

MOBILE PHONE USAGE AND DISTRACTION IN LEARNING SESSIONS

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ABSTRACT

Objective: To identify the prevalence of mobile phone use in class rooms and the distraction they cause.

Study Design: Mixed method transformational study conducted in pragmatic paradigm.

Place and Duration of Study: Army Medical College, Rawalpindi, from 1st Mar 2017 to 31st Mar 2017.

Material and Methods: Focus group discussions were conducted employing three expressive students from each of the three classes. These discussions were used to develop themes which were then utilized to formulate a questionnaire. The validity of the questionnaire was confirmed by two expert medical educationists. The survey was conducted by distributing the self-answering questionnaire among the students. Simple descriptive statistics were then used to analyze the cross sectional data thus collected using SPSS version 20.

Results: A total of 300 forms were distributed of which 235 (78.33%) were retrieved. Ninety one (38.72%) were from 3rd year, 82 (34.89%) from 4th year and 62 (26.38%) from final year. A total of 124 (52.8%) were males and 111 (47.2%) were females. Fifty three point two percent used their mobile in class rooms 21-30 times/day and 12.3% even more than that. Fifty four percent students texted and 17% played games during the class. About 50% claimed that they spent 25-50% class time on their mobiles. About 30% claimed that they used mobiles to fight boredom in the class. Fifty two percent agreed that the biggest disadvantage was that they could not pay attention in class due to mobile use while only 21% claimed that they were called by teachers for using their mobiles in class. Only 10% stated that they are distracted significantly when others are using mobiles in the class. Forty one percent students think that it will be helpful to have explicit policies about mobile use in the class room while 44% disagreed with that. Only 17% stated that mobile phones should be banned from classes totally while over whelming 83% were against this policy. A total of 38.72% students considered it their personal prerogative to use mobile phones in class while 22% claimed that need to use their mobile phones out-weighed learning in class. Twelve percent stated that they wanted to use mobile phones in the class even if it affected their learning in the class.

Conclusion: The use of digital devices in the classroom was found prevalent and causing significant distraction in learning. Most of the students consider it as their right to use these devices and they believe that this right outweighs the distraction caused in learning. Students also believe that teachers should only council the students in case of class disruption and there should not be any penalties for this behavior.

Keywords: Cell phones, Digital distraction, Medical students.

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INTRODUCTION

The twenty first century has seen grand revolution where hand held devices like mobile phones have become ubiquitous along with wireless internet connections. This gives users 24/7 connectivity with the convenience of mobile phones. Over the last decade or so the price of internet use has nose-dived making it easily

affordable to almost all the sections of the society. Students are no exception. Mobile phone with wireless net connectivity is an extremely powerful tool. With net browsers and 3G/4G technologies the knowledge of whole world is just a touch away. This seismic shift has changed the whole paradigm of education. According to PEW foundation's 2014 report, The "Millennial Generation" (children born in 21st century) were described as "digital natives". "This is the only generation for which these new technologies are not something they've had to adapt to¹."

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However along with the benefits come the problems. The 24 hour connectivity and advent of social media has made people addicts of this new technology leading to variable problems like too much information, miss information through unauthentic sources, short attention spans and distractions from learning. This is most evident in the age group 13 to 24 years, which are the peak academic years. They have been labeled as “mobile addicts”² Even the older segment of the society (18–29 years) has high participation rate on the social media platforms like Facebook, Twitter, Instagram etc³.

Many studies have evaluated the digital distractions caused by mobile use during educational settings. Kuznekoff found out that texting during class negatively impacted learning and note taking⁴. A study done in 91 schools in England during 2015 found out that test scores were higher in schools that banned use of cell phones⁵. Richtel reported that teachers consider that the constant use of mobile phones leads to shorter attention span among the students thus hampering their ability to preserve in face of difficult tasks⁶.

The use of mobile phones for academic purposes is also gaining acceptance among students⁷. A phenomenological study suggests that use of social media has become a prominent aspect of university students’ academic experience⁸.

As reported by Pakistan Telecommunication Authority, Pakistan’s annual cellular tele density is over 74% of its population, making Pakistan rank 7th among the top mobile phone using countries of the world⁹. The ownership and mobile phone usage among medical students is almost universal. Although in most of the colleges the use of mobile phone in the class rooms is discouraged but students are using it and this does have an impact on the learning of the students and the environment of the class room.

The aim of this study is to find out the prevalence of the use of the mobile phones in the

classrooms of a medical college for non-academic activities. Also to find out the level of distraction they cause when used in the class rooms for non-academic activities. The perceptions of the students about the advantages and disadvantages of the mobile use will also be gauged by this survey.

MATERIAL AND METHODS

This is a two phase mixed method transformational study conducted in pragmatic paradigm utilizing both qualitative and

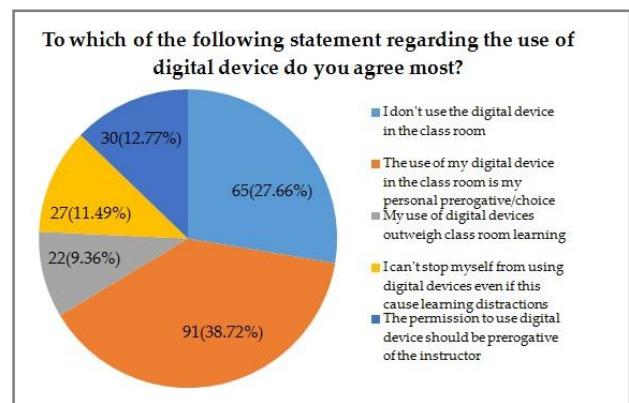


Figure-1: Responses of participants to survey questions.

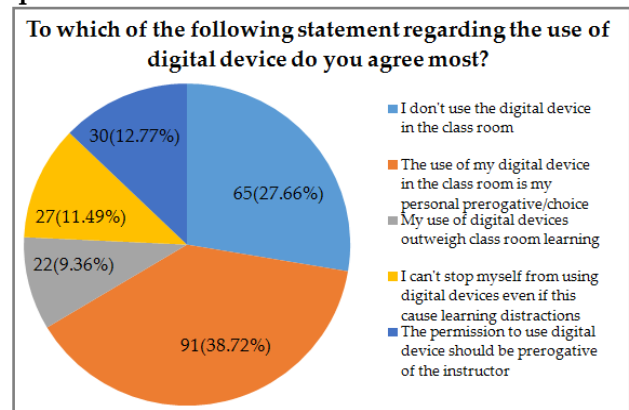


Figure-2: Responses of participants to survey questions.

quantitative approaches. In the first phase focus group discussions and interviews were conducted to develop self-answering questionnaire as the survey tool followed by its validation through experts. The second phase involved data collection and analysis. The study was carried out among third to final year students undertaking bachelors of Medicine and

Bachelors of Surgery (MBBS) program at Army Medical College, Rawalpindi under National

For Focus Group Discussions (FGDs) three students from each class (3rd, 4th and final year)

Table-I: The responses of the participants.

Use per day of digital device for non-class activities like texting, social media, emailing, games etc.	Frequency (n)	Percentage (%)
1-10 times	41	17.4
11-20 times	40	17.0
21-30 times	125	53.2
More than 30 times	29	12.3
	235	100.0
Purpose of using the device during the class	Frequency (n)	Percentage (%)
Texting	127	54.0
Emailing	11	4.7
Web surfing	30	12.8
Social Media	26	11.1
Games	41	17.4
Total	235	100.0
Percentage of class time spent on digital device for non-class activities	Frequency (n)	Percentage (%)
1-25%	88	37.4
26-50%	116	49.4
51-75%	31	13.2
Vantage of using digital device in the class for the non-class activities	Frequency (n)	Percentage (%)
To stay connected	59	25.1
Entertainment	17	7.2
To fight boredom	67	28.5
Other class activities	18	7.7
For Emergency	74	31.5
Disadvantage of using digital device in the class for the non-class activities	Frequency (n)	Percentage (%)
Can't pay attention	122	51.9
Distract others	20	8.5
Miss instructions	28	11.9
Loose grade points	15	6.4
Get called by instructor	50	21.3
Learning distraction caused by the use of digital device in the class room	Frequency (n)	Percentage (%)
No distraction	90	38.3
A little distraction	74	31.5
More than a little	35	14.9
Big distraction	20	8.5
Totally distracted	16	6.8
Distraction created by someone else while using the digital device	Frequency (n)	Percentage (%)
No distraction	117	49.8
A little distraction	77	32.8
More than a little	16	6.8
Big distraction	15	6.4
Totally distracted	10	4.3
Kind of distraction caused by the use of digital device for non-academic purpose in the class	Frequency (n)	Percentage (%)
Visual distraction	64	27.2
Auditory distraction	16	6.8
Both	93	39.6
No distraction at all	62	26.4

University of Medical Sciences from 1st March 2017 to 31st March 2017. Simple random sampling was used.

who were proficient in expressing their views were chosen. The sessions were conducted and moderated by a medical educationist with past

experience in FGDs. The sessions were audio-taped, and the audio-tapes transcribed, to ensure accurate reporting of the information provided. The verbatim transcription of the audio data was then analyzed to develop themes and sub themes. These themes and sub themes were then utilized to develop a questionnaire. The questionnaire was then validated by two expert medical educationists.

The questionnaire was distributed among the students of 3rd, 4th and final year students simultaneously. The ethical issues like privacy and voluntary participation were explained. The questionnaire contained 13 questions and time required for completion was about 20-25 minutes. The cross sectional data collected through survey method was used to assess the trends and

by that from the student's perspective. For that a survey was planned using a self-answering questionnaire as a data collection tool. The questionnaire was developed using Focus Group Discussions according to "Developing questionnaires for educational research", AMEE Guide No. 87. 2014, 1-12¹⁰. The questionnaire was then used as data collection tool to conduct the survey.

Response rate from the respondents was reasonably good¹¹ being 78% (235/300). The recovery rate was 91% from 3rd year, 82% from 4th year and 62% from final year. Male respondents were 52.8% (124) and female 47.2%.

Students were asked how often they used a digital device during classes for non-classroom related activities on a typical college day. Fifty

Table-II: Responses and suggestions of the participants.

	Yes N (%)	No N (%)	Don't Know
Do most of your instructor have policy regarding use of digital device in the class room?	148 (63%)	87 (37%)	-
Do you believe it will be helpful to have policies limiting use of digital devices in the class rooms?	96 (40.9%)	103 (43.8)	36 (15.3%)
Should digital devices be banned from class rooms?	40 (17%)	195 (83%)	-

behavior of the students towards the use of mobile phones in the classrooms and the distraction this caused in learning processes. As it was a survey so only simple descriptive statistics were used to analyze and evaluate the data using SPSS version 20.

RESULTS

A total of 300 questionnaires were distributed of which 235 (78.33%) were retrieved. Ninety one (38.72%) were from 3rd year, 82 (34.89%) from 4th year and 62 (26.38%) from final year. One twenty four (52.8%) were males and 111 (47.2%) were females.

The questions and the responses have been described in tabulated form in table-I & II.

DISCUSSION

The intent of this research was to find out the prevalence of mobile use during the class room for non-class activities and the distraction caused

three point two percent (125) responded with 21-30 times while 12.3% responded with more than 30 times. Forty nine point four percent (116) said that they spent 25-50% of the class time on mobile while 13.2% (36) said that they spent more than 50% of class time on mobiles. As compared to other studies the use of mobile in class room was much more in our survey¹². The maximum use of the mobile was for texting 54% followed by games 17.4%. This was in line with other international studies where the rates are even higher¹³.

When asked why they use mobile phones in class the maximum 28.5% responded by claiming "to fight boredom" followed by the need "to stay connected". This is a matter of concern as either the teachers and course content is not creating interest among the students or the students are unable to connect to the learning activities. If findings by Wang *et al.* were followed, digital

device distractions may also be minimized by imposing other multitasking behaviors in classrooms that can more strategically allocate students' cognitive resources¹⁴.

Students were asked to choose the disadvantages of using mobile phones in class. Maximum 51.9% stated "inability to pay attention". On the other hand when asked how much learning distraction is caused by mobile usage in class more than 70% said little or no distraction. This contradiction implies that students believe that despite the inability to pay proper attention due to mobile usage in the class their learning is not hampered much. This extrapolates that according to students' perception little learning occurs in class. A study conducted in public sector medical college in Khyber Pakhtoonkhwa claimed that learning of only 17% students was effected to some extent while of 7% were effected severly⁹.

Eighty five percent of the students claimed that either they are little or not at all distracted by others using mobile phones in the class. Of these 27% said that visual disturbance is the main cause of the distraction while only 7% are claimed auditory distraction. This means that maximum students keep their mobiles on "silent mode" during the class.

Sixty five percent said that instructors have policies for use of mobile phones in the class while 37% refuted it saying that instructors have no policy. Forty one percent stated that it will be helpful to have clear policies about use of mobile in the classrooms while 43% said otherwise. World-wide the instructors are also divided about the benefits and disadvantages of the use of mobile phones in class so there is no clear cut consensus about it¹⁵.

When asked whether mobile phones should be banned from class, an overwhelming 83% said no while only 13% were in favor of the ban. This is a clear cut indication that according to student perspective banning cell phones from class will be counterproductive.

Sixty three percent of the students think that if a student is causing distraction through his mobile phone, he should be counselled. Ten percent agreed that student should be asked to leave the class while another 10% were in favor of confiscating the digital device.

Thirty nine percent of the students claimed that it was their personal prerogative to use mobile phones whenever and where they want including the class room. Ten percent stated they would use mobile in class even if it effects their learning negatively in class while 11% claimed that using mobile was more important than class activities.

A limitation of this survey was that it was done to evaluate the perceptions of the participants so the responses were subjective in nature. As the study was conducted in Army Medical College, where the discipline level is higher than in civilian medical colleges the results cannot be extrapolated to other colleges.

The unique feature of this survey was its measurement of the frequency and duration of digital distraction in classrooms, as well as the competing justifications respondents identified for engaging in distracting behavior with digital devices they admit may have negative learning consequences.

CONCLUSION

The use of digital devices in the classroom was found prevalent and causing significant distraction in learning. Most of the students consider it as their right to use these devices and they believe that this right outweighs the distraction caused in learning. Students also believe that teachers should only council the students in case of class disruption and there should not be any penalties for this behavior.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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