

# Effects of Technology in the College Classroom

## Emma Sink, Marian University

### Introduction

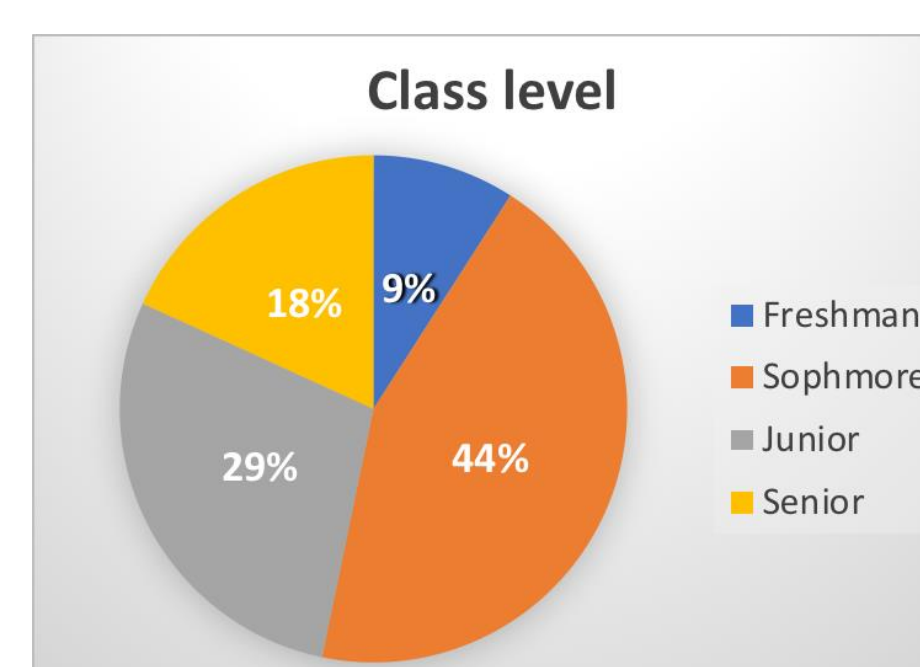
Students have become dependent on technology and do not always use it of educational purposes during class. Boredom and lack of interest are common reasons given by students for cell phone use in class. (Olufadi, 2015). Several studies have examined technology usage and it's effects in the classroom. One study found that higher overall usage of cell phones was correlated with lower GPAs. This study tracked the total amount of time phones were used in and out of school (Felsioni & Godoi, 2017). However, other studies report no impact of classroom phone use on learning. For example, students using phones during a class lecture and students not using phones had the same average lecture quiz scores. (Elder, 2013).

Our study examined the relationship between levels of classroom off-task technology use and classroom engagement, attitudes and GPA. We predicted a negative correlation between classroom technology use and all measures of classroom engagement and performance.

### Methods

**Participants:** 77 undergraduate students (48 women and 29 men) participated in an online survey. Participants were gathered using a snowball technique. The average age was 20.55 years. Most of the participants were college sophomores or juniors.

**Procedure:** After giving informed consent, students were asked questions about attitudes towards classes and learning, class engagement, technology use in class, GPA and phone usage. A debriefing was given after the survey was completed.



### Measures

**Class Attitudes** (10 Questions) Hart et al., 2011  
"I think what we are learning in school is interesting."  
Likert scale, 1 -5 (Strongly Disagree - Strongly Agree)

**Class Engagement** (6 Questions) Hart et al., 2011  
"I pay attention in class."  
Likert scale, 1-7 (Strongly Disagree - Strongly Agree)

**Tech-use** (5 Questions) Olufadi, 2015  
"I use my phone frequently during class"  
Likert scale, 1-5 (Never - Always)

**College GPA estimate**

### Results

No relationship was found between the level of off-task technology uses and GPA. Class engagement was negatively related to technology use and positively related to classroom attitudes and GPA.

Correlation Between	Pearson Correlation
Technology Use and GPA	-.157
Technology Use and Attitude	-.189
Technology Use and Engagement	-.286*
Engagement and Attitudes	.612**
Engagement and GPA	.296**



### Discussion

Our hypotheses were that the levels of off-task technology usage in class would be negatively correlated with measures of classroom engagement, attitudes, and performance. The results partially supported the hypotheses. There was a significant negative correlation between tech-use and class engagement but no relation to class attitudes or GPA. However, higher classroom engagement was a significant predictor of higher class attitudes and GPA.

A limitation of this study is that it relied on self-report data. We had no element of direct observation of technology use. Students may underestimate their usage. We also had a small number of participants.

The findings suggest that a student's classroom engagement is a better indicator of class attitudes and performance rather than the off-task usage of technology in a classroom. In addition, we speculate that it is one's engagement in class that will influence the frequency of technology use in a classroom.

### References

- Elder, A.D. (2013). College students cell phone use, beliefs, and effects on their learning. *College Student Journal*, 47(4), 585-592
- Felisoni, D., D., & Godoi A., S. (2017). Cell phone usage and academic performance: An experiment. *Computers & Education*, 117, 175-187.
- Hart, S. R., Stewart, K., & Jimmerson, S. R. (2011). The student engagement in schools questionnaire (SESQ) and the teacher engagement form-new (TERF-N): Examining the preliminary evidence. *Contemporary school Psychology*, 15, 67-79.
- Olufadi, Y. (2015). Gravitating towards mobile phone (GoToMP) during lecture periods by students: Why are they using it? And how can it be measured? *Computers and Education*, 87, 423-436.