JCAPS

RESISTIBLE: HOW THE SDSU COMMON READ ENCOURAGED MORE CONSCIENTIOUS USE OF TECHNOLOGY

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Heavy use of digital media is known to reduce psychological well-being. A recent campus Common Read program, which included reading Irresistible *(Alter, 2017) and attending a series of events, attempted to promote more conscientious relationships with technology, thus supporting psychological well-being. Changes in mobile phone dependence and self-reported technology use behaviors were evaluated with questions grounded in the theory of planned behavior, measuring students' attitudes, subjective norms, behavioral control, and intentions to decrease their use of non-educational technology. Noteworthy interactions included Common Read participants (n = 148) reporting less discomfort during times of mobile-phone abstinence and engaging in fewer social media platforms compared to control (n = 88). Common Read participants also consistently measured more favorably regarding behavioral control and screen time. Although participants' intentions to reduce their non-educational technology use were not changed, other indicators support the conclusion that participants became more conscientious about their behavior due to Common Read programming participation.*

Common reading programs are not new to the world of higher education. These programs have been credited with community building and common conversations, particularly among incoming students (Ferguson, 2006; Laufgraben, 2006). Unless otherwise noted, the terms *college students* or simply *students* refer to undergraduate students generally enrolled at physical campus locations. The Common Read program at South Dakota State University (SDSU) began in 2009. While many collegiate Common Read programs occur during new student orientations, our Common Read takes place over much of the fall academic semester. It is an opportunity for students to share in a common intellectual experience with one another while also enhancing faculty and student engagement. The SDSU campus and community Common Read is built upon characteristics attributed to dynamic and successful programs of this nature, such as the engagement of campus with local communities (Laufgraben, 2006), and serves as a great example of a gown and town program where the Brookings, SD community and SDSU collaborate to invest in an enriching educational experience.

Further, the SDSU Common Read program committee is comprised of students, faculty, staff, community members, and high school curriculum professionals. Librarians, noted for their unique enhancement of the success of such programs (Boff, Schroeder, Letson, & Gambell, 2005), have been central to our own process of book selection, programming, and resource development. Our Common Read builds upon the imperatives for campus activities described by Dungy and Peck (2019), particularly in focusing on quality engaging events, institutional priorities, enhancement of practical skills, and implementation of student-centered assessments. Further, our program incorporates high-impact practices associated with educationally purposeful activities (Komives, 2019).

A recent survey of common reading programs at six large public universities revealed that programs of this type are particularly effective at enhancing self-reported academic performance, multicultural appreciation, and sense of belonging among many other positive outcomes (Soria, 2015). Like many others, the SDSU campus and

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community Common Read serves as a vehicle for academic challenge and supports our cross-curricular mission of enhancing diversity, inclusion, equity, and access. While some of the broad-reaching outcomes of common reading programs have been published and referenced above, little is known about the impact of these programs on planned behaviors related to specific topics among participants.

Our goal was to engage in conversations designed to elevate awareness about addictive behaviors as well as the intended and unintended consequences of our current level of engagement with technology. Themes of Access, Behavior, Connection, and Safety were developed to represent the ABC'S of the conscientious use of technology. We hypothesized that participation in the Common Read would lead to more conscientious use of technology, specifically manifested as reduced technology use, exhibition of less dependence, and reported intentions to decrease non-educational technology use following the semester-long program.

LITERATURE REVIEW

Technology

After careful consideration of numerous nominations, campus and community members of the Common Read Committee selected Adam Alter's original, *Irresistible,* as the 2019 Common Read. This text offers insight into the "addictive nature of technology and the business of keeping us hooked." Alter takes us on a non-judgmental journey exploring technologies that people have adopted thinking that would enrich their lives and the myriad reasons why the average adult spent a mere eight minutes per day on cell phones in 2008 compared to two hours and forty-eight minutes in 2015 (Alter, 2017).

The first issue of the *Journal of Campus Activities Practice and Scholarship* featured an article on how campus activities can be pivotal in addressing the needs and changing demographics of the modern student (Dungy & Peck, 2019). For a college to remain relevant and to address the needs of each new generation, college activities shall be designed within an understanding of the myriad factors which have shaped the students. One such factor that has shaped the current and future generations of students, perhaps more than any previous, is the advancement and abundance of technology. Today's youth are constantly immersed in screen-based technologies within their homes and educational contexts (D'Angelo, 2020). This level of immersion raises questions about such use and its implications on positive and negative outcomes such as addiction and other or unhealthy behaviors. One positive outcome of engaging in screen-based technology is developing a more extensive social support network (Viswanath, 2008). That is, people engaged in social media platforms have more access to information and support from other individuals, possess a platform for self-expression, and can build new relationships (Royal Society for Public Health, 2017). A recent survey found that "routine use," or regular use, was positively correlated with social well-being, positive mental health, and self-rated health (Bekalu, McCloud, & Viswanath, 2019).

On the other hand, the nature of internet addiction is complex. Predicting addiction is not as easy as assessing psychosocial maturity or self-efficacy. Indeed, addiction depends on myriad contributing factors, including abnormalities in the brain's dopaminergic system (Kim, Baik, Park, Kim, Choi, & Kim, 2011; also see Wang, 2001). The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not currently have diagnostic criteria for behavioral addiction except for gambling disorder. However, the organization has deemed an Internet Gaming Disorder (IGD) worthy of consideration and has emphasized the need for further research. Although our manuscript does not focus solely on internet gaming, it would be included under the umbrella of non-educational technology. All behavioral addictions require clinically significant impairment in important areas of one's life (e.g., work or interpersonal relationships).

Specifically, nine diagnostic criteria for Internet Gaming Disorder are outlined in the DSM-5. A person must exhibit 5 of the nine symptoms for an IGD diagnosis. The diagnostic criteria are 1) preoccupation with Internet games, 2) withdrawal symptoms when Internet gaming is taken away; 3) tolerance; 4) unsuccessful attempts to control the participation in Internet games; 5) loss of interest in previous hobbies and entertainment as a result of, and with the exception of, Internet games; 6) continued excessive use of Internet games despite knowledge of psychosocial problems; 7) has deceived family members, therapists, or others regarding the amount of In-

ternet gaming; 8) use of Internet gaming to escape or relieve a negative mood; and 9) has jeopardized or lost a significant relationship, job, or educational or career opportunity because of participation in Internet games (American Psychiatric Association, 2013). Prevalence estimates for the proposed Internet Gaming Disorder are still forming. One recent study of over 1,800 adults who had used a massively multiplayer online game (MMO) in the last 12 months estimated that 4.2% of the sample would meet the criteria for the disorder (Carlisle, 2021).

Additionally, time spent on internet gaming or social networking sites harms one's mental health. In one study of Canadian children and adolescents (grades 7-12), 2 hours per day on social networking sites appeared to be a threshold where users reported more psychological distress and suicidal ideation (Sampasa-Kanyinga & Lewis, 2015). Adults aged 19-32 showed similar effects; those that visit social media sites the most were at a significantly increased odds of exhibiting depression symptoms (Lin et al., 2016)

Investigations into cell phone addiction among college students have revealed some differences between men and women (Roberts, Yaya, & Manolis, 2014; Kim, Kim, Kim, Ju, Choi, & Yu, 2015), but an overarching effort to establish social connections appears to be one commonality (Roberts, Yaya, & Manolis, 2014). Further, positive correlations between smartphone addiction and depression have been identified in college students (Kim et al., 2015; Jeong, Lee, Kim, Park, Kwon, Kim, Lee, Choi, & Lee, 2020). According to a Pew Research Center report, 48% of adults aged 18–29 are online "almost constantly" (Pew Research Center, 2021).

Though the risk factors for smartphone or screen addiction remain relatively elusive, the impacts of addiction among college students are clear. College students, who are still developing, are especially susceptible to internet addiction due to ready access and even an expectation of use (Kandell, 2009). Given these factors, it's no wonder that student performance can be impacted as addictions develop. Mishra and colleagues (2014) reported that unfettered access to technology among college students could result in academic success that is inversely related to the level of student internet addiction. Many studies on this topic are correlational, so they cannot wholly explain the well-being and digital media relationship. It could be that heavy digital media use leads to lower psychological well-being, including anxiety and depression. Alternatively, it could be that lower psychological well-being leads to heavier digital media use. Experimental research that can establish cause and effect relationships has supported the former interpretation of the connection. For example, when undergraduate students limit their use of Facebook, Instagram, and Snapchat to 10 minutes per platform per day, they exhibited significantly fewer loneliness and depression symptoms (Hunt, Marx, Lipson, & Young, 2018). In an older age group (M age = 34), participants who took a break from Facebook, operationalized as no Facebook use for one week, reported increased life satisfaction and positive emotions (Tromholt, 2016). While these studies were different in many respects, data from both highlighted the role of users' envy while browsing social media platforms. Specifically, when participants were engaged in social media activity, they compared their own lives and activities to the lives and activities presented by others. Because the activities one sees presented online are idealized, it is easy to come up short by comparison.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB; Ajzen, 1991, 2014) is a widely used model to predict people's behavior based on multiple factors. The theory assumes that a person's behavior can be traced back to their intentions to engage in a targeted behavior. Intentions can be traced back to the person's attitudes toward the behavior, subjective norms about the behavior, and perceived behavioral control. For example, according to the Theory of Planned Behavior, a person wearing a seat belt in a moving vehicle can be traced back to the intentions to do so and their attitudes, subjective norms, and perceived behavioral control. Specifically, an attitude is a person's beliefs about the behavior (e.g., wearing a seat belt) and their evaluation of the outcomes related to that behavior. In other words, a person's attitude is a gauge of whether they favor or disfavor engaging in the behavior. Subjective norms involve how significant others around the individual, like friends and family, feel about the behavior (i.e., normative beliefs) and how motivated the individual is to comply with those norms. Perceived behavioral control is whether the person feels in control of the behavior in question. Putting it all together, the Theory of Planned Behavior could predict a person's likelihood of wearing a seat belt by knowing their intentions, attitudes about wearing seat belts, subjective norms, and perceived behavioral control.

Francis and colleagues (2004) suggested a behavior (e.g., wearing a seat belt) should be defined with the Target, Action, Context, and Time (TACT) carefully considered. For example, in the current paper, the target behavior was, "In the next three months, 2019 Common Read participants will decrease their use of non-educational technology such as, but not limited to, social media, gaming, and online entertainment." The target was all participants involved in the Common Read program; the Action was to decrease non-educational related technology use, the Context is the addictive nature of technology, and the Time is the next three months.

CAMPUS AND COMMUNITY COMMON READ

The South Dakota State University campus and community Common Read program occurs in the fall semester of each academic year. The program and associated campus activities are promoted to the entirety of our campus community and the local community. Though all undergraduate and graduate students are welcome and encouraged to attend, our attendees are most commonly first-year students. Several first-year seminars and a few upper-level courses require students to read the book and attend one or more Signature Events.

One of the largest courses to require participation is the Honors Orientation course for first-year students pursuing honors distinction. Assignments related to the Common Read comprise up to 40% of the total available points in the 1-credit Honors Orientation course. In 2019, students were asked to attend three Common Read events of their choosing and to complete a guided reflection on each, drawing connections to the text and the programmatic themes. Students went on to complete a group project related to technology. In this assignment, teams were asked to investigate an area of technology of particular interest, design a research question, and design a small experiment to address the question. Students presented the background, findings, and relevance to the Common Read via an infographic and final paper. Finally, students completed a summative reflection on their experience with the Common Read. The Honors Orientation Course represents one of the most in-depth curricular implementations of the Common Read each year. The level of engagement among first-year courses varies from reading the text to engaging in one or more events and a related assignment.

Figure 1. *Marketing materials highlighting Signature Events of the Common Read Program.*

In 2019, Kulp and colleagues characterized campus-based signature events as large-scale events with high attendance by heterogenous populations with high impact (Kulp, Pascale & Grandstaff, 2021). The Signature Events associated with our Common Read are designed with these criteria. In the fall of 2019, SDSU offered 12 Signature Events (see Figure 1) free to the campus and local communities. Many of these events were planned by the Common Read committee, and several were sponsored and hosted by campus and community partners. The 12 Signature Events can be categorized as: interactive, film, lectures or forums, or independent passive events.

Interactive Events

Three of our 12 Signature Events were designed to be highly interactive. The first was a *Campus and Community Common Read Kickoff* event designed to be highly interactive, introducing the text and programmatic themes. Participants were guided to several interactive stations to explore various facts about technology. The SDSU Psychology Club (a student organization) hosted a *Technology Resource Fair* in the main hallway of the University Student Union. This resource fair showcase technology-related resources available on campus and in the community while addressing the influence of Common Read programmatic themes in everyday life. Finally, a hallmark of our Common Read program each year is a *Writing as Reflection* event. Participants in the 2019 event spent an evening with guided journaling focused on the technologies in our lives and the impact of those technologies on ourselves and our relationships with others. These interactive events are among the most highly attended.

Films

Two films were integrated as Signature Events. Community partners hosted both to reach broader audiences within the community. A feature film, *Screenagers: Growing Up in the Digital Age,* set the stage for a community-wide exploration of the impact of technology uses on families and academics. This event was sponsored by community partners, the Brookings Human Rights Commission and the Brookings Public Library. The Brookings Public Library hosted a second featured film, *Submit the Documentary*. The film highlighted the complexities of cyberbullying and provided a launching point for a robust community discussion. Both events were promoted through local schools and the Boy and Girls Club to involve educators and parents in the discussions.

Lectures or Forums

Six lectures or forums were offered in our line-up of Signature Events. In each of these events, attendees were encouraged to participate via a robust question and answer session at the end of the event. The SDSU Office of University Marketing and Communications led a discussion on digital accessibility, complete with tips and justification. This event was selected to promote understanding of why digital accessibility is important within the community, in addition to tips for creating accessibility. Each year, the College of Arts, Humanities, and Social Sciences hosts a public lecture on a topic of importance. In 2019, they hosted *Liberal Arts and Technology: Our Need for Ethics* which dovetailed wonderfully with the Common Read program. The student-led University Program Council (UPC) hosted a *Technology Forum* to discuss the impacts of technology on personal, professional, and collegiate lives. The Office of Multicultural Affairs, UPC, and the SDSU Van D. and Barbara B. Fishback Honors College jointly hosted an event featuring technology expert and Latino author to explore the impacts of technology on the Latina/o/x communities in the U.S. This event shed light on how specific communities and identities are portrayed or not portrayed in the media. The SDSU Department of Psychology hosted a lecture, "*Technology Does What to Your Memory?!*" featuring lead author Tyler Miller an Associate Professor of Psychology. The line-up of Signature Events culminated in a lecture and forum from Adam Alter, author of *Irresistible*. Alter offered a provocative exploration of the addictive nature of technology and continued to address a breadth of questions from the audience.

Independent Passive Events

For the first time in the history of the SDSU Common Read, we hosted a passive event. One week in early October was dedicated to our passive event, the *Technology Challenge*. Each day, the Common Read posted a new technology use-related challenge, such as reducing screen time or calling home. Students, staff, and community members were encouraged to engage on their own time.

METHOD

Research Design

This study examined the effect of the co-curricular "common read" program on students' non-educational technology behaviors. For the Common Read survey, we used a repeated measures research design and a control group to evaluate change resulting from Common Read participation. Specifically, we used a mixed randomized repeated-measures

research design with a quasi-independent variable *Condition* (Common Read or Control), an independent variable *Time* (Time 1 and Time 2), and dependent variables consisting of participants' responses to survey questions (see Measures below). Furthermore, for the One-time Signature Event survey, we examined whether different event types (Interactive, Film, or Lecture/Forum) would elicit different levels of intention to change for students and non-students. We also examined changes in intentions over time using data from the One-time Signature Event survey.

Sample

In all, 236 students (Common Read n = 148, Control n = 88) completed all aspects of the study (Common Read completion rate = 46.9%, Control = 82.2%) and were included in subsequent data analyses (see Tables 1-2). Data included their Grade Point Average (GPA), American College Testing (ACT) score, participant age, and academic college. High school GPA has been a strong predictor of student success in college (Allensworth, & Clark, 2020). The ACT is the most commonly used standardized test in the Midwest and South Dakota State University. These demographics, along with academic college and age, are also easy for students to recall when completing a survey. Common Read participants came from several courses that included required Common Read activities (e.g., Honors College Orientation and Biology First Year Seminar). Control group participants were all surveyed from a General Psychology course which did not include required Common Read activities. As an evaluation effort, this research did not require Institutional Review Board (IRB) approval. However, all participants were informed of the research purposes and agreed to complete the survey.

Table 1. *Participant demographics.*

		Gender				
Condition	Female	Male	No Answer	GPA	ACT	Age
Common Read	104	41	3	3.48 (0.63)	25.89 (4.72)	18.69 (0.59)
Control	67	21	0	3.05 (0.90)	21.61 (3.71)	19.16 (2.07)

Note. GPA = Grade Point Average (0-4) for Fall 2019. ACT = American College Testing standardized test performance (1-36). Values in parentheses indicate standard deviation.

Table 2. *Academic college distribution among study participants*

Major College	Common Read (n = 148)	Control (n = 88)
Agriculture, Food & Environmental Sciences	34.46%	4.55%
Arts, Humanities, and Social Sciences	14.19%	28.41%
Education and Human Sciences	10.81%	26.14%
Engineering	8.78%	1.14%
Natural Sciences	18.24%	5.68%
Nursing	7.43%	32.95%
Pharmacy & Allied Health Professions	4.73%	1.14%
No Answer	1.35%	0.00%

Measures

Theory of planned behavior. We followed Francis and colleagues (2004) manual to create questions grounded in Ajzen's (1991) theory of planned behavior (TPB). Creating one's own questions is common and used to measure a variety of planned behaviors such as the likelihood of adhering to a prescription medication regimen, engaging in pro-environmental behavior, or texting while driving (Ben-Natan, & Noselozich; Lakhan, 2018; McBride, Carter, & Phillips, 2020). Our questions were written to examine behavior change related to technology use behaviors. In all, there were 11 Likert-style questions to measure students' attitudes (4 questions), subjective norms (3), and behavioral control (4) about decreasing their use of non-educational technology in the near future. There were also 3 Likert style questions to measure participants' intentions to decrease their use of non-educational technology in the next three months. Participants answered all questions on a Likert Scale ranging from one to seven (see Table 3 for sample questions from each question area).

Table 3. *Theory of Planned Behavior example questions.*

Question Area	Question and Scale
Attitudes	Decreasing my use of non-educational related technology in next 3 months would be ... 1 (Harmful) to 7 (Beneficial)
Subjective Norms	Most people who are important to me think that I should decrease my use of non-educational technology in the next 3 months. 1 (Strongly Disagree) to 7 (Strongly Agree)
Perceived Behavioral Control	I am confident that I could decrease my use of non-educational technology in the next 3 months 1 (Strongly Disagree) to 7 (Strongly Agree)
Intentions	I intend to decrease my use of non-educational related technology in the next 3 months 1 (Strongly Disagree) to 7 (Strongly Agree)

Self-reported technology behaviors. We measured participants' self-reported technology behaviors about screen time, their use of social media platforms, and some safety behaviors related to technology use. Participants reported how much time per day (in hours) they engaged in screen time for non-educational purposes (including mobile phone and computer screen time). They also reported the number of social media platforms they use and how often they use them from a list (e.g., Twitter, Instagram, Facebook). Finally, we asked participants about their safety-related behaviors, such as making social media profiles private and reviewing their posts periodically to remove potentially offensive content.

Test of Mobile Phone Dependence. We also measured participants' mobile phone dependence using the Test of Mobile Phone Dependence Brief questionnaire (TMDBrief; Choliz, et al., 2016). The TMDBrief is a valid and reliable instrument that measures mobile phone dependence using 12 items representing four distinct factors. The four factors are 1) *Abstinence,* 2) *Abuse, interference with other activities,* 3) *Tolerance,* and 4) *Lack of control*. The *Abstinence* factor items refer to the discomfort felt when one is unable to use their mobile phone or using one's mobile phone to relieve psychological discomfort (e.g., "I don't think I could stand spending a week without a mobile phone."). The "*Abuse and interference with other activities*" items refer to interference with everyday functioning. Tolerance items refer to needing to use one's mobile phone more and more to achieve similar positive effects. The fourth and final factor featuring "*Lack of control*" items measure one's inability to stop using their mobile phone.

One-time Signature Event survey. Finally, given the Common Read events were open to the public, we also gathered some information from attendees by asking them to indicate their intentions to decrease their use of non-educational technology in the near future.

Procedure

Common Read Survey. We invited students to participate in the Time 1 Common Read survey on August 29-30, 2019, through an online survey software. The following week, eligible students received multiple reminder emails with invitations to participate. Following all Common Read programming, students received invitations and reminders to participate in the Time 2 Common Read survey on November 21-22, 2019.

One-time Signature Event survey. Following each Signature Event, Common Read committee volunteers distributed half-sheets to audience members as they walked out the door containing two questions. The first question asked the audience member to indicate if they were a student or non-student. The second question asked them about their intentions to decrease their use of non-educational technology. Respondents completed the 2-item survey and returned it immediately.

Data Analysis

For the primary survey, there are three statistical effects that this research design can reveal. First, for the main effect of Condition, we can compare the measurements for the TPM, TMD, and self-reported behavior questions from the Common Read and Control conditions. This effect reveals whether there are differences among conditions regardless of Time. Second, for the main effect of Time, we can compare measurements from Time 1 to Time 2 regardless of condition. Most important, though, is the interaction effect. The interaction effect is the most revealing because it shows the specific contribution of the common read program. It considers the simultaneous effect of the Condition and Time, referred to as an intervention effect.

For the One-Time Signature Event Survey, we used ANOVA to determine the relative effectiveness of event type (i.e., interactive, film, or lecture/forum) to elicit more intentions to decrease the use of non-educational technology on students and non-students. Second, we examined whether intentions to decrease the use of technology would become more pronounced over time using descriptive statistics (e.g., whether the effects of attending multiple events would be additive for students and non-students). No data were collected following the *Technology Challenge* event because participation was independent. We predicted that as attendees participated in more Signature Events, the message about conscientious use of technology would accumulate, and they would report more intentions to decrease their use of non-educational technology.

RESULTS

The Results section is presented below. Data from the Theory of Planned Behavior survey (i.e., attitudes, subjective norms, perceived behavioral control, and planned usage) is presented first, followed by planned usage data from the One-Time Signature Event survey. Next, data from the Test of Mobile Phone Dependence survey is separated by the factor structure (i.e., abstinence, abuse and interference with other activities, tolerance, and lack of control). Finally, at the end of the section, we report the self-reported technology behaviors regarding screen time, number of platforms, and safety behaviors.

Theory of Planned Behavior

Attitudes. We conducted a repeated measures ANOVA for the planned behaviors data and will present them in order below for attitudes, norms, perceived behavioral control, and intentions. Recall that all responses were on a 1-7 Likert scale, where 1 is less favorable to the aim of the study. At Time 1, participants reported favorable attitudes toward reducing their use of non-educational technology ($M = 5.15$, $SE = .08$) but their attitudes were unchanged when measured at Time 2 following the Common Read program ($M = 5.11$, SE = .08; $F(1,199) < 1$). Similarly, there were no differences between conditions and no interaction effect (Fs < 1).

Subjective Norms. An important aspect of behavioral change is the pressure one feels from important others to change. At Time 1, participants did not report feeling pressure to decrease their use of non-educational technology ($M = 2.80$, $SE = .09$). At Time 2, participant's perceived social pressure was unchanged ($M = 2.80$, $SE = .09$; $F(1, 199) < 1$). Like attitudes, there was no interaction effect or differences between conditions (Fs < 1).

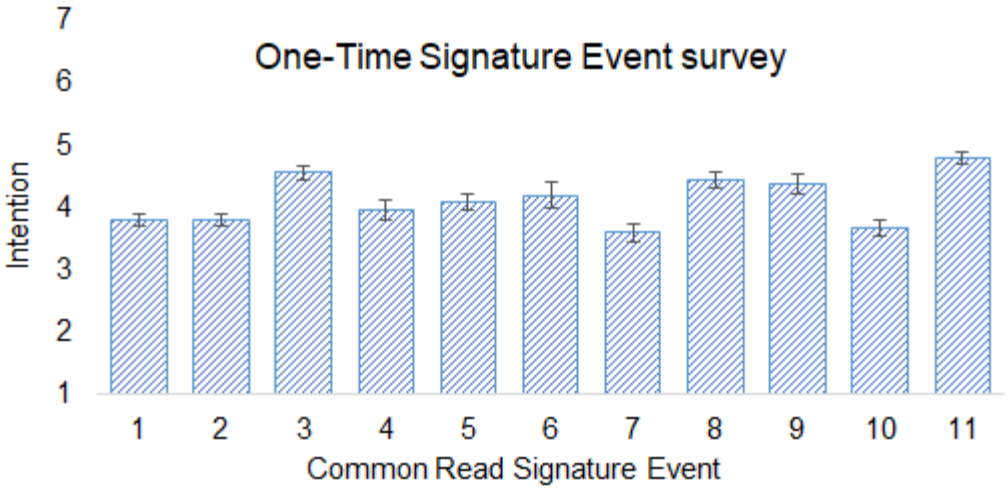
Perceived behavioral control. In terms of how "in control" participants felt about their ability to decrease their use of non-educational technology, participants reported generally feeling in control at Time 1 ($M = 5.21$, $SE = .07$), but all participants' feelings of control declined at Time 2 ($M = 5.03$, $SE = .07$; $F(1, 199) = 5.78$, $p = .017$, np2 = .03). The main effect of condition was also significant where participants in the Common Read ($M = 5.28$, $SE = .08$) condition felt more in control than the control group ($M = 4.96$, $SE = .09$; $F(1,199) = 6.69$, $p = .010$, $n_p^2 = .03$), but this effect was not due to the Common Read intervention, specifically, the interaction effect was not significant ($F < 1$)

Planned usage of non-educational technology. Finally, participants reported their level of agreement with a statement about decreasing their use of non-educational technology. Participants generally did not report strong agreement or disagreement about decreasing their use. Specifically at Time 1, participants were near the middle

of the scale (M = 4.00, SE = .10) and remained in that neutral position at Time 2 (M = 3.94, SE = .11; F(1, 203) < 1). Overall, participants in the Common Read condition were more in agreement with planning to decrease their use (M = 4.08, SE = .11) compared to the control condition (M = 3.83, SE = .13), but, the difference was not significant (F(1, 203) = 2.48, p = .117, n_p^2 = .01). The interaction was not significant (F < 1). 0

One-time Signature Event survey. For reference, participants in the Common Read condition attended approximately 3 events (M = 3.24, SE = .26) and participants in the Control condition attended nearly 2 events (M = 1.78, SE = .30). In all, we received 1,274 responses to the One-Time Signature Event survey. Each event type (Interactive, Film, Lecture/Forum) was equally effective in eliciting change in respondents' intentions to decrease the use of technology (F < 1). Overall, non-students were more likely to report intentions to decrease their use (M = 4.72, SE = .19) compared to students (M = 4.08, SE = .05; F(1, 1,391) = 10.33, p = .001, n_p^2 = .01). The interaction was not significant (F(1, 1,391) = 1.06, p = .348, n_p^2 < .01). Second, to determine change over time, or the additive effect of attending more than one lecture, we calculated the average mean difference in intentions for Signature Events 1-11. The average intention for Event 2 minus the average intention for Event 1 and so on for all events. When the difference is positive, the later event elicited more intentions to decrease than the earlier event. The average mean difference was positive (M = 0.1). Therefore, on average, attendees at later events reported similar but increased intentions to decrease their use of non-educational technology compared to earlier events (see Figure 2).

Figure 2. *Intent to decrease non-educational technology use in the next three months.*



Test of Mobile Phone Dependence

The analysis of the Test of Mobile Phone Dependence (Brief) responses presented below follows the four-factor structure identified by Choliz and colleagues (2012, 2016). For the first factor, *Abstinence,* which measures discomfort felt when respondents are not using their mobile phones, the analysis revealed Control condition participants felt more discomfort (M = 2.55, SE = .07) than Common Read condition participants (M = 2.22, SE = .07; F(1, 188) = 11.85, p = .001, n_p^2 = .06). The main effect of time was not significant (F < 1). Finally, the interaction effect was marginally significant, indicating Common Read condition participants felt less discomfort at Time 2 than Time 1 whereas Control condition participants felt more discomfort at Time 2 than Time 1 (F(1, 188) = 3.23, p = .07, n_p^2 = .02).

Statistical tests on the second factor, *Abuse and interference with other activities,* revealed Control condition participants reported more abuse and interference (M = 2.68, SE = .06) than Common Read condition participants (M = 2.49, SE = .05; F(1, 189) = 5.72, p = .018, n_p^2 = .03). The other tests, for the changes over time and the effect of the intervention were not significant (F < 1).

The *Tolerance* analysis, which captured participants' escalating need to use the mobile phone more often to achieve similar results, showed an interesting and troubling pattern. The main effect of condition and interaction effects were not significant (F < 1). However, the main effect of Time was significant such that at Time 2 (M =

2.26, *SE* = .05) all participants exhibited more tolerance-like behaviors surrounding mobile phone use compared to Time 1 (M = 2.14, SE = .04; $F(1, 188) = 7.01$, $p = .009$, $n_p^2 = .04$).

Factor 4, *Lack of Control,* showed a similar pattern to Tolerance. Specifically, at Time 2, participants reported less control of their mobile phone use (M = 2.57, SE = .05) compared to Time 1 (M = 2.65, SE = .05; $F(1, 188) = 3.07$, $p = .081$, $n_p^2 = .02$). Common Read condition participants indicated more control overall (M = 2.40 SE = .07) than Control condition participants (M = 2.81, SE = .07; $F(1, 188) = 17.71$, $p < .001$, $n_p^2 = .09$). and the interaction effect was not significant ($F < 1$).

Self-Reported technology-related behaviors

Screen time. The average screen time of all participants did not change from Time 1 (M = 4.58 hrs/day SE =.13) to Time 2 (M = 4.53 hrs/day SE = .12), nor was the interaction significant (Fs < 1). There was however, an effect of condition where participants in the Common Read condition had fewer hours of screen time (M = 3.98 hrs/day, SE = .13) compared to Control (M = 5.12 hrs/day, SE = .15; $F(1, 205) = 34.78$, $p < .001$, $n_p^2 = .15$).

When participants reported their screen time in hours per day, they also indicated what information they used when deciding what to report. There were three options, participants could indicate they were "just estimating" or that they had "checked a screen time tool on my mobile phone," or finally, if they had "checked a screen time tool on my mobile phone and added computer screen time." We considered the "just estimating" response the least conscientious option. A Wilcoxson matched-pair signed-rank test indicated the Common Read condition shifted from "just estimating" at Time 1 to indicating they were checking screen time applications at Time 2 (z = 2.77, p = .006). In contrast, participants in the control condition continued to rely primarily on estimates of their screen time (z = 0.67, p = .525).

Platforms. Overall, Common Read condition participants reported using fewer social media platforms than the ten available to select. Participants in the Common Read condition selected less than 5 platforms (M = 4.67, SE = .13) whereas Control condition participants selected over 5 platforms (M = 5.63, SE = .14; $F(1, 233) = 21.40$, $p < .001$, $n_p^2 = .08$). Although the main effect of time was not significant, there was a significant interaction effect, or an effect that is directly attributable to the intervention. Common Read participants selected fewer platforms at Time 2 (M = 4.32, SE = .17) than Time 1 (M = 5.01, SE = .13), conversely, Control condition participants selected more platforms at Time 2 (M = 5.75, SE = .22) than Time 1 (M = 5.52, SE = .18; $F(1, 233) = 11.51$, $p = .001$, $n_p^2 = .05$).

Safety. There were no statistically significant effects related to reviewing one's posts periodically or changing privacy settings to more private when it was an option (Fs < 1).

Summary of Results

As an evaluation effort, we examined several effects of Common Read participation on students and community members. A concise and integrated summary of results for the main areas of interest follows. Participants viewed limiting their use of non-educational technology favorably. Still, their attitudes, changes in screen time, plans to decrease use in the future, and perceived social norms did not change as a result of participation. An important finding was that both groups of students (i.e., the Common Read and Control condition) felt their control over their use of technology declined from Time 1 to Time 2. This lack of control was corroborated in the Theory of Planned Behavior and the Test of Mobile Dependence survey responses in the current study and relates to the previous literature on self-control failures. Specifically, people's desire to use social media is difficult to resist even when it conflicts with other goals and is more likely to lead to self-control failures than other desires (Hofmann, Vohs, & Baumeister, 2012).

Both groups of participants indicated more tolerance-like behaviors at Time 2; specifically, they reported an escalation of use to achieve the same effects. Control group participants did report more abuse and interference with other activities. Finally, a critically important finding, Common Read participants reported less discomfort when they were away from their phones for a period of time. In the area of self-reported technology-related behaviors, Common Read participants became more aware of their technology use by checking screen time applications and reported engaging in fewer social media platforms at Time 2.

LIMITATIONS

Methodological Limitations. A limitation of the current study was that our data collection did not allow for tracking specific individuals over time throughout the program. The fact that we could still discern differences between the Common Read and Control groups without more than two time-points speaks to the power of the information. Students in our control group were not prohibited from attending Common Read events. They attended an average of 1.78 events, roughly half of the average events attended by students in the Common Read Group. Once again, the fact that students in the Control group attended just 1-2 events fewer on average than the Common Read group means that some of the participation effects may have been lessened.

Another methodological limitation of the current study was two of the three survey instruments. We followed a manual to construct surveys based on the Theory of Planned Behavior (Francis et al., 2004). Even so, the survey we created and used was not a psychometrically validated survey. Furthermore, the self-reported technology behaviors survey we created had similar methodological limitations. In contrast, the Test of Mobile Phone Dependence is a psychometrically validated survey (Chóliz et al., 2016).

Discussion & Future Directions

Overall, the analyses revealed more favorable responses from Common Read condition participants compared to a control group. Common Read participants indicated less discomfort in times of mobile phone abstinence, fewer behaviors indicative of mobile phone abuse or interference with daily activities, more control over mobile phone use of non-educational technology, less screen time, and fewer social media platforms.

Demographics. The two conditions' demographic characteristics differed in age and achievement (i.e., grade point average, ACT performance). For example, Common Read participants were approximately half a year younger than the Control condition participants. Assuming younger students are newer to college, where there can be more free time for students, they may still be discovering their routines and have not started using as many social media platforms. This interpretation is supported by the pair of findings suggesting all participants exhibited more tolerance-like behaviors and decreasing control of mobile phone usage from Time 1 to Time 2.

Many respondents from the survey identified as female (72%), with 70% and 76% of respondents identifying as female in the Common Read and Control groups, respectively. This was not unexpected as 60% of the honors student population at SDSU identifies as female and recent surveys, including the honors student population, yielded participation rates between 70 and 79% female (Kotschevar, Ngorsuraches, & Bott-Knutson, 2018; Kutzke, Nold, Gonda, Hansen, & Bott-Knutson, 2020) which aligns with previous reports (Porter, & Whitcomb, 2005; Sax, & Bryant, 2003). Thus, a future direction for continued research exists within the composition of respondent gender identity and possible subsequent representation of planned behavioral differences.

Type of Event. Signature events have been reported to have more profound impacts on student success criteria such as GPA, persistence, and retention than other campus-based activities such as welcome week activities or predictable, routine events (Kulp, Pascale, & Grandstaff, 2021). Our annual Common Read programs are designed around a suite of signature events. Yet, before the current study, we didn't know whether different kinds of signature events were more likely to influence the planned behavior of students. We did not observe any difference in efficacy of one type of signature event (interactive, film, lecture) over another. One might anticipate that highly interactive events may impact a participant's planned behavior more than a passive event. However, our data indicate that exposure to the topic was more important than the type of exposure. This finding adds to the literature on co-curricular experiences promoting student thriving (Vetter, Schriener, McIntosh, & Dugan, 2019). Vetter and colleagues described the importance of involvement quality rather than the quantity of involvement. From the current research, we would add that quality experiences can come from a variety of events. Therefore, future Common Read programming will continue to offer a variety of event types. Our goal will be to expand the appeal of participation through continued dedication to hosting a variety of campus and community activities in the hopes that a wide swath of people will be attracted to one type of event over another, thus increasing the total

number of people who are exposed to the topic. Additionally, we recommend that faculty promote attendance through their classes and that student affairs professionals integrate one or more events into their planned programming. When combined, these tactics should create the opportunity and encouragement for exposure.

Time Frame. Immediate change is infrequent in behavioral studies. Our study revealed small but positive changes within the short timeframe of the Common Read program. It is possible that if measured over a longer period, we would have witnessed more robust changes. The Common Read program spanned 7-8 weeks in 2019, roughly the amount of time it takes to establish some degree of automaticity in new habits (Lally, 2009). Had a student's earnest engagement with the Common Read begun midway through the program, we would not expect to have witnessed significant habitual changes. We were encouraged to see some shifts in planned behavior.

Knowledge vs. Willingness to change. Many would acknowledge the ills of heavy technology use (e.g., Royal Society of Public Health, 2017). Even when such information is readily available, one may not have the value-set that would necessitate changing one's behaviors. One relevant example is climate change action. There is more information now about climate change than ever before, yet change is not happening as quickly as many hope. It is feasible that the Common Read increased knowledge related to the use of technology that may or may not has manifested as planned changes in behaviors to reflect a changed value-set.

Campus and Community Involvement. The Common Read is a campus and community program; it might also be called a "town and gown" program. The findings from the primary survey are limited to students, but as we saw earlier, there was a fair amount of community engagement. One may see similar effects from the community related to the number of social media platforms, screen time, and comfort in abstinence. Based on the One-time Signature Event survey results, where non-students were more likely to report intentions to decrease their use of non-educational technology, one might predict even more favorable outcomes from non-students. In 2019, Komives discussed the transition from the terminology "student activities" to "campus activities" to more accurately reflect that while engagement includes students, it also extends into non-student populations such as faculty, staff, and members of the community (Komives, 2019). The authors are intrigued by the fact that non-students were more likely to report intentions to decrease the use of non-educational technology. The non-student population could include faculty, staff, and community members. Assuming that this group is older, perhaps they're able to reflect upon more past personal experiences of times when a non-technology-based focus was either rewarding or prudent. Theoretically, these non-student participants would have a larger sphere of influence within the greater community through family, neighbors, or civic engagement. Thus, the opportunity for indirect exposure of an even larger audience to the Common Read program is enhanced, further augmenting the impact of this campus program.

Establishing Awareness. Common Read programs offer a transient opportunity to introduce ideas and deep thinking about those ideas. We view the role of the Common Read as an opportunity to guide participants in exploring a topic, equip them with the skills to think critically about the topic, and prepare them with a tool kit that they may leverage as life-long learners. We specifically point out that the culmination of each Common Read program is not the end of a discussion, but rather an affirmation that participants are prepared to continue the conversation independently of the program. It is common for members of the Common Read committee to hear students talking about their Common Read experiences and subject through their years at SDSU. Future research could track changes in intentions, dependence, or use well beyond the semester-time frame used here.

CONCLUSION

The Common Read program affected students in several positive ways. From participants' self-reports, we know that the program led to students pulling back from social media activity and a greater awareness of screen time. The Common Read program changed the narrative for participants about the need to be constantly connected online. Perhaps they thought about the negative consequences of near constant connection and became aware of the time spent on their devices. Future research using direct observations of technology use among students could corroborate these findings.

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