Impact of smart phone usage on the academic performance among secondary school students of Tezu, Lohit District of Arunachal Pradesh

Dr. Sukanta Kumar Pradhan

Assistant Professor in Education, Indira Gandhi Govt College, Tezu, Arunachal Pradesh

Abstract - **We are living in the world of 21st century. In every Sphere of life technology has been able to deliver tremendous power in the hands of human beings in terms of access, speed, accuracy, precision, control, manipulation and prediction. In the area of agriculture to administration technology is effectively and efficiently used by the people. Education without being an exception has been influenced by technology in terms of its contents, processes and pedagogy. Smart phones are used for sharing information, emails, chatting, downloading, shopping, and making payments and many other activities. There are many benefits of the smart phones in our daily life. In the same way students use smart phones for multiple purposes. Secondary stage of education is a very crucial stage from the psychological point of view because the students are in the adolescence period at this juncture. The use of smart phones for non-academic purposes leads to immature and abnormal personality development. The present study is intended to study the influence of smart phone usage on academic performance among male and female students, to find out the relationship of smart phone usage for academic and non-academic purposes of secondary school students and to work out the implications of the study for planning and designing appropriate educational ventures for the secondary school students.**

Index Terms - **Technology, Smart Phones, Secondary School students.**

INTRODUCTION

Education is a continuous and comprehensive process that brings desirable changes in the behaviour of the human beings. It is a man-making process, and it implies practicing and enduring of the human stuff at various levels of socialization, enculturation, awareness and divine realization. Education is a strong weapon through which the dignity of the individual can be restored, and the full flowering of the inherent capability can be made possible. Education is considered to be a controlling grace to the young, consolation to the old, wealth to poor and ornament to the rich.

We are living in the world of 21st century. In every Sphere of life technology has been able to deliver tremendous power in the hands of human beings in terms of access, speed, accuracy, precision, control, manipulation and prediction. In the area of agriculture to administration technology is effectively and efficiently used by the people. Education without being an exception has been influenced by technology in terms of its contents, processes and pedagogy.

The word educational technology was first used in the United Kingdom in the year 1967 and in the same year it was used in India by the NCERT, New Delhi. The word educational technology is the combination of two words like educational and technology. Educational means concerning or relating to education. The word technology has been derived from two Greek words like "*technic* and *logia*". *Technic* means art or skill and *logia* means science or study. Thus, educational technology from the derivative sense is the science of an art or skill related to the field of education. Smart phones have become integral part of daily life in the 21st century. Smart phones are phones with superior technology. They come with excellent features that go beyond the basic phone's capabilities.

In the precise and simple sense educational technology can be conceived as a systematic study of techniques and methods applied to achieve an educational objective. It is a kind of behavioural technology which presents the art of teaching in a new manner and controls educational influences with the help of those factors which are used for achieving teaching objectives. It is that science which defines teaching objectives in behavioural terms and forms the base

through which various methods and techniques are developed and constructed in order to achieve the predetermined teaching objectives.

The second meaning of educational technology is that it can be conceived as the mechanization of educational process. In other words, educational technology emphasizes the use of machine, technological gadgets and apparatus and techniques for maintenance, enrichment and transmission of knowledge. Thus, this concept is based on the hardware approach to educational technology. The examples of educational technology as mechanization of educational process are the use of multi-media and mass media approach, online admission, Tele-conferencing digitalization library etc.

The third meaning of educational technology is based on the system approach. It includes three components like input, process and output aspects. The components of input in education system refer to the previous knowledge and entry behavior of the students. The process aspects refers to the means, methods, and devices for providing learning experiences and the output aspect refers to the terminal behavior of the learners in terms of their knowledge understanding and skills achieved at end of the teaching learning process.

MEANING OF A SMART PHONE, ITS HISTORY AND USES

A smart phone is a type of cell phone that can do many of the things that a computer can. These cellular phones can usually access the internet and take photographs, as well as letting you video chat with friends and loved ones. Smart phones are small enough to fit in your pocket. However, they carry the strength of a home desktop computer. In addition, smart phones have several physical features that set them apart from regular mobile phones. Perhaps the key difference is the fact that smart phones have a touchscreen.

In 1992, IBM revealed a revolutionary device that had more capabilities than its preceding cell phones. This prototype smart phone was known as the Simon Personal Communicator, but it would not see its way to consumers until 1994.The device had many of the modern elements we attribute to current smart phones and mobile devices. Highlights of these phones included:

- Touch screen

- Email
- Fax
- Notes and Calendar
- Apps and other widgets that would become widespread decades later.

While it was a bold entry into the market, it was not exactly the smoothest starting point for a mobile device. One could say it was ahead of its time, and most consumers did not jump on board. The Simon was advanced for its time but has nothing on the smart phones of today. It only had a small monochrome LCD screen and a one-hour battery life. One thing that was cool, it did let one make landline calls instead of being at the mercy of expensive call rates. Unfortunately, at $1,100 retail MSRP, it only sold 50,000 units in 6 months. Clearly, though, the Simon created a great launching pad for others to innovate.

After that the Blackberry came to the market. The first BlackBerry mobile device was the BlackBerry 5810 launched in the year 1997. It had most of what one thinks of when one hears "Blackberry":

- Calendar
- Music
- A full keyboard
- Advanced security
- Internet access

But one had to make calls through a headset.

BlackBerry primarily targeted the business professionals. They kept releasing more and more advanced devices and became the market leader in smart phones until the iPhone gained steam. They seemed to lose sight of their target customer, though, and bottomed out with 0% market share in 2017.

Apple had already begun transforming how people use portable technology with the iPod, and the stage was set for them to unveil their latest device in 2007.The iPhone was one of the most advanced consumer smart phones the market had ever seen. Priced at $499 for the 4GB unit and $599 for the 8GB model, users flocked to the device - and to the AT&T carrier it was exclusive to. Apple sold 1.4 million phones in its first year in the market, and the device exploded to 11.6 million sold in 2008. Two primary operating systems have evolved within the smart phone market. Google's Android has been adopted by a number of hardware manufacturers to compete with Apple and their iOS at present.

SIGNIFICANCE OR RATIONALE OF THE STUDY

Smart phones are used for sharing information, emails, chatting, downloading, shopping, and making payments and many other activities. There are many benefits of the smart phones in our daily life. In the same way students use smart phones for multiple purposes. Secondary stage of education is a very crucial stage from the psychological point of view because the students are in the adolescence period at this juncture. The use of smart phones for non-academic purposes leads to immature and abnormal personality development. Several studies conducted by educationists and psychologists like Sumathi (2018), Ifeani(2018), Malik (2017), Jeevitha (2017) etc revealed a number of findings. But a very few studies have been conducted on the impact of smart phone on the academic performance of the students.. So far no study has been undertaken by any individual, organization and NGOs with regard to impact of smart phones on the academic performance of the secondary school students in Arunachal Pradesh and in Lohit district in particular. Therefore, realizing the need of the hour the investigator thought it imperative to undertake this piece of research work. The results and findings of the present study will provide a sound basis for educators, planners, policy makers and administrators to come up with mechanisms to curb the bad impact of smart phones on academic performances of the students.

Statement of the problem:
Keeping in view the above considerations the present study has been stated as "*Impact of smart phone usage on the academic performance among secondary school students of Tezu, Lohit District of Arunachal Pradesh*"

OBJECTIVES OF THE STUDY

The study has the following objectives:
1. To study the influence of smart phone usage on academic performance among male and female students.
2. To find out the relationship of smart phone usage for academic and non-academic purposes of secondary school students.

3. To workout the implications of the study for planning and designing appropriate educational ventures for the secondary school students.

Hypotheses of the study:
The study has the following hypotheses:
1. There is no significant difference in the impact of smart phone usage on academic performance among male and female secondary school students.
2. There is no significance of difference in the views of students on the impact of smart phone usage for academic and non-academic purposes.

Operational Definitions:
The following terms are operationally defined in the present study.
Smart phone: A smart phone is a type of cell phone that can do many of the things that a computer can. These cellular phones can usually, for instance, access the internet and take photographs, as well as letting you video chat with friends and loved ones.

Secondary school Students: The students studying in class IX and X in secondary or higher secondary schools of Tezu, Lohit District of Arunachal Pradesh.

METHODOLOGY AND DESIGN

The present research study pertains to the normative survey method under the descriptive research.
Population of the study:
All the students of different government and private secondary schools studying in class IX and X , Tezu , Lohit district of Arunachal Pradesh constitute the population of the study.

Selection of sample:
The sample for the present study consisted of 200 secondary school students including 100 male and 100 female students selected on the basis of simple random sampling procedure from 4 secondary schools of Tezu, Lohit district of Arunachal Pradesh.

Tools and Techniques used:
The following tool was used for collection of relevant data :

1. Self developed questionnaire on the impact of smart phones on the academic performance of the students.

Process of data collection:

Data were collected by the investigator by personally visiting the secondary schools from the randomly selected 200 male and female students.

Scope and Delimitations of the study:

The scope of the present study is limited to 200 secondary school students from 4 secondary schools of Tezu, Lohit district of Arunachal Pradesh selected randomly. The study will be delimited to the use of one self-developed questionnaire.

Analysis and Interpretation of Data

The investigator used appropriate statistical techniques feasible for analysis and interpretation of data. The simple percentage analysis was used to analyze and interpret the data.

Table No.1 Awareness about Smart Phones

Have you ever heard about smart phone?	Secondary School Students	
	Number	Percentage
Yes	166	83.00%
No	34	17.00 %

Table- No-2 Possession of smart phones

Do you have a smart phone?	Secondary School Students	
	Number	Percentage
Yes	67	33.50 %
No	133	66 .50%
Can't say	00	00%

Table No -3 Benefits of a Smart Phone

Do you think that use of smart phone will be beneficial for you?	Secondary School Students	
	Number	Percentage
Yes	65	32.50%
No	135	67.50%

Table No-4 Area of Smart Phone Usage

Smart Phone Usage helps you in	Secondary School Students	
	Number	Percentage
Playing games	95	47.50%
Downloading study materials	50	25.00%
Any other	55	27.50%

Table No-5 Smart Phone and Academic Subjects.

Use of smart phone enables students to get relevant materials on different subjects according to their academic interests.	Secondary School students	
	Number	Percentage
Yes	130	65.00%
NO	70	35.00%

Table no-6 Smart Phone and Updating Oneself

Use of smart Phone keeps you updated with national and international news.	Secondary School Students	
	Number	Percentage
Yes	120	60.00%
No	80	40.00%

Table No-7 Smart Phone and quality of education

Use of smart phone has deteriorated the quality of education	Secondary school Students	
	Number	Percentage
Yes	191	95.55%
No	09	4.45%

Table No-8 Students Attention Span and Smart Phone

Use of smart phone distracted the students attention span on studies	Secondary School Students	
	Number	Percentage
Yes	178	89.00%
No	22	11.00%

Table No-9 Smart Phone and better Understanding

Use of smart phone leads to better understanding of concepts through online learning	Secondary School Students	
	Number	Percentage
Yes	69	34.50%
No.	131	65.50%

Table No-10 Impact of smart phone on Academic Performance

Use of smart phone affects the academic performance of the students.	Secondary School Students	
	Number	Percentage
Yes	179	89.50%
No	21	10.50%

Table No-11 Smart Phone and Health Hazards

Use of smart phone leads to health hazards among the students	Secondary School Students	
	Number	Percentage
Yes	127	63.50%
No	73	36.50%

Table No-12 Places of Using Smart Phones

Most of the students use smart phone in	Secondary School Students	
	Number	Percentage
The school	16	8.00%
The home	111	55.50%
The hostel	73	36.50%

Table No-13 Smart Phone and Antisocial Activities

Use of smart phone increases the probability of anti-social activities	Secondary School Students	
	Number	Percentage
Yes	170	85.00%
No	30	15.00%

Table No.14 Frequency of Using Smart Phones

How frequently you use the smart phone.	Secondary School Students	
	Number	Percentage
Regularly	43	21.50%
Occasionally	133	66.50%
Never.	24	12.00%

Table No-15 Smart Phone and Communication

Use of smart phone helps the students for easy and speed communication.	Secondary School Students	
	Number	Percentage
Yes	69	34.50%
No	131	65.50%

Table No.16 Impact of smart phone on Personality

Use of smart phone has adverse impact on the personality and character of the students	Secondary School Students	
	Number	Percentage
Yes	190	95.00%
No	10	5.00%

Table No-17 Cost of Using Smart Phones

Smart phone usage is costly and expensive.	Secondary School Students	
	Number	Percentage
Yes	177	88.50%
No	23	11.50%

Table No-18 Level of Satisfaction with academic performance

How far you are satisfied with your academic performance	Secondary School Students	
	Number	Percentage
Very satisfied	120	60.00%
Satisfied	33	16.50%
Not satisfied	47	23.50%

Table No-19 Role of Parents and Teachers

Do your parents and teachers prohibit you from using smart phones?	Secondary School Students	
	Number	Percentage
Yes	150	75.00%
No	50	25.00%

Table No-20 Area of interest in Using A smart Phone

if you would be given a smart phone, for what purpose you would like to use -	Secondary School Students	
	Number	Percentage
Listening Music	75	37.50%
Watching movies	40	20.00%
Playing online games	50	25.00%
Using Social Media	30	15.00%
Browsing academic materials	05	2.50%

MAJOR FINDINGS OF THE STUDY

The following are the major findings of the study:

1. Majority (83%) of them were aware about smart phones. However, a little less than one-fifth of the students said that they did not have any knowledge about smart phones.
2. One third (33.50%) of them revealed that their parents had given them smart phones. However, majority of them (66.50%) had denied that they did not possess any smart phone.
3. Majority 67.50% of the students said that smart phones are not beneficial for them. Only 32.50% of students agreed that smart phone is beneficial to them.
4. Nearly half of the secondary school students 47.50% revealed that smart phone helps them in playing games. Only one fourth of the students said that they download study materials with the help of smart phones.
5. Majority (65%) of the students revealed that use of smart phones enables them to get relevant materials on different subjects according to their academic interests.
6. Majority (60.00%) of the students were updated with the national and international news by the help of smart phones. However, a considerable percentage of students said that smart phones did not help them for the same.
7. Almost all the students 95.55% had the viewpoint that uses of smart phones have deteriorated the quality of education.
8. Majority of students 89% opined that use of smart phone distracted student's attention span on studies. Only a little more than one tenth of the students did not believe the same.
9. More than one third of the students said that smart phone led to better understanding of concepts.
10. Majority 89.50% of the students felt that use of Smart phone had negative impact on academic performance of the students.
11. Majority of students 63.50% felt that the use of smart phone led to health hazards.
12. More than half 55.50% of the students used smart phone at the home and one third of them used smart phones while staying at the hostel.
13. Majority of (85.00%) of secondary school students said that use of smart phone increases the probability of anti-social activities.
14. Majority of the students used occasionally 66.50%. however more than one fifth of the students used the smart phones regularly.
15. One third 34.50% of the students said that smart phones helped them in easy and speedy communication.
16. Almost all the students 95.00% believed that use of smart phone has adverse impact on the personality and character of the students.
17. Majority 88.50% believed that use of smart phone is a highly expensive and costly affair.
18. Majority (60.00%) the secondary school students were very satisfied with their academic performance. However, nearly one fourth of the secondary school students were not satisfied with their academic performance.
19. Three fourth of the students were prohibited by their parents and teachers from not using smart phones.
20. Only 2.50% of students will use it in browsing academic materials. However, 37.50% and one fourth of students revealed that they will listen music and play online games with the smart phones respectively.

RECOMMENDATIONS OF THE STUDY

On the basis of the findings of the present study, the following recommendations are made.

1. It was found that nearly half of the students were using smart phones for playing online games. Hence, it is recommended that the students should refrain themselves from playing such immoral and dangerous games, inculcate positive attitude, interact more with their friends, develop social relationships with peers and teachers, and maintain good health and hygiene. Besides they should be allowed to participate in the curricular and co-curricular activities of the school. It is also recommended that conducive and congenial environment should be created by the teachers and parents both at the school and at the home.

2. It was found that almost all the students accepted that use of smart phone had deteriorated the overall performance of the students and infact the quality of education. Hence, it is recommended that the teachers and parents should take extra care to prohibit the students not to use smart phones for other activities. Special classes and counseling programs may be arranged in the school for the students. They should be

motivated and guided to develop healthy study habits and positive attitude towards studies. They should be properly guided by their parents at their home and in their family for enhancing their academic achievement.

EDUCATIONAL IMPLICATIONS

By considering the findings and recommendations of the study, the investigator felt it essential to highlight the educational implications of the study for the Secondary school students, parents and guardians and principals. The   study has implications for the Secondary students that they should develop better adjustment pattern at both the family and at the institution, realize the importance of studies in their life, develop positive attitude towards studies, develop healthy study habits , take the advice and guidance of the teachers for solving academic problems, maintain good relationship with their friends, clarify the doubts in various subjects by interacting with the teachers, develop better level of achievement motivation, try to devote more time to their studies at home and at the school regularly, give up the habit of engaging in unproductive activities ,try to complete their home works regularly develop better educational and occupational aspiration, develop the habit of reading newspapers and magazines and try to take part in various curricular, co-curricular and extra- curricular activities of the school.

The study has implications for the parents and guardians that they should motivate and inspire their children towards studies, provide proper study atmosphere at home, inculcate in them positive attitude towards studies, monitor the study activities regularly, assist their children in their studies, provide facilities essential for the children to participate in the co-curricular activities of the school, discourage the habit of engaging children in domestic duties, promote the skills of good study habit in them, guide and advise them not to become way ward, enhance their level of self - confidence and consult the teachers and principals of the school regarding the progress of their children in studies at regular intervals and prohibit them from illegal and immoral activities.

The study has implications for the principals that they should inspire the teachers for taking special care of the students., advice the students to put hard labour in their studies, monitor academic achievement of the students, assess the instructional inputs provided by teachers, co-ordinate the seminars, debates, symposium etc, discuss the educational problems of the secondary students with higher authorities, provide adequate facilities at the institutional premises, organise remedial and tutorial classes, maintain healthy organizational climate and communicate the higher authorities regarding the performance of students.

CONCLUSION

In conclusion, Smart phones have become integral part of daily life in the 21st century. Smart phones are phones with superior technology. Smart phones are used for sharing information, emails, chatting, downloading, shopping, and making payments and many other activities. There are many benefits of the smart phones in our daily life. In the same way students use smart phones for multiple purposes. Secondary stage of education is a very crucial stage from the psychological point of view because the students are in the adolescence period at this juncture. The use of smart phones for non-academic purposes leads to immature and abnormal personality development further, the study will help the administrator and bureaucrats to evolve suitable strategies to evolve strategies to mitigate the problems of smart phone usage in academic life of the students.

REFERENCES

[1] Aggarwal Y.P (2000), Statistical methods, New Delhi: Sterling Publishers Pvt. Ltd.

[2] Aggarwal, J.C. (2009), Education for Environment, values and human rights, New Delhi: Shipra Publications.

[3] Aggarwal, J.C (2014): Philosophical and Sociological Foundations of Education,Shipra Publications, New Delhi.

[4] Aggarwal,Y.P (2004), Statistical Methods-Concept, Application and Co mputation, Sterling Publishers, New Delhi

[5] Annaraja, P. and Thiagarajan, A. Poonarbala (1993), "The Effect of Psychological factors on the academic achievement of the scheduled tribe adolescents", Journal of Indian Education, Vol-XVII (6), New Delhi.

[6] Aurobindo, (1947), The Doctrine of Passive Resistance, Pondichery: Sri Aurobindo Ashram.

[7] Best. J.W. and Kahn, J.V. (2001), Research in Education, New Delhi: Prendicle Hall of India.

[8] Buch, M.B. (Ed.) (1991), Fourth Survey of Research in Education, Vol-I and Vol-II, New Delhi: NCERT.

[9] Buch, M.B. (Ed.) (1995), Fifth Survey of Research in Education, Vol-I and Vol-II, New Delhi: NCERT.

[10] Garrett. H.E (1979), Statistics in psychology and education, Vakils, Feffer and Simons Ltd, Bombay.

[11] Gronlund.N.E and Linn. R.L. (2000), Measurement and Assessment in teaching, Macmillan, New work.

[12] Hunkins.P and Ornstein.J (2005), Curriculum Development, Harper and Collins, New work.

[13] Koul. L. (1997), Methodology of Educational Research, New Delhi: Vikas Publishing House.

[14] Mrunalini.T. (2009), Curriculum Development, Neelkamal Publishers, Hyderabad.

[15] Nayak, B.K(2012): Education in the Emerging Indian Society, Axis publishers, New Delhi,

[16] NCFTE (2009), National Council for Teacher Education, New Delhi,

[17] Oliva. Peter (1995), Curriculum Development-Basic Principles, Mcgraw Hill, Paris.

[18] Sax.G (2000), Measurement and evaluation in education and psychology, Prentice Hall of India, New Delhi.

[19] Sharma R.A, (2009), Educational Measurement and Evaluation, R.Lall Book, Meerut.

[20] Pradhan.S.K (2013): Text Book on Elements of Education, DKD Publishers, Aalo,

[21] Pradhan. S.K (2015).: Textbook on Indian Education and its Problems, Lucky Publishers, Bhubaneswar.

[22] Taba, Hilda (1962), Curriculum Development – Theory and Practice, Brace and world, New York.

[23] Taneja, V.R(2000).: Educational Thought and Practice, Sterling Publishers Pvt, Ltd, New Delhi,