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Impact of Mobile Phone Usage on Students' Writing Skills: A Case Study of University of Peshawar

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Abstract

This paper evaluates the effects of mobile phone usage on students' writing skills at the University of Peshawar. The data was collected through a survey and a questionnaire was used as research instrument. Simple random sampling technique was used to collect data from different disciplines of the University of Peshawar during Autumn 2015 semester. Pearson correlation was applied on the variables for correlation. Multinomial regression was used for the analysis of correlated variables to identify negative and positive effects of mobile phone usage on respondents' studies. The study explored that most of the students use mobile internet for entertainment only. The results of the study revealed that the mobile phone usage has a negative impact on the writing skills of the students because they do not use standard language in text messages.

Key words:

Mobile Phone, Text Messages, Writing Skills, Entertainment, Internet

Introduction

The growth in the cellular sector is high especially in the developing world (Ravichandran, 2009). This increasing trend in mobile phone usage in all walks of life has led the researchers to explore its impact on daily life of the users (Chung et al., 2003; Shaikh & Karjaluoto, 2015). The research studies conducted in different parts of the globe outline the good and bad effects of mobile usage on students comprehensively. The review of various research works establishes that the impact of mobile usage on students is either positive or negative due to cultural variations, maturity level and mind set of the users (Ling, 2004).

Mobile Phones in Society

There is an increased trend of mobile usage among the users of all age groups in the society. Peer group influence is very high among teenagers (Ling & Helmersen, 2000). This influence of mobile phone on peer relationships has given rise to a networked society (Williams & Williams, 2005). The basic reason to keep a mobile phone is to text and talk with friends; this concept is accepted by 56% of high school students in a study at New Zeeland (Netsafe, 2005). Another most cited reason to keep mobile with children is for safety (Srivastava, 2005; Ling & Helmersen, 2000; Geser, 2004). Parents seemingly concerned with the safety of both male and female children (Ling & Helmersen, 2000) reported that they contacted their child whenever required to know where he/she is (Matthews, 2004).

Mobile Calls

Many students received a great number of calls from their friends and family regarding educational purposes and social matters. The respondents were using missed calls for different purposes, e.g. some students used a missed call for call back purpose and some students used it for reminding (*of something), teasing and missing (the receiver).*

Mobile SMS

Short Message Service (SMS) developed as an initial product (Faulkner and Culwin, 2004) for instant messaging (Goldstuck, 2006). Text messaging mostly involved words that were either shortened or used symbols. Students were of the view that mobile text messaging was harming students' writing skills (Russell, 2010).

Mobile Internet

The internet service access with portable devices enables the users to access information available on web anywhere anytime.

The increased trend of mobile phone in Pakistani society especially among university students is a positive sign. This increased trend may lead to an information rich society. But it also

has some negative effects on the students' education especially the writing skills. The study reveals the positive and negative impact of mobile phone usage on students' writing skills.

Literature Review

Presently mobile phone is also used as a tool of entertainment along with communication. Most of the students use mobiles for setting alarm, giving missed calls to intimate classmates and make calls for family communication (Nawaz & Ahmad, 2012). This has a positive impact of mobile usage on students' peer and family relationships. Young generation maintains their social connections with mobile phone which is its positive usage towards the organization of social links. Mobile phone calls are considered costly as compared to the SMS in the developing world. The users especially students rely on messaging services to communicate with peers and family. The SMS text messaging increases the tendency among students to adopt non-standard uses and contracted forms of English words in their classwork, examinations and research reports especially in an academic environment.

Most of the students use mobile internet services for course related reading and research needs. They use it at the University Library's Digital Lab Unit as well as their departments and homes. Google as a search engine and Yahoo as an email service are the most popular web tools among students. A study shows that students are making use of the internet for course related reading and research needs. Only one-fourth students use it for the entertainment purpose (Bashir, Mahmood & Shafique, 2008). This trend is opposite to the general perception of the internet use in Pakistan which is attributed to entertainment.

Impact of Mobile Phone on Writing Skills

The new digital environment presented an exceptional array of possibilities for communication, interaction and information retrieval at the fingertips that was never before available (Ling, 2004). While cell phone expansion is happening at 'breath-taking speed' (Geser, 2004), the use of messages through cell phones is also getting popular rapidly.

Yousaf and Ahmad (2013) found that the higher the exposure to the SMS, the more the negative effect on the writing skills of the university students. The manner people converse and write has been influenced by the text messaging. Their study also revealed that SMS texts are written by ignoring spellings, intentionally or reflexively. The accepted credence is that texting has developed as a twenty-first-century trend as a highly idiosyncratic vivid style, full of contractions and out of the ordinary uses of language used by an immature generation that doesn't worry about standards.

University of Peshawar is a popular and widespread university in Khyber Pakhtunkhwa (KP). Almost all the students use mobile phones. The increasing trend of mobile phone usage especially among the students demands to investigate the positive and negative impact of mobile phone usage on their studies. This study contributes to literature in two ways: first giving insight to parents about the hazards of mobile phone usage and second by giving information to students to avoid short messaging on mobiles as it is negatively influencing their writing skills.

Methodology

The students of undergraduate level at University of Peshawar comprised the population of the study. A sample of 150 students out of 35000 was selected using random sampling technique. A survey was conducted and a questionnaire was used as a research instrument to collect the data. The designed instrument's items were taken from different studies and adapted according to the requirements (Nawaz & Ahmad, 2012; Dansieh, 2011; Bashir et.al, 2016; Yousaf & Ahmad, 2013; Bakhsh et al., 2017). The questionnaire's face validity was not required as it was adopted from previous studies (Yousaf & Ahmed, 2013). The instrument's measurement scale was Likert with five options from strongly agree to strongly disagree. The questionnaire was distributed among four disciplines that were Numerical Science, Social Science, Biological Science and Physical Science. The collected data was analysed using descriptive statistics, cross tabulation, chi-square, odds ratio and multinomial logistic regression.

Results

Figure 1 shows that the majority of the students' age lies between 21 to 22. Mostly students were studying in 8th semester as shown in figure 2. It was also found that the majority of the students did not have their own source of income and they were dependant on their parents for their pocket money as shown in figure 3. The results of the study illustrate that the majority of the students' family background was that of doctors, labourers, lawyers and farmers.

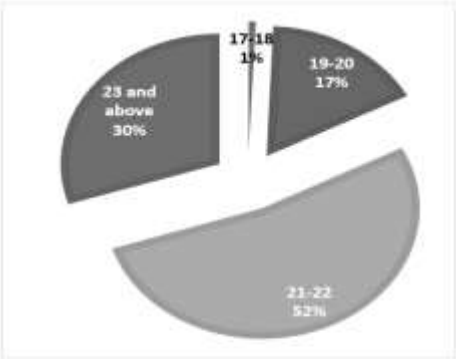

Figure 1: Students' age

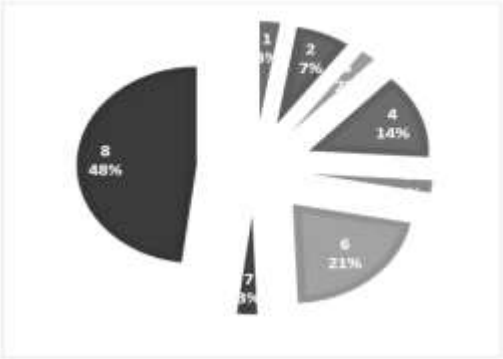

Figure 2: Semester wise breakup of students

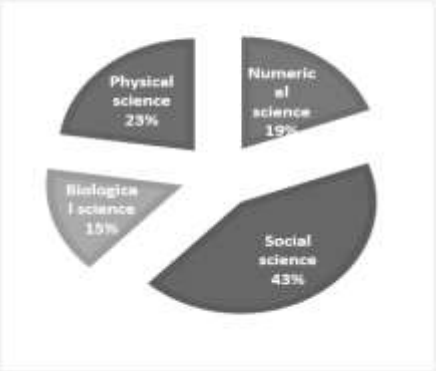

Figure 3: Discipline wise distribution of students

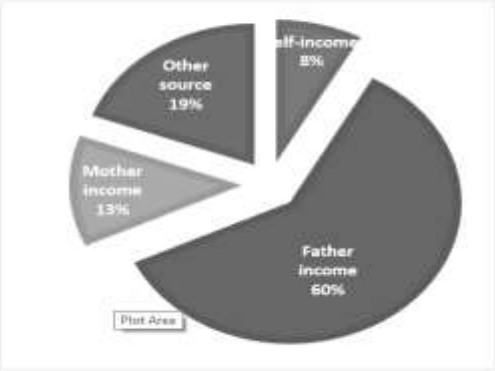

Figure 4: Students' source of income

The discipline wise distribution of students can be seen in figure 3. It shows 43% students were from Social Science, 23% from Physical Science, 15% from Biological Science and 19% from Numerical Science. The figure 4 shows the income distribution of the students. The major source of income for 60% students is their parents while income from other sources is 19% and self-generated income is 8%.

The students' responses were further analysed which showed that their monthly mobile phone expenditure ranged from five to six hundred rupees and they were using Ufone and Telenor connections. When the students were asked whether text messaging affected their writing skills, 10 of the respondents strongly disagreed with the idea, 69 of them agreed with the idea, 42 disagreed while 29 remained neutral.

When the respondents were asked about the usage of internet on mobile, it was found out that 53.3% were using internet on the daily basis and 36.7% of the respondents were using internet twice or thrice a week while 10% were using internet once in a month. When the respondents were asked how they learnt to use mobile internet, it was found out that 28% of them acquired skills to use internet by themselves, 29% of the respondents acquired skills to use internet through friends and the remaining 43% acquired skills of using internet through other sources. When the

respondents were asked how helpful internet was in their studies especially in writing assignments, 27% said they used internet to complete their class assignments.

Table 1:
Student Age * Use of other functions on mobile cross tabulation count

Age Group	Use of other functions on Mobile							Total
	Camera	Education	Songs	Calculator	Calendar	Time	Alarm	
17-18	0	0	1	0	0	0	0	**01**
19-20	11	2	6	3	1	1	1	**25**
21-22	26	5	25	3	2	5	13	**79**
> 23	10	3	13	1	0	9	9	**45**
Total	**47**	**10**	**45**	**7**	**3**	**15**	**23**	**150**

The result shows that 61% respondents of age group 21-22 used camera and played songs (Mp3 and Mp4) whereas 13 respondents used alarm.

Table 1a:
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.698 [a]	18	.350
Likelihood Ratio	20.058	18	.330
Linear-by-Linear Association	6.624	1	.010
N of Valid Cases	150		

a. 18 cells (64.3%) have expected count less than 5. The minimum expected count is .02.

This Table 1a shows that p-value is greater than 0.05 which shows there is insignificant association between student age and the use of other function on mobile.

Table 2
Current Semester * Spelling mistakes due to SMS cross tabulation count

Current Semester	Spelling mistakes due to SMS					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
1	0	0	2	0	2	**4**
2	1	2	5	2	1	**11**
3	1	0	0	2	0	**3**
4	1	6	4	10	0	**21**
5	0	0	1	2	0	**3**
6	3	11	6	11	1	**32**
7	0	1	0	2	1	**4**
8	11	22	15	19	5	**72**
Total	**17**	**42**	**33**	**48**	**10**	**150**

The analysis shows that 48 respondents agree that they make spelling mistakes due to usage of non- standard English in SMS. However, 42 respondents disagree that they make spelling mistakes due to usage of non- standard English in SMS.

Table 2a:
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.224[a]	28	.114
Likelihood Ratio	36.536	28	.129
Linear-by-Linear Association	2.947	1	.086
N of Valid Cases	150		

a. 31 cells (77.5%) have expected count less than 5. The minimum expected count is .20.

The result shows that p-value is greater than 0.05 which shows that there is insignificant association between current semester and spelling mistakes due to SMS.

Table 3
Current Semester * Text messaging has effect on writing skill cross tabulation count

Current Semester	Spelling mistakes due to SMS					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
1	0	0	2	2	0	**4**
2	0	2	3	5	1	**11**
3	0	1	0	2	0	**3**
4	2	5	3	10	1	**21**
5	0	0	3	0	0	**3**
6	1	12	5	9	5	**32**
7	2	0	1	1	0	**4**
8	5	22	12	29	4	**72**
Total	**10**	**42**	**29**	**58**	**11**	**150**

Table 3 shows that 39% respondents agree that the usage of non- standard English in SMS negatively influence their writing skills; however, 28% respondents disagree that the usage of non-standard English in SMS negatively influences their writing skills.

Table 3a:
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.373[a]	28	.061
Likelihood Ratio	34.631	28	.181
Linear-by-Linear Association	1.536	1	.215
N of Valid Cases	150		

a. 31 cells (77.5%) have expected count less than 5. The minimum expected count is .20.

The table shows that p-value is greater than 0.05 which shows that there is insignificant association between current semester and the effect of text messaging on writing skill.

Table 4
Current Semester * Reasons for using mobile internet cross tabulation count

Current Semester	Reasons for using Mobile Internet									Total
	Class Assignment	Research Project	Update Knowledge	Commu nication	Entertain ment	Prepare for Examination	Read News	Download Software	Other Reason	
1	0	2	2	0	0	0	0	0	0	**4**
2	4	0	1	0	2	0	1	0	3	**11**
3	0	0	0	0	2	1	0	0	0	**3**
4	9	0	1	1	4	1	1	0	4	**21**
5	1	0	0	2	0	0	0	0	0	**3**
6	10	2	1	3	10	2	1	1	2	**32**
7	2	1	0	0	1	0	0	0	0	**4**
8	15	4	16	2	22	2	2	2	7	**72**
Total	**41**	**9**	**21**	**8**	**41**	**6**	**5**	**3**	**16**	**150**

Table 4 shows that 27% respondents use mobile internet for entertainment and class assignment whereas 21% respondents use mobile internet for updating their knowledge. However, a few respondents used internet for reading news, preparing examination and downloading software.

Table 4a:
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	83.198[a]	56	.011
Likelihood Ratio	65.384	56	.183
Linear-by-Linear Association	.003	1	.957
N of Valid Cases	150		

a. 64 cells (88.9%) have expected count less than 5. The minimum expected count is .06.

We conclude that p-value is less than 0.05 so that there is significant association between the two variables (Current Semester and Reasons for using Mobile Internet).

Table 5
Cross tabulation which search engines are being used to get information

Which search engines are being used to get information	Based Email Service				Total
	Yahoo	Hot mail	Gmail	Other	
Google	66	9	46	3	**124**
Yahoo	13	6	1	0	**20**
MSN	0	1	1	0	**2**
Alta Vista	0	1	0	0	**1**
Any Other	1	0	1	1	**3**

Total	**80**	**17**	**49**	**4**	**150**

Out of 150 respondents, 82.2% of the respondents use Google as a search engine whereas 13.3 per cent of the respondents use Yahoo as a search engine. Information has been collected from one hundred and fifty respondents, out of which most of the respondents use Yahoo portal for the purpose of mail service and some use Gmail whereas a few of the respondents use other portals.

Table 5a:
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.255[a]	12	.681
Likelihood Ratio	9.521	12	.658
Linear-by-Linear Association	3.214	1	.073
N of Valid Cases	150		

a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is .16.

The analysis of the association between the variables shows that there is insignificant effect of student's pocket money source (self-income, father-income, mother-income and other sources) and their per day spending of pocket money. Chi-Square=9.255, p-value=.681.

Multinomial logistic regression is used to analyse relationships between a non-metric dependent variable and metric or dichotomous independent variables.

Table 6:
Case Processing Summary

Father's Profession	N	Marginal Percentage
Businessman	34	22.7%
Government servant	55	36.7%
Other	61	40.7%
Total	150	

Table 7:
Case Processing Summary

Daily Study	N	Marginal Percentage
< an Hour	49	32.7%
1 to 2 Hours	56	37.3%
2 to 3 Hours	26	17.3%
> 3 Hours	19	12.7%
Total	150	

In order to find out the effect of father's profession on student's studies, multinomial logistic regression has been applied on the father's profession- dependent variable and student's daily study- independent variable.

Table 8:
Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	47.911			
Final	27.925	19.986	6	.003

In this analysis, the probability of the model chi-square (19.986) was 0.003, less than or equal to the level of significance of 0.05. The existence of a relationship between the independent variable (Daily study) and the dependent variable (Father's Profession) was supported Nagelkerke's value of correlation measures to estimate the strength of the relationship is 0.14.

The likelihood ratio test evaluates the overall relationship between an independent variable and the dependent variable. The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Table 9:
Parameter Estimates

Father's Profession		B	Std. Error	Wald	df	Sig.	Exp (B)
Businessman	**Intercept**	-2.708	1.033	6.875	1	.009	
	< an Hour	2.644	1.094	5.844	1	.016	14.062
	1 to 2 Hours	2.500	1.098	5.184	1	.023	12.187
	2 to 3 Hours	1.678	1.157	2.105	1	.147	5.357
	> 3 Hours	0b	.	.	0	.	.
Government Servant	**Intercept**	-1.609	.632	6.476	1	.011	
	< an Hour	1.727	.720	5.759	1	.016	5.625
	1 to 2 Hours	2.133	.707	9.105	1	.003	8.438
	2 to 3 Hours	.916	.784	1.367	1	.242	2.500
	> 3 Hours	0b	.	.	0	.	.

The coded values are [Q3=1] = Less than Hour, [Q3=2] = 1 Hour to 2 Hours, [Q3=3] = 2 Hours to 3 Hours, [Q3=4] = More than 3 Hours

In table 9, two comparisons will be made: the 'Businessman' group will be compared to the 'Other services' group. The 'Government servant' group will be compared to the 'Other services' group. The reference category plays the same role in multinomial logistic regression that it plays in

the dummy-coding of a nominal variable: it is the category that would be coded with zero for all of the dummy-coded variables that all other categories are interpreted against.

As the coefficient of [Q3=1], [Q3=2], [Q3=3] in Business group are greater than zero this implies that the students who study less than 3 hours are more likely to belong to a profession of business man. And same is the case of [Q3=1], [Q3=2], [Q3=3] in Government services group that study time of students is very low in this group as compared to that of other services.

Table 10
Parameter Estimates

Use of Mobile connection		B	Std. Error	Wald	df	Sig.	Exp (B)
	Intercept	.163	.330	.243	1	.622	
Ufone	Businessman	.100	.535	.035	1	.852	1.105
	Government Servant	.205	.545	.142	1	.706	1.228
	Intercept	-.531	.399	1.773	1	.183	
Jazz	Businessman	-.673	.770	.766	1	.382	.510
	Government Servant	-.057	.686	.007	1	.934	.944
	Intercept	-.268	.368	.530	1	.467	
Telenor	Businessman	.045	.601	.006	1	.940	1.046
	Government Servant	1.290	.536	5.800	1	.016	3.632
	Intercept	-2.833	1.029	7.581	1	.006	
Warid	Businessman	-18.610	.000	.	1	.	8.273E-009
	Government Servant	1.735	1.226	2.002	1	.157	5.667

If we consider Ufone mobile connection, the coefficient (.100) is greater than zero which indicates that the businessmen are more likely to prefer Ufone and same is the case with the government servants who prefer Ufone because its coefficient (.205) is also greater than zero.

In dependent variable with 2nd category Jazz, the coefficient (-6.73) indicates that the businessmen are less likely to use Jazz mobile connection and on the same line (-0.057) government servants are less likely to prefer Jazz.

Discussion

The overall results of the study indicate that most of the students are using mobiles on daily basis. The result illustrates that most of the students with their family background of government employees use Telenor Sims. It was also found that most of the students use and prefer Ufone and Telenor Sims for SMS purposes.

Along with the positive aspects of the mobile use, there are several negative repercussions associated with it. At one hand, the students use mobiles for setting alarm, giving missed calls to intimate classmates and make calls for family communication. They also maintain their social connections with mobile phones which is its positive usage towards the organization of social links. Moreover, the use of SMS is cost effective; therefore, the students use SMS for their academic communication.

On the other hand, the students waste their time through SMS so majority of the students do not study properly. The students who are using mobiles widely do not focus on their studies. A very few of them are using mobiles for the study purposes. Similarly, the wide use of short text messages badly affects the writing skills of the students and most importantly spelling mistakes in students' writings are frequently occurring due to the extensive use of non-standardized words while composing text messages.

The students were asked to mention the place where they were using the Internet. It was also found out that most of the students used the services of central library (UOP). When students were asked about the reasons of using internet, most of the students gave the reason of completing class assignments. However, some students used internet to update their knowledge and prepare examination. 82.7% students said that they used Google search engine when they need information while some students used Yahoo and very few used Alta vista. The results revealed that most of the students used Yahoo as a mail service and some students used Gmail.

Conclusion

Based on the results of the study, it is concluded that there is a strong correlation between mobile usage and the age of the students. The results further revealed that mobile phone usage especially text messaging was negatively influencing the writing skills of the students. Students write erroneous language while composing text messages which ultimately destroy the writing skills of the students. Therefore, assignments and final reports written by the students are badly influenced. In order to ensure the positive use of the mobile phones, there should be proper guidance and training classes that will possibly lead to the better use of the mobile phones among the students of Peshawar University.

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