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Smartphone Usage by College Students and its Impact on Traditional Media

ABSTRACT

The world is on the rise with the advancement of handheld technologies like smartphone which has substituted the traditional media with advanced functions like SMS, telephone, diary, etc. with internet connectivity. College students use smartphone as a multi-purpose gadget like sending and receiving text messages, voice-calling, listening radio or watching television and web hosting, etc. Also, television channels and newspapers are available on the internet. The study investigated the 'smartphone usage by college students and its impact on traditional media. The researchers found that all respondents, irrespective of their gender, were equally using smartphone. They have been using internet on their smartphone for news updates instead of accessing radio, television or newspaper directly. Male respondents have been watching sports on their smartphone instead of on television. Most of the respondents agreed that smartphone has reduced the time which they used to spend on traditionally media. The overall perception about the usage of smartphone by the respondents was also analysed and a significant difference was found among boys and girls. On the other hand, the results statistically revealed significant relationship between gender and smartphone usage instead of using traditional media.

Keywords: Smartphone, Usage, Students, College, Impact, Traditional Media.

Introduction

The 21st century has led to the rapid development of moving images as an educational and informative medium through these digital technologies.

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Mobile technology is rapidly developing as voice communication all over the world including Pakistan. Nowadays, smartphone has become an important communication device in society because of its functions. Students are tremendously technology-savvy and in the words of Ahonen (2008), they are, “a division of people who has been energetic in renovating technologies in surprising speed and defined this as gadgets’ diversity”. They have been using the smartphone comfortably as compare their previous generations.

Today, the smartphones provide almost all the services that the traditional mass media once used to give to their users. The traditional media i.e. television, print, and broadcast, evolved the new needs that lie on top with new media. The cellular companies are providing internet facilities at the lowest cost which benefit the college students in getting benefits from these facilities and are enjoying for different purposes.

Nowadays, all newspapers are available on internet as e-papers. Masses in the world today don’t have enough time to sit and read newspaper or watch television to get updated information, so they use internet on their smartphone and get what they need. Even, in Pakistan internet facilitate people to access e-papers and the businessmen get required information through internet.

In addition to voice communication, the smartphone companies are providing facilities of news, entertainment and developing social bonds. Therefore, the study is intended to investigate whether the smartphone usage of college students has caused any impact on traditional mass media such as newspaper, radio, television etc. in Pakistan.

Research Questions

- i) What is the basic purpose of smartphone usage by college students?
- ii) Is there any impact of smartphone usage on traditional media?

Review of Related Literature

A mobile phone introduced a new world into the life of young students. A number of electronic devices also provide entertainment and information, but smartphone is the latest addition to the existing devices, and this single device now provides almost all the facilities.

Nowadays, smartphone usage and its impact is a debatable topic. Almost all over the world no one can live without it. In the telecommunication histories the smartphones are of course single of the volatile advancement ever to have taken place. Keeping smartphone has become a universal phenomenon all over the world, especially the youth use the smartphone for organising and maintaining their social relations.

According to PTA, the number of SIMs from their launching date to April 2011, reached 107886440 which were issued by different telecommunication companies in Pakistan.

As mentioned in Wikipedia “first cellular mobile service was introduced in Pakistan in the mid-1990, that was Insta Phone and the service was very limited. There were merely a few individuals using cellular services and it was considered a status symbol as only rich and elite individual could afford it”. Another cellular network entered in the market 1992 was Paktel and afterward many service providers started their operations. Presently, cellular networks like Mobilink, Zong, Ufone, Warid, and Telenor are operating in Pakistan. The number of users spectacularly increasing day by day with the advancement of mobile technology and services. Biagi (2003) discusses that, “every mass media is consisting of its own content types, individual imaginative performer and procedure, and business component. Generally, in the domain of mass communication the internet and mobile (6th and 7th media) are called digital media; and radio and TV (4th and 5th media) as broadcast media”.

Masses have become more dependent and it has now become part and parcel of their lives. It reflects the different aspects of masses lives through media eyes. One thing is clear that mass media is an integral and indivisible part of users lives either talked about the pictorial messages of the older age or the new technology. Entertainment is an essential ingredient of traditional media, but in addition to the entertainment programmes, media provides information on all the aspects of life. Mass media forms masses opinions; ideas by its powerful ability to influence their minds. That’s why it is said by media scholars that it is double edged sword, because, it tells us different stories.

New media is a comprehensive phrase which developed in the end of 20th century. For example, it is possible to access new gadget at anytime, anywhere, on any device, and interact other user through social media. Another significant quality of new media is the ‘advancement’ of beginning, publication, transmission and utilization of media content. New media through social media is generating responsiveness among the masses for the achievement of their rights all over the world. Smith (2008) describes “new media is having the description of being influence, networkable, compressible, and interactive, for examples Internet, computer, and multimedia. New media does not include television programs, feature films, magazines, books, or paper-based publications – unless they contain technologies that enable digital interactivity”.

In Pakistan, most of the students are interested in using smartphone for sending and receiving SMS (text messages) and voice calling to communicate their friends and family members. They also explore television on their smartphone through internet to get the sports updates and sometimes read newspapers. Hassan (2008) comments that “the number of smartphone users in

Pakistan has increased with an extraordinary speed i.e. 58%, which is the highest in South Asia with the total number of mobile subscribers". Media scholars are of the view that there are many countries in the world where the smartphone technology can bring the revolutionary changes in the lives of the individuals especially in students.

There is also no doubt in it that smartphones are the best source of greater personal security, convenience, and it have the also potential to spare one's dead time on doing something on it. Another advantage of smartphone is that persons use it when they are free and need some entertainment like listening to music etc. On the other hand, it has some negative impacts as well, including environmental impact, health and safety and certainly the social changes, occurred due to heavy use of it, as we are now permanently available and contactable, that has a profound effect on our interpersonal interaction (Srivastava, 2005).

According to Ling (2004) "smartphones appeared for social networking and additionally these insured its users a strong control of their social networks. He further argued that it makes available for all type of communication between parents and children and between students and friends. Thus, it was often used to enhance social capital, especially by connecting their family members and friends".

Cellular Phone and Traditional Media:

Katz (2002) defined that "the internet has currently converted into influential media tool to such an extent that many governments repressive such as China and Iran – to name only a couple – have tightened the control of the net. In some countries, people use internet on their mobile phones and this facility is affecting the traditional media".

Newspapers which electronically available are E-papers. It includes all the features of a regular print. As per Helmerson (2004) "no doubt it's the 2nd invention after printing press, which has brought the revolutionary changes in the newspaper readership, which is made of flexible material, required ultra-low power consumption, cheap for the manufactures and above all easy and very convenient to read. It can be expected with the rapid growth and popularity of the E-papers that within the next few years many printed papers will be converted into E-newspapers."

Bachmeier (2009) stated that "listening traditional radio can be difficult because there may be bad reception and it can take a while to tune the right station. Listening to internet radio with smartphone has many advantages over a traditional radio, and discover preferred station is just a click away. Once the listener found his/her interested program, they just click on the web link and broadcasts. Finding a talk show, sports game, or favourite music is also easily accessible from the internet with smartphone".

Listening internet radio on smartphone would laid the foundations for new communications ways, and spread around the world faster than any other device.

When television stations nationwide switched to broadcasting exclusively in a digital format the possibilities for smartphone opened. From iPads to iPhones and other Smartphones, consumers have a variety of ways to access real-time TV anywhere. Frazier (2002) conducted a survey of 1500 users under 20 were simply asked "would you willing to watch television on smartphone", 68% said, "No," but when the question changed and asked "your favourite songs or programme," 71% said "Yes." If the proposition involves your favourite movie songs with your name, 76% said "Yes." Given the chance or enhance their cell phone with smartphones 82% are willing to accept.

According to Severin and Tankard (1997) "most of the theories on media explained about the effects of media had on people. In fact, the theory which narrates how the person use media to fulfil their need and gratifications. We can say that what the people do with the media rather that what it does with the people. People make use of the media for their specific needs, and this theory can be a user/audience-centered approach."

Research Method

A survey research method was applied in this study to investigate the smartphone usage of college students and its impact on traditional media. The most important area of measurement in social research is survey and non-experimental research methods. Basically, this study was based on two set theories i.e. 'Theory of Reasoned Action' and 'Uses and Gratification Theory'. The researcher collected the data from first year college students through questionnaire and personally administered it. According to the nature of the study a multistage cluster sampling technique was employed for selection of population and sample. As a first step in selection of sample for the study, the researcher divided the Rawalpindi city into four clusters. The researcher randomly selected one cluster in which both boys and girls colleges were situated. The researcher randomly selected 100 students, (50 boys and 50 girls), who were studying in first year at Government Colleges located in Rawalpindi.

Results and Discussion

Most of the questions were on Likert scale which generally exercised for investigation in survey research. Principally, statistical method was applied to examine the relationship between demographic variables which were different in nature. However, cross-tabulation and chi-square were applied

to check the significant influence of smartphone on traditional media. Simple Linear Regression was also applied to check the R², F-stat along with significance levels about different perception of the respondents regarding impact of smartphone on traditional media.

**Table 1:
Use of Internet on Smartphone by Gender**

Variables	Male	Female	Total	Chi-Square
Sometimes	63 (63.0%)	25 (25.0%)	88 (44.0%)	65.853 P = .000
Never	37 (37.0%)	75 (75.0%)	112 (56.0%)	

The results about 'using internet on smartphone' documented that the male respondents are in majority (63%) who regularly use internet on their smartphone as compare to female respondents. The chi-square test value 65.853 shows the significant (.000) relationship between the responses and the usage of internet on smartphone by males. The difference of usage of Internet with smartphone among gender is also observed in individual's daily life as well. Poysti, Rajalin, Summala (2005), conducted a study and concluded that "Norwegian boys use mobile phone more frequently for text messaging than the girls do, however, both are exposed to radio and television media for different purposes".

**Table 2:
Listening Radio on Smartphone by Gender**

Variables	Boys	Girls	Total	Chi-Square
Often	84 (84.0%)	20 (20.0%)	104 (52.0%)	24.012 P = .000
Sometimes	16 (16.0%)	80 (80.0%)	96 (48.0%)	

As evident from the results, respondents of study male (84%) and female (80%), listen to radio on their smartphones. Whereas, the chi-square (X²) value (24.012) which is significantly (.000) proved correlates the results of both the gender with the statement. These results also support the fact that smartphone reduces the uses of traditional mass media.

**Table 3:
Reading Newspaper on Smartphone by Gender**

Variables	Boys	Girls	Total	Chi-Square
Sometimes	20 (20.0%)	15 (15.0%)	35 (17.5%)	27.679 P = .000
Never	80 (80.0%)	85 (85.0%)	165 (82.5%)	

The results about reading newspapers on smartphone revealed that boys are in majority (67%) who read newspaper on their smartphones as compared to girls' respondents. The value of chi-square (X^2) (27.496) and significant (.000) value shows gender's relationship regarding reading habits of e-paper on smartphone. For example, information technology in form of smartphone has launched a revolutionary new product (News Hunt), which allows users to read e-paper of their choice on the go. News Hunt is a mobile application through which user can access the latest news of the regional language newspaper on their handset.

Table 4:
Reduced Time Earlier used to spend on Listening to Traditional Radio by Gender

Variables	Boys	Girls	Total	Chi-Square
Sometimes	69 (69.0%)	34 (34.0%)	103 (51.5%)	25.209 P = .001
Never	31 (31.0%)	66 (66.0%)	97 (48.5%)	

The results regarding smartphone reduces the time which users earlier used to spend in listening to the traditional radio. As evident from the results, a majority (69%) of boys and (66%) girls' respondents 'agreed' with the statement that 'smartphone reduces the time which they earlier used to spend on listening to the traditional radio'. Whereas, the value of chi-square test (25.209) significantly (.001) supported that the 'smartphone reduces the uses of traditional mass media'. It is concluded that both the gender in majority listen to radio on their smartphone. According to Bachmeier (2009), "listening to a radio on mobile cannot be difficult nowadays because there are signals which can take a while to tune".

Table 5:
Reduced Time Earlier used to spend on Reading Newspapers by Gender

Variables	Boys	Girls	Total	Chi-Square
Sometimes	35 (35.0%)	20 (20.0%)	55 (27.5%)	48.543 P = .000
Never	65 (65.0%)	80 (80.0%)	145 (72.5%)	

The results regarding 'smartphone usage reduce the time which user earlier used to spend in reading traditional newspaper', reflected that both the respondents agreed that smartphone usage reduced their time which they earlier used to spend on reading printed newspapers. However, the chi-square test values (48.543) and its significant level (.000) shows that the

majority of both the respondents read e-paper on their smartphone but not regularly.

A report released by Pew Research Centre about Internet and American Life found that Americans get news or other information on mobile device. Maryanne (2008) explained that “reading is not a natural act and there are no reading genes. Rather, reading is a traditional action which has profound changes since its inception because smartphones are time saving devices”. The exposure of e-paper on smartphone screens early in the morning and online reading habits maybe reduce the reading of print newspaper. Sheridan (2002) stated that “rapid development and acceptance of the e-papers among readers stimulated other printed newspaper to convert their paper into e-paper that means most of the masses read e-paper on internet using their smartphone”.

**Table 6:
Reduced Time Earlier used to spend in Watching Television by Gender**

Variables	Boys	Girls	Total	Chi-Square
Sometimes	71 (71.0%)	59 (59.0%)	130 (65.0%)	26.425 P = .002
Never	29 (29.0%)	41 (41.0%)	70 (35.0%)	

The results documented that smartphone has reduced the time which users earlier used to spend in watching traditional television. The majority of both the gender agreed to the statement. The chi-square test values (26.425) and significant level (.002) demonstrated the relationship between the responses of both the gender. According to Hodgkin (2010) smartphone usage has grown 28% year over year. People spend almost four and a half hours watching television. While these absolute figures suggest television well entrenched in our daily lives, the year to year trend paints a much different picture. Year over year, television, radio, and newspapers are all on the decline, while smartphones are making gains.

**Table 7:
Different Perceptions of People about Usage of Smartphone**

Mean	Median	Std. Deviation	Skewness
25.87	29.00	7.296	-2.18
Cronbach's Alpha = .679		(N= 200)	

The researchers measured respondents’ perceptions regarding the positive aspects of smartphone by using a multi-item scale in the questionnaire. The researchers used seven indicators of the phenomena by asking a set of

seven statements relating to different objects of the smartphone. A new variable 'perception' was created by combining the values of all the seven statements. The highest possible score on the 5-point scale was 35 (7×5) and the lowest possible score was 7 (7×1). It indicates that the mean value (25.87) and negative skewness (-2.18) of the distribution scores on "different perceptions of people about the smartphone" imply the greater number of respondents expressed their positive interest. The value of standard deviation (7.296) indicates that positive aspects of smartphone usage were not the same for all the respondents, it reveals variation.

Relationship between Usage of Smartphone and Gender

The perceptions about importance of a smartphone was examined by creating a composite score based on Likert scale questions. As discussed earlier about interest of respondents regarding usage of smartphone do not mean interest in simply usage rather by this concept here the mean interest in usage of all features like checking emails, reading newspapers, listening radio, watching television etc. Because this media is still young in Pakistan; masses tend to use this media but not much as use in other countries due to the limited services.

Table 8:
ANOVA Test regarding usage of Smartphone by gender

ANOVA Table					
Perception * Gender	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	40.500	1	40.500	274.754	.000
Within Groups	29.186	198	.147		
Total	69.686	199			
Measures of Association					
			Eta	Eta Squared	
Perception * Gender			.762	.581	

The above table shows the results of 'ANOVA' test 'Measures of Association' test' regarding overall perceptions about usage of smartphone by gender. The means square between groups are (40.500), which F ratio value (274.754) and significant level (.000) indicates that the majority of both the respondents were using smartphone for different communicative purposes along with listen radio, watch television. However, the association among gender were calculated with measures of association with Eta value (.762) and Eta Squared value (.581) signify that boy

respondents were in majority who listen and watch television on their smartphone as compare girl respondents.

Most teenagers may obtain smartphones without being thoughtful that how this gadget impacts their lives; or, parents may make it available to their children hoping to improve parent-child communication for tracking. Whereas, possession of a mobile phone by college students may have unforeseen influences on the developmental outcomes. If they are a period of identity and a period of heightened self-consciousness (Erikson, 1968), the impact of it may be greater than one could assume.

Findings, and Conclusion

Findings

The smartphone is emerging as a 7th mass media all over the world as well as in Pakistan. These devices are an essential element of our lives – for example we cannot memorize a number without mobile. They develop into instant nature – we eat, breathe and, yes, even sleep with it. On the whole, making them individual ornament today. Smartphones provide the facilities of receiving and sending SMS, MMS, voice-calling, listening radio, watching television, and reading e-paper through net. The media captured the shares of publicity, news, TV, internet, social networking and even printed books. Now, smartphones are the internet like TV and radio, a compelling and absolute media display place.

Silva (2006) concluded the findings, “nowadays the internet has become a powerful media tool to such an extent that many government repressive such as China and Iran – to name only a couple – have tightened the control of the net. In some countries, masses using internet on their smartphones and this facility is affecting the traditional media i.e. electronic and print”.

So the smartphone will substitute other media, it makes a powerful container for why it will be the leading media for the reason that it will be additional disruptive than the Internet. For example, basically communication with smartphone are text messaging and voice-calling for urgent reply. In addition, instant reply, interactivity and smartphone adoption have been leading the youth. This gadget established unbeaten portable media models – and demonstrates how college students can be incentivised (e.g. voice and texts, internet media) to connect in a conversation with others. Overall findings of the study are:

- i. Around 84% of boys and 80% of girls listened radio on their smartphone; they also agreed that radio facility on smartphone reduce the listening of traditional radio which is significant according to the value of chi-square test (25.209).

- ii. Almost 80% of boys and 85% of girls never read newspaper on their smartphone but they also agreed that e-paper reduce the reading habits of hard newspaper which is significant according to the chi-square test value (48.543).
- iii. Around 71% of boys and 59% of girls agreed that smartphone reduce the time which they earlier used to spend in watching television. The chi-square test value (36.425) shows the significance (.000).
- iv. Most of respondents both (boys and girls) agreed about different perceptions of smartphone like 'easy to carry', 'basic necessity', 'keeps updates', 'keeping social contacts' 'latest mass medium', 'checking updates' etc. Most of respondents were using their smartphone instead of traditional media but not too much as use in other countries due to the limited services of internet.

Conclusion

It is inducing remarked addictive sign of usage behaviour because the smartphone has turn into a worldwide gadget. Approximately each smartphone user remains surrounded by arm's reach for instant response. The technology of smartphone has publicized great expansion in current years and now competitors of this device are one of the main dominant forms of mass media.

The impacts of smartphone on other communication devices are enormous. The researchers found that the majority of both respondents have been using smartphone for listening radio because FM radio is a built in feature of all smartphone models. However, a majority of boy respondents have been using it for reading e-papers for different purposes but the girls respondents were not in minority as compared to boys. A few respondents of both the gender used smartphones for watching television.

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