

One Click Away

Examining the Perceived Academic Impact of Screen Time Among Pharmacy Students

Luke Aust, PharmD Candidate 2017

Carol J. Kobulnicky, PhD, RPh, Associate Professor

University of Wyoming

Honors Program

Spring 2016

Abstract

Technology has advanced significantly within the past decade and along with that has come the ability to use a variety of devices for academic purposes. While this can make accessing information much easier and allow for new organizational methods, it can also provide the opportunity for more distractions. The purpose of this study is to research how access to screens, such as smartphones, tablets and computers, impacts studying and academic performance in college students. We examined how this distraction potential can play a role in studying experiences and academic performance and how students attempt to overcome it. Focus group interviews with current pharmacy students were conducted, audio-recorded and analyzed. Participants reported using screen time for many activities ranging from communication and entertainment to educational purposes such as note-taking, studying and researching. From an academic standpoint, the reported positive contributions of screen usage are improved accessibility and organization, while the negative repercussions are distraction, obsessive habit surrounding use and poor sleep hygiene. Strategy to overcome the negative aspects of screen usage was overwhelmingly the need for self-control. Students spoke of using screen access as a reward for studying, setting clear limits on time spent using screens for non-academic reasons, and intentionally restricting personal access to the Internet. Helping students to generate a self-awareness of the need for this self-control provides a unique opportunity for collaboration among student leaders, instructors and administrators.

Keywords: technology, screen time, academics, distraction, self-control

Introduction

The aim of this study was to research how access to screens, such as smartphones, tablets and computers, impacts studying and academic performance in college students. Technology has advanced significantly within the past decade and with it has come the ability to use a variety of devices for academic purposes. While this can make accessing educational information much easier, it also provides more distractions. We examined how this distraction potential can play a role in studying experiences and academic performance as well as how students attempt to overcome it. Because these advancements have been so rapid, this is still a relatively new area of research. This study was completed to provide insight on how these distractions might be dealt with in the future to improve studying and overall academic performance in students.

Computing technology has seen rapid advances in both device functionality as well as Internet accessibility. The WiFi availability and length of login time here on the University of Wyoming campus is a prime example. Since 1997, the number of on-campus computers for student use has increased 800%. Since WiFi access points were installed in 2002, the number of access points has increased significantly, allowing for more widespread and continuous use. Between 2013 and 2014 alone, the average student login time increased by more than 50% (personal communication, Jesse Ballard, April 30, 2015). Computer use is increasingly widespread and of long duration among UW students, resulting in a potentially greater likelihood of screen-based distraction.

Research documents the negative impact of video games and television on children's sleep and academic performance (Peiro-Velert, et al., 2014; Sharif, et al, 2010). In addition, a systematic review analyzed how (unhealthy behaviors, of which screen time use was a factor, could impact the academic performance of adolescents (Busch et al., 2014). This review analyzed six different studies about screen time behaviors and found that many of these had negative impacts on academic performance. The authors report that certain behaviors, such as emailing, might have positive impacts but that overall this exposure to screen time can negatively affect both focus and grades by taking time away from activities related to school. The lay press also records some accounts of this distractive behavior with concerns toward student concentration and learning (Schwartz, 2013). Among college students, research has shown messaging (then, Instant Messaging or IM) does predict poor academic performance (schoolwork), per student self-report (Junco & Cotton, 2011). What appears to need further exploration is the college student's perspective of how screen usage can impact their academic performance both negatively and positively, and how they attempt to overcome the negative to be more successful.

How might these findings differ for college students enrolled in a professional doctorate program (i.e., the PharmD program) that requires screen usage for accessing course materials, completing assignments, studying for exams and communicating within teams? What strategies are used to reduce distractibility? Which ones are successful? These questions do not appear to have been studied. Due to this current knowledge gap, we aimed to examine screen usage and academic performance among college students enrolled in the UW School of Pharmacy using a focus group approach to promote discussion about the topic.

Methods

We conducted three focus groups comprised of first year (P1) and third year (P3) PharmD students at the University of Wyoming. These focus groups were conducted in conference rooms in the College of Health Sciences building on campus. Students were recruited by email from the P1 and P3 classes. During each focus group session, responses were collected from three major questions with each having multiple follow-up prompts. The questions were:

- 1) At this time in your life, what do you use screen time for?
- 2) How does screen time affect you academically, directly or indirectly?
- 3) What suggestions do you have for trying to overcome the negative impacts of screen time usage?

The focus group discussions were digitally audio-recorded and then transcribed verbatim by two research members after they were all concluded. Each transcription was cross-checked to ensure accuracy. The transcriptions were analyzed by all members of the research team to organize the information into overarching categories based on participant responses. These trends were further categorized into subgroups using direct quotes. Coding and sub-coding were conducted during multiple face-to-face meetings using a Google spreadsheet. When all transcripts were completed, coding was revisited and codes were consolidated for consistency and parsimony. Our research was approved by the Institutional Review Board and all responses were kept confidential and anonymously documented in the analysis.

Results

Five first-year pharmacy students and four third-year pharmacy students participated in focus groups ranging from 29 to 49 minutes in length. Of those students, six were women and three were men. Participants reported using screen time for many activities ranging from communication to entertainment purposes such as social media and watching videos to educational purposes like note-taking, research or looking up reference materials. Many students noted that they use their computer or iPad for pulling up lecture slides or reference books. One participant uses a screen for “*everything -- watching TV, researching things, Facebook, communicating with people, spending free time. I’m pretty much always on a screen.*” Another participant noted that using a screen is “*nice for studying. If I need to*

clarify a topic, I'll YouTube a video of [the subject],” and “anytime you have a question, you can reach out to Google.”

From an academic standpoint, the positive contributions of screen usage were improved accessibility and organization. Accessibility benefits included reports of having information quickly accessible via Internet, having easier collaboration with classmates, being able to take and read notes more easily, benefitting from color displays and the capability to zoom in to view complex diagrams. One participant noted, *“My electronic notes actually make it a lot easier for me to study. I can search key words, I can add in pictures to my notes that would be with a glue stick otherwise.”* Better organization and time management were also discussed as a benefit to screen usage. One particular aspect of organization brought up by several participants was summed by one who said, *“I think that it's really nice to have all of your resources and all of your files for all of your classes in one small device.”*

The negative repercussions brought up by participants were the distraction, obsessive habit surrounding use and poor sleep hygiene. Distraction included the individual being pulled away from studying due to lack of self-control. One participant noted, *“You can always find something to do if you're on your tablet. I mean, the Internet is one click away. If I'm in my notes and I want to get out, push the home button, got the whole world in front of me.”* Another type of distraction was described as coming from fellow students who *“ask...questions completely not related to school in the middle of studying and you have to take time out [to respond].”* The obsessive, habitual nature surrounding its use, such as the checking and rechecking of social media, was exemplified by a participant who explained, *“I'll get on and I'll be like alright, I'm gonna check Facebook, I'm gonna check Instagram, I'm gonna check this other app, Snapchat. I get through all of them and I'm like, alright, start at the beginning again.”* Poor sleep hygiene primarily resulted from exposure to the blue light coming from screens (related to melatonin effects) due to reading or responding to texts and emails in the middle of the night. One participant discussed this behavior by noting, *“If I like wake up in the middle of the night, I like have this habit of checking my phone so if people have emailed me or texted, I like think it's super important at three in the morning to go through them.”*

Strategy reported to overcome the negative aspects of screen usage was overwhelmingly the need for self-control. This suggests an unspoken need for self-awareness about how much screen time we consume, and an intentional effort to

reduce screen time. Strategies for exercising self-control include restricting access to potential distractions. As one participant noted: *“I think studying with your phone away from you or on silent is a good thing.”* It also incorporated setting personal boundaries such as to *“set strict time limits on when you’re going to go back to studying.”* The last main strategy was to use screen time as a reward. *“If I’m going to study, then every so often after studying I can get on Facebook for five minutes kind of thing. Even reward yourself, but also have the self-control to be like alright, once that five minutes is up, though, back to studying.”*

Discussion

The Internet is a necessity in the academic life of any college student. For this reason, we examined pharmacy students’ perspectives of how screen usage impacts their academic performance, as well as how they overcome the negative impact. Previous research supports the argument that screen time use definitely affects the academic performance of adolescents (Busch et al., 2014). In addition, instant messaging (IM) while studying has been shown to negatively impact schoolwork among college students (Junco & Cotten, 2011).

Building on these studies, our findings highlight how students perceive screen usage, including messaging, negatively impacts their academic performance. They reported it as a distraction and an obsessive habit, and something that contributes to poor sleep hygiene. In particular, it was noted that one-click access to the Internet, more than the devices themselves, was a big factor in becoming distracted.

When given the opportunity, students reported positive impacts of screen usage, such as improved accessibility and organization. Acknowledging this demands the need to find a balance. When asked, self-control was repeatedly suggested as a means for overcoming the negative aspects of screen time usage. While previous authors have suggested the need for interventions to help students better manage their time and the cognitive load of studying (Junco & Cotten, 2011), participants in this study identified actual ways they and others strategize to exercise self-control. Their input fills the current knowledge gap with practical suggestions and tools for managing this growing potential issue. While somewhat intuitive, these findings support the need for greater self-awareness and intentionality with screen usage.

Conclusion

Screen usage can be productive in students’ lives, positively influencing studying and

academic performance. It can also be a distraction and become an unhealthy and damaging habit. The idea of self-control was repeatedly suggested as a means for overcoming the negative aspect. As Internet access continues to have a bigger role in students' lives, striking a balance that optimizes academic usefulness while minimizing the drawbacks will be imperative for student success. Helping students to become more self-aware of the need for a balance and self-control provides a unique opportunity for collaboration among student leaders, instructors and administrators. Study findings provide a starting point to overcoming this growing challenge.

References

- Busch, V., Loyen, A., Lodder, M., Schrijvers A.J.P., van Yperen, T.A., de Leeuw, J.R.J. (2014). The Effects of Adolescent Health-Related Behavior on Academic Performance: A Systematic Review of the Longitudinal Evidence. *Review of Educational Research*, 84(2), 245-274.
- Junco, R., Cotten, S. (2011). Perceived Academic Effects of Instant Messaging Use. *Computers & Education*, 56(2011) 370-378.
- Peiro-Valert C., Valencia-Peris A., Gonzalez L.M., Garcia-Masso X., Serra-Ano P., Devis-Devis J. (2014). Screen Media Usage, Sleep Time and Academic Performance in Adolescents: Clustering a Self-Organizing Maps Analysis. *PLoS ONE* 9(6): e9947
- Schwartz, K. (2013). Age of Distraction: Why It's Crucial for Students to Learn to Focus. Retrieved May 5, 2015, from <http://ww2.kqed.org/mindshift/2013/12/05/age-of-distraction-why-its-crucial-for-students-to-learn-to-focus/>
- Sharif, I., Wills, T. A., & Sargent, J. D. (2010). Effect of visual media use on school performance: A prospective study. *Journal of Adolescent Health*, 46, 52–61.