The Journal of Applied Linguistics and Applied Literature: Dynamics and Advances, Volume 8, Issue 2, Summer and Autumn, 2020, pp. 39-60

Smartphones and Our Students: A Case of Undergraduate Students in an EFL Context

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Abstract

Immoderate smartphone usage usually makes the students addicted to it and spend less time reading lecture notes and textbooks. This study aims to determine university students' usage of smartphones and perceived rejection of paper books in an EFL context. The study collected data through a 20-item structured questionnaire consisting of the general characteristics, the number and hours of general smart phone usage, the daily usage of textbooks or paper books, and via the online short version of Smartphone Addiction Scale (Kwon, Kim, et al., 2013) administered to 200 Iranian EFL participants aged ≥ 18 years and recruited from the Department of Humanities and Biological Sciences in Rabe Rashid Higher Education Institute (RRHEI), Tabriz, Iran. Results of the online SAS showed that the participants had a mean SAS-SV score of 47.02 (SD = 4.235), so they were regarded as excessive smartphone users. Also, results of questionnaire indicated that the majority of participants were more inclined to spend an alarming amount of time on their smartphones rather than on their lecture notes and textbooks. The author concludes that students in RRHEI are strongly addicted to smartphones and this addictive behavior makes them spend less time reading textbooks and using university library. The author ultimately gives some useful tips on how to mitigate the negative effects of smartphones. The results of this study promise practical implications for policy-makers, parents, and academics and their students.

Keywords: EFL Context, Undergraduate, Paper Book, Smartphone Addiction, Lecture Notes

ARTICLE INFO

Article history:
Received: Monday, January 6, 2020
Accepted: Tuesday, June 9, 2020
Published: Thursday, January 14, 2021
Available Online: Thursday, January 7, 2021
DOI: 10.22049/jalda.2020.26700.1154

Online ISSN: 2383-2460; Print ISSN:2383-591x

Introduction

In recent years, we have witnessed the use of mobile devices in all parts of our lives from communication to simple daily routines and from education to media tools. By means of computers, tablets, smart phones and social media, people communicate more easily throughout the world. Moreover, the rampant growth of technology makes "the world flattened". As Friedman (2005) argued, "The world is being leveled"; and this leveling process keeps continuing every minute. It makes no difference where people are, in Iran, in Turkey, or in America, they can have contact with people around the world without delay, and this communication occurs through mobile technology and inevitably the Internet.

The use of smartphones in educational settings is a double-edged sword because they can be used to communicate with others, find large amounts of information in a few seconds, make purchases and pay bills, and browse the news, but it also has negative effects on the education. By way of explanation, while the use of a smartphone may help students progress by searching for study-related information (Chen and Yan, 2016; Hawi and Samaha, 2016), copious research indicates that students view smartphones basically as sources of entertainment, rather than as academic tools (Barkley and Lepp, 2013; Lepp et al., 2013).

There are four common reasons why paper books are spending their worst years in Iran. Generally, due to internet and specifically due to the widespread use of smart phones and other mobile devices, the high cost of books, the high rate of unemployment among Iranian graduates, and the common belief that higher education means less job opportunities or lower salaries.

Moreover, our undergraduates rarely use technology to support learning. Books sound more like mosques and public transport. People like having them. But as for using them, there is little time to use mosques, and general public prefer private cars over public transit. Similarly**,** Iranian undergraduate students like textbooks. But as for using them, there is little time left for textbooks after overusing smartphones. Students overuse their smartphone diverse apps to fill in the communication gaps in all their relationships with friends and relatives rather than the information gaps around themes from curriculum content areas. They use their phones to stay in touch with friends and parents, share stories and photos, entertain themselves when they are bored in and outside the classroom, go online to browse the web, to participate in social networks, and check their emails. To crown it all, they use smartphones to cheat on tests, gossip about teachers, and plot class cancellations.

Students' lives and faculty observations confirm that there are ways in which mobile devices have ill-served our undergraduates. In the past, our students used to read books both on-campus and off-campus. They used to spend hours in the university libraries rather than using smartphones between lessons and during breaks to while away the time. They walked into the classroom with open books in their arms studying as if they had a test. They used to study course-books deeply, underline the important details, take notes, and prepare classroom presentations. Furthermore, in

the past how easy it was to have students actually look at you when you were lecturing and concentrate when you were presenting materials. Likewise, how easy it was to help them understand materials and ask questions within classes and college corridors.

Today, most university students in Iran are having problems using their smartphones too much and their professors are discombobulated, utterly confused as to what has happened to students. Because smartphones are always in reach, it becomes much easier for students to spend time alone in their own world. Smartphone is the last thing they see before they go to bed and the first thing they check in the morning. During the day, the device bombards them with constant notifications-from four different email accounts as well as Instagram, Facebook, WhatsApp, Telegram and Twitter. They are preoccupied-checking messages, miss calls, and social media at all hours of the day.

Iranian teachers and parents tend to think that the new net generation growing up in the digital era get plenty reading from screens and that this is as efficient as reading books was for earlier generations. Due to this fallacy, they have paid too little attention to whether extensive use of digital devices actually provide students with relevant materials during the course of academic career. Consequently, the number of students who are asked to leave the classroom by the teachers and the number of students who ask permission to leave the classroom to answer the phones grows every year. Figures show that our undergraduates are more likely to own a mobile phone than a book, causing fears over a decline in book usage.

While on the surface this appears a relatively trivial issue, it has potentially major implications for many frustrated Iranian teachers and educators who frequently complain about low student engagement as a result of strong negative effects of smartphone use in and outside the classroom. This study is of great importance, especially in Iranian EFL context, in contributing to the current literature on the use and abuse of smartphones among university students. While a large amount of research has addressed the issue around the world, very few of them have been conducted in or are applicable to the EFL context of Iran. On top of that, this study does not want to disparage the many advantages of smartphones, nor does it want to ignore their disadvantages. It is a quest to discourage students from mindlessly using their smartphones.

Literature Review

In *Digital Natives, Digital Immigrants*, Prensky (2001) wrote: "Our students have changed radically. Today's students are no longer the people our educational system was designed to teach" (p.1).

As educational researchers argue, a new generation of learners is flowing into our educational centers, one which has acquired information and communication technology (ICT) since childhood. What makes these young people different from previous generations of students and from their teachers is their use of ICTs. Moreover, the differences are so significant that the nature of education itself must

fundamentally change to accommodate the skills and interests of these "digital natives" (Prensky, 2001a).

In spite of the fact that such calls for radical modification in education are being widely proposed, they have undergone little critical investigation and have been embraced without empirical research in the educational context of Iran. The blindfold adoption of what was once called "western technology" and now "eastern technology", just to keep up with the rest of the world, has had negative impacts on the micro-level (individual) and macro-level (social) education. On a micro-level, the negative side effects of misapplication of technology has resulted in students' insomnia, academic under-achievement, sedentary lifestyle, isolation from pen and paper and modification of study habits in favor of distraction and procrastination.

On a macro-level, this misapplication has damaged education by growing a pseudo-digital generation whose academic performance has now come into question. Iranian students' under- achievement has become especially evident in the early half of the 21st century with the increase in utilization of Chinese electronic devices. The ironic part is that the more the Iranian new generation becomes digital as a result of utilizing multiple electronic devices, the more they disconnect from libraries, teachers, and pen and paper books in thought for whiling away the minutes by talking on the cell phone, net surfing, googling, chatting and texting through cell phone messaging apps. This is evident by the fact that students, upon entering classroom, reach for their electronic devices instead of pens and papers once the lesson begins.

Using technology does not necessarily mean students should stop using print-based reading, but instead, they should know that ignoring the value of paper for learning and academic progress would lead to significant costs and consequences. As Alexander and Singer (1917) concluded, "while new forms of classroom technology like digital textbooks are more accessible and portable, it would be wrong to assume that students will automatically be better served by digital reading simply because they prefer it."

Eventually, Beniger (1989) and Postman (1995) (as cited in Brown, 2011) warn against the overuse or misuse of technology:

> We proceed under the assumption that information is our friend, believing that cultures may suffer grievously from a lack of information, which, of course, they do. It is only now beginning to be understood that cultures may also suffer grievously from information glut, information without meaning, information without control mechanisms. (Beniger, 1989, p. 70)

There have been numerous studies to investigate the relationship between smartphone addiction and academic performance. The literature review reports the possibility of social networking sites addiction through their online social networking study and that smartphone use could be linked to loneliness, depression and self-esteem based on their smartphone (Kuss & Griffiths, 2011). Park & Lee (2012) reported the psychological risk factors of addiction to social networking sites by

investigating outcome expectancies, impulsivity and internet self-efficacy in Chinese smartphone users. Previous studies have shown the relationship of smartphone addiction to mental health, campus life, personal relations, self-control and life stress. Kim and Lee held that adolescents are more at risk of exhibiting problems than the adults because the adolescents use smartphones as a new way to access the internet (Wu, Cheung, Ku, & Hung, 2013; Choi, Lee, & Ha, 2012; Kim and Lee, 2012).

Most early studies as well as current work focus on the difference between screen and paper for reading and learning. Alexander & Singer (2017) found that students learn better from books than screens. The effects of mobile phones on students have also been discussed by a great number of authors in literature. Crawford (2020) concluded that cell phones make students lazy and prevents them from concentrating on their academic tasks. Perlman & Peplau (1981) stated that smartphone addiction influences the way people communicate and can cause social stress. Casey (2012), however, observed that people who are addicted to smartphones tend to overindulge and focus on their smartphones until they ignore who they are.

Furthermore, there exists a considerable body of literature on smartphones as distracting tools. In one study, Beland & Murphy (2016) investigated the impact of schools banning mobile phones on student test scores and discovered that students in schools who were not allowed to use mobile phones got higher test scores and that weak students benefited the most. In another study, Kuznekoff & Titsworth (2013) examined the impact of mobile phone usage and found that students without mobile phones performed better in several different areas. They wrote down more sentences, recalled more information, and scored higher scores than those who actively used their cell phones. In line with that, (as quoted in Rainie & Duggan, 2012) texting (SMS) may affect students' reading and writing. "Papers written by these students show poor punctuation, bad grammar, and inappropriate abbreviations" (p.117).

Surprisingly, Ward, Duke, Gneezy & Bos (2017) found that the mere presence of cell phones lowers cognitive capacity even if they are turned off, turned face down or put away. Gordon (2019) stated that the end result of using smartphones by students is that they are only half-present in the classroom for much of the time. Twenge, Martin & Spitzberg (2019) found that less than 20 percent of U.S. teens read a book, magazine or newspaper daily for pleasure, while more than 80 percent used social media every day.

A large number of existing studies in the broader literature have examined the impact of mobile phone exposure on cognitive function. Ward, Duke, Gneezy & Bos (2017) found that cognitive capacity was significantly reduced whenever a smartphone is within reach, even when the phone is off. Moreover, Barr, Pennycoo, Stolz & Fugelsang (2015) reported that research provides support for an association between heavy smartphone use and lowered intelligence. However, these authors asserted that we need more research to make sure that smartphones actually decrease intelligence.

Nevertheless, few studies have documented the positive effects of smartphones on students' academic performance. Several studies are reported in the literature to address this issue. Johnson & Radhakrishnan (2017) investigated the academic use of smartphones among the students and proved that the academic use, advantages, and impact of smartphones were positive. Additionally, Synnott (2018) acknowledged that smartphones have the potential to enhance the learning process arguing that students can research subject matter online for current information. Farley, Murphy, Johnson, Carter, Lane, Midgley & Koronios (2015) studied how students used their mobile devices to support learning. They proposed some practical, low-cost tactics that educators could potentially employ to begin engaging with mobile learning, leveraging what students already do.

Methodology

The main objective of this study was to determine university students' usage of smartphones and perceived rejection of paper books in RRHEI. In the following sections, the method to achieve the research objective will be presented.

Participants

The participants comprising the population of this study were 200 undergraduate students of translation studies and Biological Sciences (170 females and 30 males) with the mean age of 20. 38 studying at RRHEI., Tabriz, Iran. Nearly all the participants had a Turkish background and spoke Persian (Farsi) as a second language.

Instruments

Instruments used in this research consist of two questionnaires, namely the Smartphone Addiction Scale–Short Version (SAS-SV) and a printed questionnaire which includes the participants' demographic data, among others.

Printed Questionnaire

In order to obtain the data needed in the research, a demographic information form that was developed by the researcher was used. The translated version of the printed questionnaire comprised 20 questions and it took 15 minutes to answer. Some questions were followed by five options. Some questions were open and respondents had to compose their own answers.

Online Smartphone Addiction Scale-Short Version (SAS-SV)

The Smartphone Addiction Scale-Short Version (Kwon, Kim, et al., 2013) (see appendix B) consists of 10 items using a six-point Likert-type scale. Students were asked to rate on a dimensional scale how much each statement relates to them, (1 "strongly disagree" to 6 "strongly agree"). Higher scores in the test indicate that the risk of addiction is greater. Moreover, the students were given the translated version to make sure everyone could completely understand the items. The Cronbach's alpha coefficient of the short form is 0.91.

Procedure

The first step to conduct the study was to ask the participants to complete a printed questionnaire which included 20 items. (see appendix A). Responding to this questionnaire, the respondents gave some demographic information on their age and gender, social networking sites usage habits, daily usage times of smartphones and books, daily average time spent on smartphones and books, average time spent using smartphones and books and their reasons for using them. Similarly, the students were asked the same demographic features about their book usage habits. Participants who participated in the study were given a brief explanation about the study. The researcher arranged with different course instructors to take 10-15 minutes of the class time for the students to complete the survey questionnaire. All the questionnaire categories were answered by the students. Similarly, the same students were asked to complete the online smartphone addiction scale-short version in their free time.

Results and Analysis

Demographic characteristics

The demographic variables included in the surveys were that of gender and age. Out of 200 participants, 170 (85%) were girls and 30 (15%) were boys with the mean age of 19.38. All participants (100%) declared that they owned and used smartphones in and out of college.

Results of Background Questionnaire

The questions in the questionnaire were divided into two groups, namely students' smartphone usage and students' use of paper book both on-campus and off-campus.

As the results of the questionnaire indicate, the majority of participants carried mobile devices to use social media (65%) and as a university requirement (24%). A closer look at the results shows that a great proportion of participants (66%) rarely used their cell phones for academic purposes and a great majority (91%) said they used cell phones for non-academic purposes.

Surprisingly, a great majority admitted that their smartphones could help them in academic studies. While a large majority (75%) named self-learning and dictionary as the main reasons they used mobile devices, but they believed that online games and distraction (35% + 35%) were the reasons why mobile devices interfere with academic performance. Not surprisingly, about the same proportion (70%) did not support a ban on mobile phones in classrooms. However, less than a third (20%) supported the ban. In the tenth item, the respondents were asked the number of times they used their cell phones on an average day. One-third of the respondents reported four times a day and less than a third reported three times a day.

The percentages were scattered when respondents reported the amount of time they spent on their smartphones. The maximum percentages were for 2 hours (26%)

and 1 hour (22%). The minimum percentages were for less than an hour, and three hours and more than three hours were 19% and 15%, respectively.

As for the apps, the maximum percentages were for Telegram (43%) and WhatsApp (37%) while only 5% used Instagram. Regarding yearly budget for smartphones, a significant proportion (77%) said they spent 100-200 thousand Tomans on smartphones. Similarly, a significant proportion reported that they checked their cell phones every 5 minutes.

The last five questions include information about the pattern of students' use of books by students. The sixteenth item asked the respondents to report how often they bought books. As Figure 1 shows, a large proportion (65%) reported that they bought books yearly and 23% reported every two months. Regarding studying books daily, the maximum percentages were for 2 hours (51%) and less than an hour (33%).

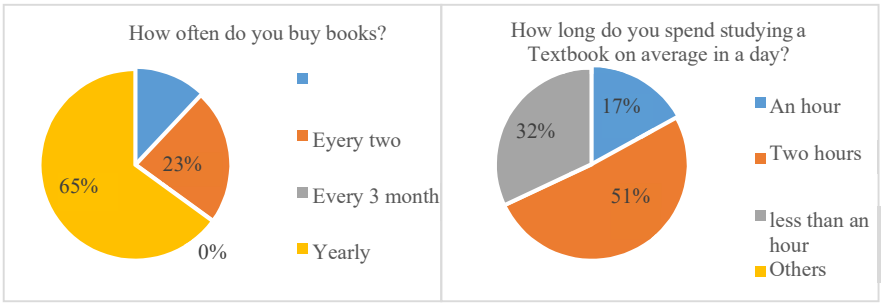

Figure 1. The Distribution of Percentages for Q. 16 and Q.17.

As for studying textbooks on campus and off campus, Figure 2 indicates that the maximum percentages were for always (43%), often (24%), and sometimes (19%). The minimum percentages were for rarely (12%) and never (2%).

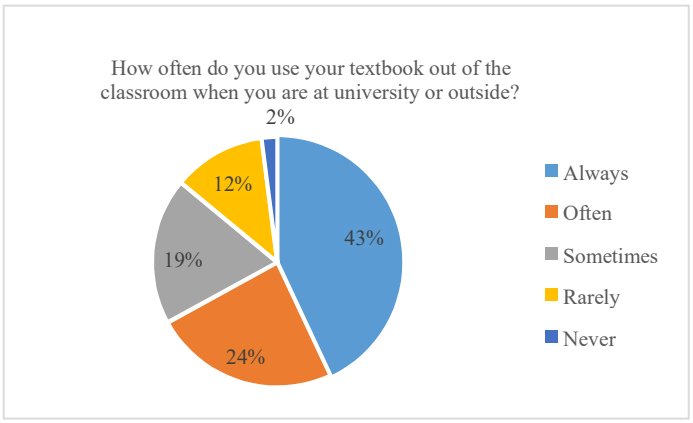

Figure 2. The Distribution of Percentages for Q. 18

Finally, in item 19 and 20, a large proportion admitted that they spent more time using cellphones than studying books (66%), and that they did not often use university library (62%).

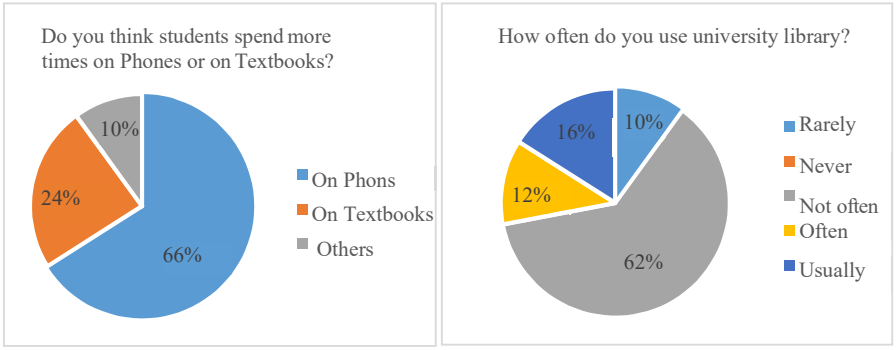

Figure 3. The Distribution of Percentages for Q. 19 and Q. 20

SAS Scores of Participants

Smartphone addiction was measured using the Smartphone Addiction Scale short version (see appendix B). The total score ranges from 10 to 60, with the highest score being the maximum presence of smartphone addiction. The final 10 questions were chosen with regard content validity, and the original SAS-SV showed content and concurrent validity and internal consistency (Cronbach's alpha: 0.91).

Moreover, support for validity of this scale is that it has been used in various recent researches across cultures including (Lopez-Fernandez, 2017), (Noyan, Darcin, et al., 2015). The scale is very quick and easy to use; there are no reverse scores involved.

The online SAS was created through Google Forms, and responses were then downloaded and coded through MS Excel. Data collected was further analyzed using the Statistical Package of Social Science (SPSS 25).

The overall description of the sample (N = 200) in terms of mean, standard deviation, minimum, and maximum scores of the students is demonstrated in Table 1 and table 2.

Table 1. Overall Description of Male and Female Undergraduate Students in UCRR

Descriptive Statistics

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Variance Statistic	Skewness	
							Statistic	Std. Error
Total	200	11	55	47.02	4.235	17.934	-3.544	.172
Valid N (listwise)	200							

Table 2. The Frequency Distribution

Total

N	Valid	200
	Missing	0
Mean		47.02
Mode		47
Std. Deviation		4.235
Variance		17.934
Skewness		-3.544
Std. Error of Skewness		.172
Minimum		11
Maximum		55
Percentiles	25	46.00
	50	47.00
	75	49.00

As table 1 and 2 indicate, the lowest obtained score was 11 out of 60 (Min. = 11) and the highest obtained score was 55 (Max. = 55) with a mean of 47.02 (M = 47.02) and standard deviation of 4.235. (SD = 4.235). These results indicate that the sample as a whole was highly addicted to smartphones.

As figure 4 indicates, the wide area of the bar between 40-50 in the histogram indicates high frequency of occurrences. Furthermore, the data in Figure 4 is left skewed (negatively- skewed), i.e., the mean is on the left of the peak and much smaller than the median. There is also an extreme value in the data which is much lower than the other numbers.

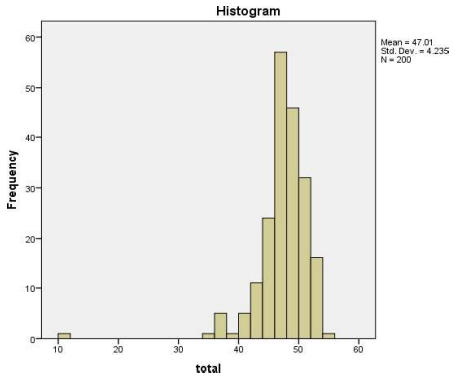

Figure 4. The Frequency of Score Occurrences Among Undergraduate Students in UCRR

Discussions

Results of the online SAS showed that the participants were addicted to smartphones (M = 47.02) so they spent less time studying books, using university library and they bought books less frequently, and used their smartphones less for academic purposes. Since the students are highly addicted to smartphones, they are disinclined to abandon the frequent mobile phone use and less inclined towards using books. A similar conclusion was reached by the research published in the journal Psychology of Popular Media Culture. Twenge, Martin & Spitzberg (2019) found a steep decline in reading. They concluded that teens today spend more time on digital media, less time reading**.** A similar pattern of results was reported by Rainie & Duggan (2012) who demonstrated that students' reading and writing are negatively affected by using smartphones.

The findings of this study are in consistent with previous studies following Kuss & Griffiths (2011), Park & Lee (2012), Wu, Cheung, Ku, & Hung (2013), Choi, Lee, & Ha (2012), and Kim & Lee (2012), showing that smartphones overuse can be really dangerous to students in schools and colleges. This result ties well with previous studies (Casey, 2012; Perlman & Peplau, 1981) wherein it was found that smartphone addiction influences the way people communicate and can cause social stress and that people who are addicted to smartphones tend to overindulge and focus in their smartphones until they ignore who they are.

Additionally, results of this research are in allied with the findings in other studies. Alexander & Singer (2017) found that students learn better from books than

screens. Crawford (2020) concluded that cell phones make students lazy and prevents them from concentrating on their academic tasks.

Similar to the findings of previous studies, the current study implicates how distracting smartphones are. In one study, Beland & Murphy (2016) who discovered that students in schools who were not allowed to use mobile phones got higher test scores and that weak students benefited the most. Likewise, in another study Kuznekoff & Titsworth (2013) found that students without mobile phones performed better in several different areas, such as writing, recalling information. A similar pattern of results was obtained by Ward, Duke, Gneezy & Bos (2017) who surprisingly found that the mere presence of cell phones lowers cognitive capacity even if they are turned off, turned face down or put away.

A similar conclusion was reached by Gordon (2019) stated that the end result of using smartphones by students is that they are only half-present in the classroom for much of the time. Contrary to the findings of this study, a few others (Johnson & Radhakrishnan, 2017; Synnott, 2018; Farley et al. 2015) have shown that smartphones can have academic advantages for students. Overall, the findings of this study are mostly in accordance with a surge of research indicating that smartphones cause a decline in book readership, distract students, and lower academic performance.

The research group covers only EFL students of translation. It is recommended that in future research, other groups should be studied. Consequently, studies that include humanities and natural sciences faculties would have generated more generalized information if it had included wider area of samples of different universities throughout the country. Another important point is that the study participants are mostly female. Similar studies should be conducted to include gender differences.

Another feature of the research group is that they study at a private non-profit university. It is recommended that further studies should include research groups with different cultural features and different age intervals.

Conclusion

Since the educational reform in Iran is glacially slow, many academics have not yet adopted mobile technologies or applied innovative teaching methods in their classrooms and some still spend most of their time in class, lecturing in the traditional way as they have always done. Consequently, their students took the initiative and embraced the opportunity to use such technologies in their own interests, i.e., for their personal non-scholarly purposes in and outside classrooms.

The findings of this study suggest that mobile technologies at their best may be acclaimed for their mobility and the value they can add to students' learning experience, but they could easily become a distracting factor, rather than the remedy they were supposed to be.

Moreover, there is no desire to disparage advantages of technology, but our students are seen marching non-stop toward screens neglecting the fact that smartphones are taking book monopoly. What we are witnessing today is students' minds that are perpetually at war and obsessed with smartphones. No wonder students' subjection of themselves as a slave to smartphones is a behavioral problem. We expect academics and those who shape educational experience to keep an eye on students and understand that addiction not only refers to drugs, but also refers to smartphones. This is what is called "behavioral addiction" and can wreak havoc on students' mental and physical health.

More specifically, results of this study are intended as a caution to academic administration to protect our scientific property, i.e., printed words. Research has confirmed that we are better served by printed words than the screens, though both can co-exist since they complement each other and scholars propose that we take a holistic approach to digital and print.

Ultimately, this paper has provided the impetus for providing teachers with some tips to mitigate the negative effects of smartphones on students' academic life. First and most importantly, our teachers need to come to awareness of the importance of Information and Communication Technology in our information society of which the immediate consequences for educational practice can be observed. Secondly, university lectures need to overtake students as the first users and misusers of mobile technology. One way of doing it is to shift from the traditional classroom setting, where the student is seen as a passive consumer of educational knowledge, to a classroom in which learners are considered active participants and where collaboration and sharing information in a resource-rich environment is given precedence. Thirdly, students must be redirected into the many scholarly uses of their smartphones. This educational trick can advance the necessary educational reform academics are pursuing, i.e., they can benefit students' potentials as well as their electronic devices in the classrooms to enhance learning and teaching. Smartphone diverse applications are valuable resource. These apps can be used in an overly restrictive way in the classrooms.

Last but not least, as the findings of this study showed, students in RRHEI are strongly addicted to smartphones and this addictive behavior makes them spend more time on smartphones and less time reading textbooks and using university library. Therefore, restricting mobile phones as a low-cost policy should be a last resort to reduce the risk to students who are victims of mobile phone technology.

Ethical Approval

This research was approved by the Ethics Committee of Rabe Rashid Higher Education Institute and all collected data were kept confidential.

Conflict of Interest Disclosures

None.

Acknowledgements

The present study was deduced from the approved research project in the Student Research Committee of Rabe Rashid Higher Education Institute, therefore we appreciate the Dean, the Research Deputy, and the Director of the Department of Humanities for supporting this research. We also thank the Department of Biological Sciences for their help to conduct this study.

References

Alexander, P. A., & Singer, L. M. (2017). A new study shows that students learn way more effectively from print textbooks than screens. *Business Insider*. Retrieved from: https://www.businessinsider.com/students-learning-education-print-textbooks-screens-study- 2017-10

Barkley, J. E., Lepp, A. (2013): Cellular telephone use is associated with greater sedentary behavior independent of leisure time physical activity. *Applied Physiology, Nutrition, and Metabolism*, 38(S1), 1023.

Barr, N., Pennycook, G., Stolz, J. A., & Fugelsang, J. A. (2015). The brain in your pocket: Evidence that Smartphones are used to supplant thinking. *Computers in Human Behavior*, *48*, 473-480.

Beland, L. P., & Murphy, R. (2016). Ill communication: technology, distraction & student performance. *Labour Economics*, *41*, 61-76.

Beniger, J. R. (1989, January). The evolution of control. In *Computers in the human context: Information technology, productivity, and people* (pp. 48-70). MIT Press.

Casey, B. M. (2012). Linking psychological attributes to smart phone addiction, face-to-face communication, present absence and social capital. *Graduation Project, Graduate School of the Chinese University of Hong Kong*.

Chen, Q., Yan, Z. (2016): Does multitasking with mobile phones affect learning? A review. *Computers in Human Behaviour*, 54, 34–42.

Choi, H. S., Lee, H. K., & Ha, J. C. (2012). The influence of smartphone addiction on mental health, campus life and personal relations-Focusing on K university students. *Journal of the Korean Data and Information Science Society*, *23*(5), 1005-1015.

Crawford, Charles (2020). 7 Reasons Smartphones Make You Lazy. Lifehack. Retrieved from https://www.lifehack.org/484043/7-reasons-smartphones-make-you-lazy

Farley, H., Murphy, A., Johnson, C., Carter, B., Lane, M., Midgley, W., ... & Koronios, A. (2015). How do students use their mobile devices to support learning? A case study from an Australian regional university. *Journal of Interactive Media in Education*, *2015*(1).

Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. Macmillan. Johnson, S., & Radhakrishnan, N. (2017). Academic use of smart phones among the students of business schools in UAE-a study. *KIIT Journal of Library and Information Management*, *4*(1), 32-36.

Hawi, N. S., Samaha, M. (2016): To excel or not to excel: Strong evidence on the adverse effect of smartphone addiction on academic performance. *Computers & Education*, 98, 81–89.

Kim, N. S., & Lee, K. E. (2012). Effects of self-control and life stress on smart phone addiction of university students. *Journal of the Korea Society of Health Informatics and Statistics*, *37*(2), 72-83.

Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction—a review of the psychological literature. *International journal of environmental research and public health*, *8*(9), 3528-3552.

Kuznekoff, J. H., & Titsworth, S. (2013). The impact of mobile phone usage on student learning. *Communication Education*, *62*(3), 233-252.

Kwon, M., Kim, D. J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: development and validation of a short version for adolescents. *PloS one*, *8*(12), e83558.

Lee, Y. S. (2006). Biological model and pharmacotherapy in internet addiction. *Journal of the Korean medical association*, *49*(3), 209-214.

Lepp, A., Barkley, J. E., Sanders, G. J., Rebold, M., Gates, P. (2013): The relationship between cell phone use, physical and sedentary activity, and cardiorespiratory fitness in a sample of U.S. college students. *International Journal of Behavioral Nutrition and Physical Activity*, 10, 79.

Lepp, A., Barkley, J. E., Karpinski, A. C. (2015): The relationship between cell phone use and academic performance in a sample of U.S. college students. *SAGE Open*, 5, 1–9.

Lopez-Fernandez, O. (2017). Short version of the Smartphone Addiction Scale adapted to Spanish and French: Towards a cross-cultural research in problematic mobile phone use. *Addictive behaviors*, *64*, 275-280.

Noyan, C. O., Darçın, A. E., Nurmedov, S., Yılmaz, O., & Dilbaz, N. (2015). Validity and reliability of the Turkish version of the Smartphone Addiction Scale-Short Version among university students. *Anatolian Journal of Psychiatry*, *16*, 73-81.

Park, N., & Lee, H. (2012). Social implications of smartphone use: Korean college students' smartphone use and psychological well-being. *Cyberpsychology, Behavior, and Social Networking*, *15*(9), 491-497.

Perlman, D., & Peplau, L. A. (1981). Toward a social psychology of loneliness. *Personal relationships*, *3*, 31-56.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the horizon*, *9*(5), 1-6. Postman, Neil. 1995. "Making a Living, Making a Life: Technology Reconsidered." College Board Review 176: 8-13.

Rainie, L., & Duggan, M. (2012). E-book reading jumps; print book reading declines. *Pew Internet & American Life Project, December*, *27*.

Synnott, K. (2018). Smartphones in the Classroom: The Pros and Cons. *Available at SSRN 3138884*.

Twenge, J. M., Martin, G. N., & Spitzberg, B. H. (2019). Trends in US Adolescents' media use, 1976–2016: The rise of digital media, the decline of TV, and the (near) demise of print.

Psychology of Popular Media Culture, *8*(4), 329.

Wu, A. M., Cheung, V. I., Ku, L., & Hung, E. P. (2013). Psychological risk factors of addiction to social networking sites among Chinese smartphone users. *Journal of behavioral addictions*, *2*(3), 160-166.

Ward, A. F., Duke, K., Gneezy, A., & Bos, M. W. (2017). Brain drain: The mere presence of one's own smartphone reduces available cognitive capacity. *Journal of the Association for Consumer Research*, *2*(2), 140-154.

Authors' Biography

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Appendix A

Printed Questionnaire

University Name: ……..……

University Year: (1/2/3/4)

Course: ……..……

01. Which mobile devices do you use?

a. Smartphone

b. iPad

c. Laptop

d. None

e. Others: ……

02. Why do you bring mobile devices to University?

a. University requirement

b. Convenience

c. Time Saving

d. Entertainment

e. Social media

f. Instant messaging

g. Other reasons: ……

03. How often do you use your phone for academic purposes?

a. Rarely

b. Not often

c. Sometimes

d. Often

e. Usually

f. Always

g. Never

04. Which of these mobile devices are used by you <u>for non-academic purpose</u> such as entertainment, social media or any other purpose?

a. iPad

b. Smartphone

c. Laptop

d. Others (Please Specify) ……..

05. Do you think mobile devices help you in academic studies?

a. Yes

b. No

c. Cannot say

d. Not much

How? ……

06. What are some of the most common reasons you think that mobile devices interfere with your academic performance?

a. Social media

b. Online games

c. Instant messenger

d. Distraction

e. Others (Please Specify) …….

07. What are some of the reasons you think that mobile devices help with your academic performance?

a. Online course material

b. Lecture videos

c. Interactive tools

d. Self-learning

e. Dictionary (Lexicon)

f. Others ……

08. Do you think mobile devices?

a. Should be banned in classrooms

b. Should be used in classrooms

c. It depends

09. Do you have any recommendation for use of mobile devices by student for academic purpose or any tips to avoid misuse?

……

……

10. How many calls do you make on an average day?

a) Zero

b) One

c) Two

d) Three

e) Four

f) Five

g) More than Five

11. How long do you spend on your smartphone on average in a day? (Calls, messages and etc.)

a. 1 hour

b. Less than an hour

c. 2 hours

d. 3 hours

e. More than 3 hours

12. Do you use apps? Which one?

a. WhatsApp
b. Telegram
c. Instagram
d. All of the above
e. Others: ……...

13. What are your 3 favorite apps? (Write them.)

……
……...
……

14. How much is your yearly budget for your smartphone?

a. 100-200 Thousand Tomans
b. 200-300 Thousand Tomans
c. 300-400 Thousand Tomans
d. 400-500 Thousand Tomans
e. Others: ……

15. How often do you check your phone?

a. Every 5 minutes
b. Every 10 minutes
c. Every 15 minutes
d. Every 30 minutes
e. Others: ……

16. How often do you buy books?

a. Once a monthly
b. Every two monthly
c. Every three yearly
d. Yearly
e. Weekly
f. Others: ……

17. How long do you spend studies a textbook on average in a day?

a. An hour

b. Two hours

c. Less than an hour

d. Others: ……

18. How often do you use your textbook outs of the classroom when you are at University or outside?

a. Always

b. Often

c. Sometimes

d. Rarely

e. Never

19. Do you think students spend more times on Phones or on Textbooks?

a. On Phones

b. On Textbooks

c. Others: ……

20. How often do you use university library?

a. Rarely

b. Never

c. Not often

d. Often

e. Usually

Appendix B

Smartphone Addiction Scale-Short Version (SAS-SV)

Missing planned work due to smartphone use						
Having a hard time concentrating in class, while doing assignments, or while working due to smartphone use						
Feeling pain in the wrists or at the back of the neck while using a smartphone						
Won't be able to stand not having a smartphone						
Feeling impatient and fretful when I am not holding my smartphone						
Having my smartphone in my mind even when I am not using it						
I will never give up using my smartphone even when my daily life is already greatly affected by it.						
Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook						
Using my smartphone longer than I had intended						
The people around me tell me that I use my smartphone too much.						