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Time for Digital Detox: Misuse Of Mobile Technology And Phubbing

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Abstract

With the expansion of the technology, people –especially the students- have a vast array of e-communication tools at their fingertips and feel as appertained to them. Current researches have estimated that 100% of university students have their own mobile phones and all of them bring their devices to the courses. Minority of the students use their smartphones to enhance learning, such as to look up pertaining information about the lesson, take pictures of information on the blackboard; however majority of them use smartphones for personal affairs during courses. Keeping in touch during lesson hinders students' learning experience and, it also occurs during examinations, although it is illegal. The purpose of this study is to explore some of the challenges associated with mobile phones in college classrooms. A sample of students from different departments was surveyed to assess the extent to which the technology is considered a serious source of distraction in the classroom and also during the exams. We examined and enlightened several social aspects of this multi-faceted larger societal theoretical concept of technological connectivity; namely phubbing, cheating during courses and students' opinions towards cell phone regulations and instructor behaviors. According to the results, the pattern of percentages within genders reveals the intention of students. Male students seem calmer, whereas female participants appear more sensitive about disturbing their classmates. The size of the classroom also has a big impact. As the class becomes larger, students behave more uninhibited and phub without being noticed. Majority of the students are distracted by their classmates and also confess that they can cheat with the help of their phones.

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Keywords: Abuse of mobile phones; misuse of mobile phones; mobile phone use in class; phubbing

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1. Introduction

Described as portable computers and the Swiss army knife of technologies, mobile phones alternately referred to as cell phones have become one of the fastest-growing communication technologies ever, with subscriptions reaching went from almost none to a half billion through the 1990s (ITU, 2002), over two billion in 2005 (Wireless Intelligence, 2005) and now nearly 7,5 billion (GSMA Intelligence, 2014) worldwide. Considering the practically and popularity of this communication tool, it is surprising that appropriate and polite use of mobile phone is still unclear as there is no definitive set of rules for its usage (Elgan, 2010; Rosenfeld & O'Connor-Petruso, 2010).

In this context, although the urbane use of mobile phones is not identified, the impolite behaviors are well known. Phubbing is a brand new expression and stands for "phone snubbing", describes the act of snubbing someone in a social setting by looking at your phone instead of paying attention. This word is born as part of a campaign by Macquarie Dictionary. In May 2012, the advertising agency behind the campaign - McCann Melbourne - invited a number of lexicographers, authors, and poets to produce a new word to describe the behavior. The term has appeared in media around the world, and was popularized by the Stop Phubbing campaign created by McCann. By means of this very meaningful word, the disrespect of the students, don't paying attention to the teacher during courses, found a name. Nowadays, this rudeness is rifle throughout the world in all walks of life.

The abuse of smart phones has placed people at the risk of impaired social interactions. When it comes to smartphones, tablets and other mobile delights, many of the adults have the unfortunate tendency to behave like children: prodding and poking their shiny toy to the exclusion of anyone and anything else. People would rather communicate via text instead of talking face-to-face. As an increasingly pressing issue, phubbing has raised global attention and stirred widespread discussion. Almost in all kinds of social settings one can find phubbers.

Nevertheless the problem of phubbing becomes much trickier when it comes to the field of education. Traditionally expected, while the learning environment should be quite and pleasant, portable device use has become increasingly common in the classroom with 98% of college students owned a mobile phone (Diamanduros, Jenkins, and Downs, 2007) and 62% of students reporting the use of electronic media for non-academic purposes while in class, studying, or doing homework (Jacobsen & Forste, 2011).

End, Worthman, Mathews, and Wetterau (2010) claimed that ringing mobile phone impairs student performance during the lesson. However, mobile phone ringing is distracting, students typically do not converse with the caller during lectures (Barks, Searight, & Ratwik, 2011). Although, silent cellular phone text messaging permits extensive conversational exchanges during classes that may not be as obviously disruptive (Young, 2006), a significant proportion of surveyed believe that texting creates a distraction to those sitting nearby (Tindell & Bohlender, 2010). Considering that the classroom discipline is one of the most important aspects in teaching and learning, it become not easy for teachers to struggle with mobile phones' negative impacts on students while keeping them focused on learning. In addition to all this negativity, some students have found ways to use mobile phone by accessing information online during an exam, taking and disturbing photos of exam, and text-messaging answers to exam questions (Katz, 2005).

As seen from another frame, it is important to recognize that not all mobile phone use in educational contexts is objectionable. For example, Katz (2005) reported on uses of the technology for tutoring, accessing Internet resources, and connecting students, instructors, and parents in efforts to coordinate school-related activities. Others have noted the potential of the technology to support anytime, anywhere learning (Mifsud, 2003), new forms of collaboration in distance education (Milrad, 2003), distributed intelligence (Fischer & Konomi, 2005), and

knowledge communities through "m-learning/' the mobile evolution of Internet-based e-learning (Nyiri, 2002).

Gilroy (2004) argued that the opinions of faculty regarding the use of cell phones in the classroom are quite diverse, with some faculty members wishing to ban them and others feeling that even guidelines on cell phone use are overly restrictive and unnecessary. Some institutes have certain guidelines for restricting the students for carrying and using mobile phones in the class rooms, whereas some institutes are not much restrictive (Shrivastava & Shrivastava, 2014). A study, conducted by National Education Association (NEA), shows that 85% of a sample of higher education instructors in the U.S. agreed that professors include policies regarding the in-class use of mobile phones on their syllabi.

It makes no matter that they are used for academic purposes or not, mobile phone ownership estimations indicate that, for the first time in the human history, every student might own a mobile phone that is truly individual-based for their learning at school in the foreseeable future, just like their personal pens and textbooks. This necessitates and challenges mobile phone regulation at school, given that mobile phones are becoming the most ubiquitous technology with claimed features of 4E, everywhere, every time, everything, and everyone (Yan, Chen, & Yu, 2013).

2. Literature Review And Hypotheses

The modern era of the university classroom began with two instructional items: the chalkboard and the overhead projector. Since those early days, classrooms are equipped with new technology products. Today's university classroom may contain computer projection, large screens and/or whiteboards, and all of the devices necessary to enhance education. All of the technology in the classroom had one thing in common: it was controlled or utilized by the instructor. Perhaps the most interesting, challenging, and controversial technology to be introduced does not come from the instructor, but rather the student that being the electronic devices students are bringing into the classroom (Bayless, Clipson & Wison, 2013).

When cell phones first began to appear in the classroom, an annoying ringing phone would announce its presence and students would look around wondering who it belonged to. This distractor made it difficult for the instructor to keep the attention of the class. Later the rings changed to notes of a song, then to vibrations, which could bounce a phone across a metal desk, and finally to text messages. Every call or message is a distraction to someone. Now smartphones have access to the internet allowing students to browse on Facebook or any other website, as well as check email and send text messages.

Many recent studies have been conducted to clarify the usage of mobile phones in class, but the literature is insufficient about the new expression, phubbing. No study to date has surveyed students' mobile phone using habits under the frame of phubbing. As phubbing means snubbing someone by looking at your phone instead of paying attention, we consider that, being busy with mobile phones during courses is an act of phubbing. Tindell and Bohlander (2012) surveyed 269 university students and argued that the use of the cell phone is a distraction and that "if students are spending time texting, they are not paying attention in class". McCoy (2013) asked 777 university students from six U.S. universities to describe their behavior and perceptions regarding classroom use of digital devices for non-class purposes. He stated that the average respondent used a digital device for non-class purposes 10.93 times during a typical school day for activities including texting, social networking, and emailing. Most respondents did so to fight boredom, entertain themselves, and stay connected to the outside world. More than 80% of the respondents indicated such behavior caused them to pay less attention in the classroom and miss instruction.

A pilot study conducted by Burns and Lohenry (2010) surveyed faculty and students in the health sciences to determine the perception of cell phone use during class. About 40% of the students indicated that they used their phones during class, and this activity caused a distraction for about 85% of the students. It seems clear that students are using their phones during class, and that this behavior is potentially disruptive. They also found the majority of students and faculty believed that cell phones were distracting during class. These personal behaviors in the context of teaching and learning often annoy professors (Jenkins, 2011). This is not the case for all professors of course.

Campbell (2006) conducted a study to explore some of the challenges associated with mobile phones in university classrooms. Participants including students and teachers reported that ringing is a serious source of irritation and distraction for both students and faculty members and supported for formal policies restricting the technology during class time. Rosen et al. (2011) investigated the effect of texting during instruction. Results indicated that academic performance decreased when students texted during class. Similarly, educators worry about the influence of textese, the abbreviations and slang associated with texting, on written language skills. Clayson and Haley (2012) found students received and sent texts during class time. Students believed they could listen to lectures and text at the same time. This was not so and they earned lower grades.

Massimini and Peterson (2009) found students' use of smartphones resulted in tardiness. Tardiness results in negative consequences on the learning experience for the late students and the students interrupted by this behavior. Dzubak (2012) found interruptions during the learning process inhibit knowledge acquisition. Another study found students who experienced a ringing smartphone during a video presentation performed poorly compared to students in a control group who did not experience ringing phones (End, Worthman, Mathews, & Wetterau, 2010).

Synnott (2013) surveyed 129 students at a midsized public university in New England. The study's focus was on students' use of smartphones during class time and their perceptions with regard to their classmates' use of smartphones concerning: texting, surfing the Web, visiting social sites, and leaving the classroom to take calls. He found all students do engage in these activities during class time to some degree. He also found that students misperceive that their peers use their phones more than they do themselves. These misperceptions may result in students increasing their use of smartphones during class time to be like their peers.

Another, perhaps even greater, concern relates to academic dishonesty. Cheating with the use of a mobile phone is more sophisticated than traditional means of cheating and can often go undetected (Campbell, 2005). Studies (Pickett & Thomas, 2006; St. Gerard, 2006; Tindell & Bohlander, 2012; O'Bannon & Thomas, 2014; O'Bannon & Thomas, 2015) confirm that students use their mobile phones to cheat. For example, at Prairie View A&M University, 11 nursing students admitted to cheating on a comprehensive exam by texting students who had already completed the test (Tolson 2008). The technology available through cell phones allows an individual to send answers to multiple-choice questions to other test takers or send pictures of test questions to friends (outside the test), who send back the response. With web-browsing phones, it is even possible to look up answers to questions directly (Tindell & Bohlander, 2012). There have always been issues with students' passing of notes in class and cheating on exams. As pointed out by Orbinger & Coffey (2007), "Many students are extremely rapid and proficient at text messaging and could share answers on both multiple choice and essay type items". Another important issue is noted by Kiedrowski et al. (2009) who discussed the issues of privacy violations. They wrote that "Using the video features of a cell phone, students can record other students to denigrate peers or teachers by posting these rogue videos in public forums such as YouTube to simply try to 'provoke a teacher into losing their temper" (Shrivastava & Shrivastava, 2014).

Coe and Oakhill (2011) examined the effect of student texting/textese and literacy and reported a positive

relationship, whereas Drouin and Driver (2012) identified that texting negatively affects students' literacy. In classroom settings, Wei, Wang and Klausner (2012) found texting during class partially affected a students' ability to self-regulate their attention to classroom learning. Wei and Wang (2010) noted university students' ability to text and perform other tasks simultaneously during class might become a habit over time. Such habits may be defined as automatic behaviors triggered by minimum consciousness. Findings such as these may not be surprising given other research involving human behavior and the use of digital technology. Ophir et al. (2009) noted society's increasingly saturated media environment means more people are consuming more than one content stream at the same time. It is also stated tha the human mind is not really built for processing multiple streams of information. Also, Foerde et al. (2006) found people had a harder time learning new things when their brains were distracted by another activity. Yet, research on this issue is still mixed.

Based on the available literature, it is concluded that students are heavily using mobile phones, distracting the teaching and learning. Students are also misusing their mobile phones for creating disturbances. On the other hand phubbing is a brand new perspective and the research on phubbing is limited. Therefore, the focus of this paper is to conduct a survey among college students in Turkey to verify their views about mobile phone usages, research in this area needs frequent updating because the proliferation of new technology is growing at an exponential rate. Also the survey addresses the frequency and intensity of non-class related digital distractions in the classroom and aims to reveal students' phubbing habits. Within the study, students were asked to report on their own use of cell phones in class, as well as their observations of others. Specifically, students were asked to report about the use of phones before and during class, as well as during exams. They were also asked questions regarding how distracting they felt that text messaging were to themselves and other students, and whether there were characteristics of the classroom or instructor that made it easier to text in class. Additionally, students were asked what they believed an effective policy for cell phones would be. This study was conducted in order to gain a better understanding of the use and abuse of cell phones in a college classroom setting, and to potentially aid in policy-making decisions.

3. Methodology

3.1. Research Goal

The purpose of this study is to examine some of the challenges associated with mobile phones in college classrooms. We examined and enlightened several social aspects of this multi-faceted larger societal theoretical concept of technological connectivity; namely phubbing, cheating during courses and students' opinions towards cell phone regulations and instructor behaviors.

3.2. Sample and Data Collection

Students from a state university in Turkey, Sakarya participated in this study. Students were invited to participate in the survey by one of their instructors, when they were waiting for the course to begin. The selection process produced a stratified sample with respect to academic major, with 6 different majors, representing the business school at the university.

We prefer to choose stratified random sampling over other types of sampling, because we want to examine if the trends vary between subgroups within the population. Stratified sampling is appropriate for this because it ensures the presence of key subgroups within the sample. Also stratified random sampling allows us to observe relationships between subgroups. With this type of sampling, we are guaranteed subjects from each subgroup are included in the final sample, whereas simple random sampling does not ensure that subgroups are represented

equally or proportionately within the sample.

Another fact for using stratified sampling is our interest in rare extremes of the business school population, such as department of management information systems or international trade which have less population; by that way we can representatively sample even the smallest and most inaccessible subgroups of the college population. Simple random sampling does not allow this.

Stratified random samples generally require smaller sample sizes, which in turn can save a lot of time and effort for us. This is because this type of sampling technique has a high statistical precision compared to simple random sampling due to the fact that the variability within the subgroups is lower compare to the variations of dealing with an entire population (Babbie, 2001).

We use proportionate stratified random sample in this research to represent the business school truly. In proportional stratified random sampling, the size of each strata is proportionate to the population size of the strata when looked at across the entire population. This means that each stratum has the same sampling fraction. We have six strata with population sizes of 760, 1530, 70, 90, 900 and 140. We chose a sampling fraction of 1/10, this means we randomly sample 76, 153, 7, 9, 90 and 14 students from each stratum respectively. The same sampling fraction is used for each stratum regardless of the differences in population size of the strata. In order to conduct this quantitative analysis, totally 349 students from six departments participated the survey.

3.3. Analyses and Results

Because the participants could choose to omit questions if they desired, the sample could vary by question, but all of them are answered. The sample size didn't differ from the total of 349.

All participants (100%) said they had a mobile phone that could be used for text messaging and almost all of them (99%) indicated they are texting during the day. The vast majority (99,1%) said they always bring their phone to class. It is clear that college students are using their cell phones in the classroom. Almost all (98%) admitted to sending or receiving text messages while waiting for class to begin. About 95% admitted that they phub in class at least once or twice, and 32% do this every day. The participants also notice the phubbing done by others in the classroom, 98% of students indicate they have noticed this at least once or twice and 41% says that they witness this every day. There is statistically significant difference between the phubbing frequencies of grades (p=0,003) and couples (p=0,036). First grades seem more likely to phub and students who has a girl/boy-friend spend more time with their phones during courses.

If we consider being busy with the mobile phones during courses as phubbing, this means at least 95% of the students take a part in this rude behavior.

The students indicated that while in class their phones were either set to vibrate (51,6%) or silent mode (44,4%). Only 2,3% of the respondents stated they turn off their mobile phones and 1,7% of them said their phones stay at loud mode. In general (83%) students think that phones must be set to vibrate and should be free to use without distracting others. Actually it’s hard to draw lines of distraction. When asked to choose how much of a distraction was caused by their own use of mobile phones during class for non-classroom activities, the top response was “A little distraction” at 51%. It was followed by “More than a little distraction” at 23.1%, and “Big distraction” at 7 percent. 60% of the participants state that phone sounds (clicks, beeps, button sounds etc.) distract them and 54% says that they got distracted before by a ringing phone at least once. Also, the distraction phenomenon differs

statistically between genders (p=0,011). Female students are more likely to get distracted by audio activities and they are more careful about silence of their phones. 37% of the students confess that their phone has rung at least once before, but females' mean is statistically different from males (p=0,013) Also first grade students behave more free about ringing phones according to bigger classes (p=0,024), they are more likely to forget to set their phones to silent or vibrate. The students feel like they don't disturb their classmates, but the research results reveals even the presence of phones annoys a large number of students.

Generally, women and men make different decisions and they have different manners. According to descriptive statistics, 54% of female students prefer to use their phones in silent mode where this percentage is just 26,5 for male. Majority of female students (54%) set their phones to silent mode. Most of the male students (48,9%) set their phones to vibration mode. Because the sample size is not so big, it's hard to comment on some results. Only 6 students indicated they set their mobile phones to loud mode during courses. Whereas one of them is female, 5 respondents is male. The pattern of percentages within genders reveals the intention of students. Male students seem calmer, whereas female participants appear more sensitive about disturbing their classmates. Accordingly, chi-square is conducted for sound profile to analyze if there is a difference between the two gender groups. Statistically significant (p=0,000) results of chi-square imply that sound profile preference differs through genders.

Phubbing can occur by texting, surfing the web, checking time, answering a call etc. The multiple choice question about the usage purpose of mobile phones during class revealed that majority of the students (77,8%) use their phones to check time or date and 54,5% use as a calculator. Although these purposes show students so innocent, 56,9% of them indicated they check whatsapp, 41% send messages, 32,9% surf the web, 22% use facebook during courses. This results show that checking time or date forms the greatest portion of phubbing.

However, students do not feel that instructors are aware of their phubbing habits. Almost half of the respondents indicated that it is easy to text in class without the instructor being aware. Another third of the respondents said that the difficulty depends on the class, with it being easy in some and more difficult in others. Students who have girl/boy-friends statistically differ according to their texting performance (p=0,022). Couples text more frequent and it's easier for them to continue texting without the instructor being aware. It seems that texting ability is parallel with experience. Characteristics of instructors also affect phone usage and phubbing habits of students. Majority of the students (64,3%) confess that it is easier to spend time with phones if the instructor prefer to sit during the course; on the other hand it's hard to phub petulant instructors. When asked to complete the following statement, "If college instructors only knew about text messaging in the classroom, they would be shocked," students most commonly responded (84%) that instructors would be shocked if they knew how much texting goes on. So, students are consistent in their views that instructors are unaware of the extent to which texting occurs. Students apparently do not want to risk a confrontation with the professor, and so are less likely to text in class if the instructor has a set policy and seems to care whether the students are texting. The participants also claim that 92% of the instructors, who care about phubbing and have a set of rules during courses, is male.

The size of the classroom also has a big impact on how easy it is to phub without being noticed. The vast majority (83, 7%) of participants believed they could text without the instructor being aware in a classroom that had more than 50 students, and about half felt they could go undetected in a class with fewer than 25 students. This percentage decreased to only 20% if the class had less than 10 students. Consistent with this finding, when asked to specify what classroom characteristics make it easier to text, participants most frequently referred to the size of the classroom, indicating that it is easier in large classrooms, with more students. This seems to be particularly true when the room is crowded and there is an obstructed view from the instructor to the phubbing student.

With the apparent widespread use of cell phones in class, students were questioned about the reasons which make the students to phub during courses. About 13% of the students surveyed indicated that they prefer to phub because they wanted to be online. Another 13% claimed that they do it just for fun. The greatest portion with 60% said they start phubbing because they get bored during courses, only 14% indicated they get busy with their mobile phones in an emergency. Although the students continue phubbing, they are aware of its disadvantages. Nearly 80% of the participants indicated that they become distracted and miss the course because of phubbing. Also 21% of them confess that phubbing during courses affect their academic performance negatively.

Students were asked if their instructors have a policy regarding the use of mobile phones in their classrooms. “Yes, some of them have rules” was chosen by 60, 2% of the respondents. Additionally, when asked if there should be a policy on digital distractions in the classroom, 46, 8% of the respondents said “yes, this rudeness must be punished every time”, followed by “no warning no punishment” at 19, 3%. These percentages statistically differs between genders (p=0,003), females seem more disciplined and think that punishing is a good way to prevent phubbing. Also, students were asked what they believed an effective policy for cell phones would be, if someone is caught phone in hand and distracting others. 49% of the students prefer the instructor to warn whole students without declaring who the phubber is, so no one knows who the warning addressed but the phubber gets insulted.

Being busy with the phones during courses refers to phubbing, but texting during an exam relates to academic dishonesty, namely cheating. The percentage of cheaters is not as much as phubbers, but features of the brand new mobile phones enables to access unlimited resources and cheat easier during exams. Although 81, 9% of the students expressed that they have never admitted to cheating on an exam, 7, 4% confessed that they texted but the messages was not about the exam. Also the frequency of being busy with the phones during exams differs statistically between grades (p=0,02). Parallel to their phubbing habits, first grades seem more likely to cheat via their mobile phones. The cheaters also claim that it’s definitely easier to read messages instead of sending.

4. Conclusion

When college students multi-task with mobile phones in classrooms, research indicates it may hamper their ability to pay attention. This behavior, research suggests, has become more habitual, automatic, and distracting. This study of college students further defined the dynamic relationship between mobile phone use that promotes, and mobile phone use that distracts from classroom learning. It found most students favor policies that may better define and limit learning distractions caused by mobile phones in classrooms (McCoy, 2013). Distractions of this nature were previously identified by Froese (2012), Campbell (2006), McCoy (2013) and Wei, Wang and Klausner (2012). This study attempted to further quantify the frequency with which students used mobile phones for non-class activities while in the classroom. This study’s results expanded on previous findings by identifying non-classroom purposes a large majority of college student respondents use mobile phones for during class. Based on student responses to the present research, it appears that students are not willing to simply give up their mobile phones in class and would continue to try to phub even if classroom policies banned their possession or use. When students understand the need to have a mobile phone policy and can help to set that policy for a class, they may be more likely to comply. It appears that many of the offending students may not be aware that their behavior is causing a distraction for their classmates, or that phubbing could be a problem for the instructor. Given the additional information, the students may be more likely to comply with an existing policy or help negotiate an alternative policy they would be willing to follow.

Having a cell phone policy in place is not enough, however. Faculty must enforce the policy for it to be effective. Individual instructors must monitor the use of cell phones, making it clear that phubbing will not be tolerated.

Clearly the use of mobile phones in the college classroom is an issue that academic institutions cannot ignore, and it demands action by faculty to ensure an effective learning environment for all students.

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