

A Study on Smartphone Usage among the Adolescents and Its Influence on the Academic Performance

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ABSTRACT

Smartphone in the 21st century is a digitally enhanced device and interface carrying a compressed operating system of its own and capable of performing complex operations. A particular section of the society which has been highly influenced by the widespread reach of Smartphone is the adolescents. They are very prone to Smartphone use and the easy accessibility that the present century provides makes it very convenient for the adolescents. Though the use of Smartphone has serious consequences too. The excessive usage influences the academics resulting in poor performance in the academics. The study aimed to find out the Smartphone use and its influence on the academic performance of the adolescents. For the present study the researcher has used Descriptive Survey Method. A sample of 200 adolescent boys and girls studying in class IX in the schools affiliated to the CBSE curriculum were selected for the study. Self structured interview schedule was used to collect the requisite data and information from the students. Simple percentage, t-Test, Chi-square test were applied to analyse and interpret the data.

Keywords

Academic Performance, Adolescents, Smartphone usage

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Introduction

Technology has added a new dimension in the prosperity and advancement of mankind. It has revolutionised the entire thought process of human race. It has given wings to the imaginations of a person and ensured that the line between an idea and reality becomes thin. Technology as a whole has managed to touch almost every dimension of one's life. Smartphone, a by product of technology acts very vital in the growth and development of the human race specially because of its accessibility. Smartphone in 21st century is a digitally enhanced equipment and interface carrying a compressed operating system of its own and capable of performing complex operations like video calls, exchange of video, audio, text messages, online gaming, superior accessibility to any sort of information via 3G/4G spectrum. Smartphone has been acting as a catalyst to narrow the communication gap, immediate access to any sort of information in the world, capturing pictures and videos and countless more. The complex algorithms written in order to enhance the functionality of the Smartphone is improvised on a constant basis resulting in a stiff competition in the digital market. The very introduction of concept of Artificial Intelligence (A.I) incorporated in the microprocessor of the Smartphone has enabled the device to react at the

user's instruction by studying the pattern of usage giving it relatively smarter edge in the world of technology. A particular section of society which has been highly influenced by the widespread reach of Smartphone are the students. Lately it has been witnessed that with sufficient promotion and encouragement in online teaching platforms has attracted the attention of serious students. However, the fact cannot be denied that Smartphone has resulted an advent of negativity and misinformation which has led the students to encounter grave situations. The superior technology available in this 21st century in the form of Smartphone is sometimes is merely used as a source of amusement and to commit heinous crimes.

Smartphone has become a part and parcel of today's generation, especially in the life of the students. The adolescent period is considered as a crucial period in one's life. Changes take place in almost all the realm. The sheer urge among the adolescents to stand out in the crowd makes them an easy victim of Smartphone usage as it provides a corridor for the outer world digitally. The adolescents are very prone to Smartphone use and the easy accessibility that the 21st century provides makes it very convenient for the adolescents.

NEED AND SIGNIFICANCE OF THE STUDY

With the advent of technology several portable gadgets has come up to ease the life of mankind. One such device which is considered as of prime importance is the Smartphone. Smartphone has successively helped triggering the development of human race by providing access to information, video calls/conferencing, audio calls, games, maps navigation and countless more at our finger touch. The stage which is very influenced by the Smartphone use is the adolescence stage, a stage which is regarded as the crucial period of one's life. The use of Smartphone not only influences the physical, mental, social, emotional domains of the adolescents but also it influences the academic performances to a large extent. The unrestrained use of this gadget by the adolescents has resulted in lack of attention, concentration, behavioral, social and other serious problems. The fact cannot be denied that close monitor of the influence of Smartphone use is of utmost importance. The present study is considered as very significant which sheds light on the usage of Smartphone by the adolescents and its influence on their academic performance.

STATEMENT OF THE PROBLEM

The present study which has been entitled as 'A Study on Smartphone usage among the adolescents and its influence on the Academic Performance.'

OBJECTIVES OF THE STUDY

1. To find out the duration of Smartphone use by the adolescents on the basis of gender.
2. To find out the purpose of using Smartphone by the adolescent boys and girls.
3. To study the influence of Smartphone use on the academic performance of the adolescents.

HYPOTHESES

H₀₁. There exists no significant gender difference in the duration of Smartphone use by the adolescents.

H₂. Smartphone use influences the academic performance of the adolescents.

OPERATIONAL DEFINITIONS

Adolescents- The adolescence period primarily reflects the formative period of an individual and can be subjectively defined as the period where marked changes can be witnessed in both physical and psychological arena. The adolescence period

involves the age group of 12/13 to 18/19 years. The present study involves class IX students.

Smartphone - The acceleration of the wheels of technology has primarily resulted in "demand and supply". The increasing dependency of mankind on technology has resulted in a very portable and easily accessible medium that is Smartphone. Smartphone has successively helped triggering the development of human race by providing access to information, video calls/conferencing, audio calls, games, maps navigation and countless more at our finger touch.

Smartphone Use- In the present study, Smartphone use or usage refers to the duration of Smartphone use by the adolescents per day on an average.

Academic Performance- the academic performance reflects the collective achievements of a student in academics. The present study focuses on the performance of adolescents in their class IX final examination.

DELIMITATIONS OF THE STUDY

The study has been delimited to the adolescent boys and girls studying in class IX in the institutions affiliated to CBSE curriculum in Kamrup (Metro).

LITERATURE REVIEW

Ahmed, Qazi and Perji (2011), they conducted a research among 500 students in Pakistan to study the pattern of mobile phone usage among youngsters to explore the extent of addictive behaviour towards its usage. The study revealed that majority respondents are able to have definite priorities between their responsibilities and commitments and their cell phone usage. Very few are those who always exhibit the extreme addictive behaviours and rest is the majority who are not frequently involved in addictive usage pattern. The study also revealed that youngsters use their cell phones under reasonable limits and do not tend towards extreme behaviours leading towards addictive cell phone usage. The result of the study indicated that majority respondents were able to draw a line of priorities between the responsibilities and commitments and the cell phone usage.

Arpit Loya and Bhatt A, (2013) Sapient Institute of Management Studies, Indore : A study into the usage pattern of Smartphone owners among students and service class. The purpose of this study is to better understand the current dynamics of the Indian market for

Smartphone and the usage behaviours of consumers. The data was collected from 530 respondents across major cities in India out of which 272 qualified for the research. The study has looked into the familiarity of users towards Smartphone, choices of Smartphone brand and service providers and most importantly the determinants that influence their purchasing decision.

Al-Barashdi Suleiman Hafidha, Bouazza Abdelmajid and Jabur .H Naeema (2014), Department of Information Studies, Sultan Qaboos University, Oman: Smartphone Addiction among undergraduates: A literature Review. The paper reviewed the growing literature on Smartphone addiction among University undergraduates to identify trends. Some studies have shown gender differences in Smartphone addictive use, others have proved that gender and Smartphone use are not significantly related. A few studies have examined the relationship between addiction and students' field of study.

Kibona Lusekelo and Rugina Mdimu Juma of Tanzania (2015) reviewed the impact of Smartphones on Academic Performance of students in higher learning institutions. Intensive literature review was done finding out the disadvantages and advantages brought by Smartphones in academic arena. According to the study, some researchers agree that Smartphone as a tool can help students to achieve or perform well in his/ her studies but other scholars argue that, Smartphone is a tool which hinders students in getting deserved score in their studies(GPA)

Bisen S. and Deshpande Y. (2016), Nagpur, Maharashtra: An Analytical Study of Smartphone Addiction among Engineering Students: A Gender difference. The study explored the impact of Smartphone User Applications (Apps) on the behaviour of the Engineering students. The study examined Smartphone user behaviours and their relation to Smartphone addiction. It was found that male students are more prone to Smartphone addicts as compared to female students.

Dr. Devi M. (2016), Guwahati carried out a study on mobile phone addiction among undergraduate college students of Guwahati Metropolitan area and the study advocates an urgent attention of the society towards one of the most alarming condition in the youth of today's generation, i.e.

Smartphone addiction. The study revealed the information on the use of mobile phones by college students under Art and Science streams in Guwahati Metropolitan area.

DESIGN OF THE STUDY

Method of the study- In this study, the researcher has used Descriptive Survey Method which is the most popular and widely used method in education.

Sample- For the present study, the researcher has selected randomly 200 adolescent boys and girls studying in class IX affiliated to CBSE curriculum of Kamrup (Metro).

Tools used- For the present study, the researcher has used Self Structured Interview Schedule to collect data from the adolescent boys and girls.

Statistical Technique used-In this study, the researcher has used percentage, t-test, chi-square to analyze and interpret the result.

ANALYSIS AND INTERPRETATION OF THE STUDY

Objective 1. To find out the duration of Smartphone use by the adolescents on the basis of gender.

H₀₁- There exists no significant gender difference in the duration of Smartphone use by the adolescents on the basis of gender.

TABLE 1.1 Duration of Smartphone use per day on an average

GENDE R	DURATION OF SMARTPHONE USE				TOTA L
	Lo w	Moderate	Above Average	Hig h	
BOYS	6	23	33	38	100
GIRLS	8	28	30	34	100
TOTAL	14	51	63	72	200

From table no.1 .1 it has been seen that the duration of Smartphone use in case of boys is more than that of girls. 38% boys and 34% girls spend more than 10 hours on Smartphone. 6% boys and 8% girls spend only 1 to 3 hours on Smartphone per day on an average.

TABLE NO. 1.2 t test showing significance of mean in the duration of Smartphone use on the basis of gender

GENDER	N	MEAN	SD	SEM	t ratio	LEVEL OF SIGNIFICANCE
BOYS	100	8.48	2.869	0.4082	2.057	Significant at 0.05 level
GIRLS	100	7.64	2.904			

From table no. 1.2 it has been found that the mean of boys is 8.48 and the mean of girls is 7.64. The Standard deviation of boys and girls are 2.869 and 2.904 respectively. The computed t- value that is

2.057 is higher than the critical value at 0.05 level. Hence, it is significant at 0.05 level and thus the null hypothesis is rejected at 5% level.

OBJECTIVE 2 To find out the purpose of using Smartphone by the adolescent boys and girls.

Table no.2 Purposes of using Smartphone by the adolescent boys and girls.

Sl. No.	PURPOSE	BOYS		GIRLS	
		FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
1.	Calling and texting	100	100%	100	100%
2.	Video calling	88	88%	72	72%
3.	Assists in academic work	86	86%	92	92%
4.	Promoting skills	36	36%	25	25%
5.	Watching online movies	98	98%	80	80%
6.	Navigation	55	55%	45	45%
7.	Online bank transaction	77	77%	25	25%
8.	Ordering Food	90	90%	92	92 %
9.	Spreading Propaganda	12%	12%	6	6%
10.	Online games	100	100%	35	35%
11.	Chatting in social media	100	100%	100	100%
12.	Listening to music	75	75%	95	95%

From table no.2 it has been seen that 100% adolescent boys and girls use their Smartphone for calling and texting. Boys do more video calling than that of girls. 86% and 92% boys and girls use Smartphone in their academic work respectively. 25% girls use Smartphone to promote their skills online whereas 36% boys use Smartphone to promote their skills in social media platforms. Maximum boys watch online movies in their Smartphone as compared to girls. 55% and 45% adolescent boys and girls reported that they use their Smartphone for maps navigation. 77% boys use Smartphone for online bank transactions. In case of ordering food online 90% and 92% boys and girls use their Smartphone. It has been found

that girls order food online more than that of boys. 12% boys use their Smartphone to spread propaganda whereas 6% girls use their Smartphone to spread propaganda. It has been found that all the sample boys use their Smartphone to play online games whereas it has been seen that only 35% girls play online games with the help of their Smartphone. 100% adolescent boys and girls use their Smartphone to chat in social media. It has been seen that 75% boys and 95% girls use their Smartphone to listen to music.

Objective 3. To study the influence of Smartphone use on the academic performance of the adolescents.

TABLE NO. 3.1 shows the data that represents the influence of Smartphone use on the academic performance of the adolescents

CATEGORIES OF SMARTPHONE USAGE	ACADEMIC PERFORMANCE CATEGORIES							
	EXCELLENT	VERY GOOD	GOOD	AVERAGE	BELOW AVERAGE	POOR	VERY POOR	TOTAL
LOW	0	3	4	6	1	0	0	14
MODERATE	2	8	12	14	9	3	3	51
ABOVE AVERAGE	2	4	7	14	17	12	7	63
HIGH	2	9	9	16	15	13	8	72
TOTAL	6	24	32	50	42	28	18	200

Table no 3.1 represents the category wise cross tabulation data of Smartphone usage and academic performance of the adolescents. The adolescent's Smartphone usage has been classified into four groups- Low, Moderate, Above Average, and High. Out of the 200 samples, maximum boys and girls fall into the category of average and below average. It has also been seen that their

Smartphone usage duration is also found to be above average and high.

The researcher has used chi-square test in order to investigate if there is any influence of Smartphone on academic performance of the adolescents.

TABLE NO.3.2 chi-square table showing the influence of Smartphone usage on the academic performance of the adolescents

Variables	Computed chi-square value	Critical value	Degrees of freedom	Level of significance
Smartphone use	22.357	28.869	18	significant
Academic Performance				

Table no.3.2 shows that the computed value of chi-square is 22.357 which is less than the critical values of chi-square at both 5% and 1% levels of significant. Hence, it is significant and the null hypothesis cannot be rejected. So, it can be inferred that Smartphone usage influences the academic performance of the adolescents.

MAJOR FINDINGS

1. It has been found that the duration of Smartphone use in case of boys is more than that of girls.
2. 38% girls and 34% boys spend more than 10 hours on their Smartphone on an average.
3. 6% of the total boys and 8% of the total girls are found to make a minimal use of Smartphone per day on an average.
4. The study reveals that there exists a significant difference in the duration of Smartphone by the adolescents on the basis of gender.

5. It has been found that all the adolescent boys and girls considered in the study use their Smartphone to make audio calls and for texting.

6. The study also reveals that a very small amount of adolescent boys and girls use their Smartphone to promote their skills.

7. 80% of the girls and 90% of the boys use their Smartphone to watch online movies.

8. It has been found that all the adolescent boys and girls taken up in the study use their Smartphone to chat in Social media and they have social media accounts in Instagram, Facebook, Whatsapp, Twitter and LinkedIn.

9. 86% boys and 92% girls reported that their Smartphone assists them in their academic work. Smartphone help them in class projects, appearing for online mock tests, attending live classes.

10. It has been found that Smartphone usage influences the academic performance of the adolescent boys and girls resulting in mediocre

and below average performance in their academics.

CONCLUSION

From the study it can be concluded that Smartphone is an important innovation in the 21st century which in countless ways has helped to ease the life of mankind. The study throws light on the use of Smartphone by the adolescents. It has been found that the adolescents perform variety of tasks with the help of Smartphone. The increasing dependency and the unavoidable integration of the use of Smartphone cannot be justified on the pretext that it has acted as a credible tool in fostering the superiority of mankind. The underlying aspect of the study primarily focuses on the use of Smartphone by adolescents and its impact on academic performance. The reason why the concept of Smartphone is thriving in today's world is not debatable but one should not ignore the various physical and psychological impacts from the prolonged use of the device. Necessary restraint should be encouraged and the use of Smartphone should be monitored by parental control feature present in most of the android phones which will result in optimizing the benefits and neutralizing the threats it imposes on today's generation.

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