% 2	40.00% 4	0.00% 0	0.00% 0	0.97% 10
Total Respondents	466	366	133	48	13	1,026

## DigiDistractions Q11 CompFemale Male Phase III

Q11

Which of the following statements do you agree with MOST regarding classroom uses of digital devices for non-classroom purposes?

Answered: 988 Skipped: 158

	I BELIEVE MY USE OF DIGITAL DEVICES OUTWEIGH CLASSROOM LEARNING DISTRACTIONS THEY MAY CAUSE.	I DON'T USE DIGITAL DEVICES BECAUSE OF THE CLASSROOM LEARNING DISTRACTIONS THEY MAY CAUSE.	I CAN FREELY USE A DIGITAL DEVICE WITHOUT IT CAUSING LEARNING DISTRACTIONS.	I CAN'T STOP MYSELF FROM USING DIGITAL DEVICES EVEN IF THEY MAY CAUSE LEARNING DISTRACTIONS.	IT'S MY CHOICE TO USE A DIGITAL DEVICE WHENEVER I FEEL LIKE USING ONE.	TOTAL
Q17: Female (A)	10.37% 61 B	15.82% 93	34.52% 203	8.67% 51	30.61% 180 B	59.76% 588
Q17: Male (B)	15.21% 59 A	18.30% 71	37.37% 145	6.19% 24	22.94% 89 A	39.43% 388
Q17: Prefer not to say (C)	0.00% 0	37.50% 3	25.00% 2	12.50% 1	25.00% 2	0.81% 8
Total Respondents	120	167	350	76	271	984

### DigiDistractions Q12 CompFemale Male Phase III

#### Q12

Do you believe it is helpful to have policies limiting non-classroom uses of digital devices?

Answered: 1,028 Skipped: 118

	YES	NO	DON'T KNOW	TOTAL
Q17: Female (A)	51.13% 316	28.96% 179 B	19.90% 123	60.35% 618
Q17: Male (B)	48.23% 191	36.36% 144 A	15.40% 61	38.67% 396
Q17: Prefer not to say (C)	40.00% 4	20.00% 2	40.00% 4	0.98% 10
Total Respondents	511	325	188	1,024

### DigiDistractions Q15 CompFemale Male Phase III

#### Q15

Which policy would you most favor for students caught using digital devices in the classroom for non-class purposes?

Answered: 999 Skipped: 147

	NO WARNINGS OR PENALTY	WARNING ON FIRST OFFENSE, FOLLOWED BY PENALTIES	PENALTY EACH TIME IT HAPPENS	TOTAL
Q17: Female (A)	28.50% 171 B	69.33% 416 B	2.17% 13	60.30% 600
Q17: Male (B)	34.81% 134 A	62.86% 242 A	2.34% 9	38.69% 385
Q17: Prefer not to say (C)	30.00% 3	70.00% 7	0.00% 0	1.01% 10
Total Respondents	308	665	22	995