

SMARTPHONE ADDICTION AND IMPACT ON HIGHER SECONDARY SCHOOL STUDENTS

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Abstract

Smartphone is a mobile phone with advanced computing ability, combining the functions of a multimedia player (allowing for music/video storage and playback) and a personal digital assistant (PDA), offering mobile Internet connectivity, built-in GPS and camera, and the ability to run a wide variety of third party applications (such as games, communication software, applications offering weather or traffic information etc. Smartphones have now become an essential part of life. One of the typical examples is the overuse of smart phone. Smartphone can easily get our attention and distracts us. People, especially students, therefore are easily overusing the smart phone. The prominent areas, where impacts of Smartphone are obvious included business, education, health and social life. Mobile technology has drastically changed the cultural norms and behaviour of individuals. The impacts are both at the positive side and also at the negative side. At one end Smartphone are enabling people to create their own micro-cultures and engage into activities considered dangerous of society and on the other end Smartphone enabling people to remain connected with all in time. On the basis of review of related literature it seems that a lot of work had been done in the area of integrating smart phone in education in order to bring the learning process effective and efficient. The objectives of the study was to find the significance of difference in addiction of smart phone in Higher Secondary School students gender-wise (i.e. boys and girls), to find the significance of difference in addiction in smartphone in Higher Secondary School students locality-wise (i.e. rural and urban) and to find the interactional effect of significant difference in addiction in smart phone in Higher Secondary School students under the joint influence of gender (boy and girl) and locality (rural and urban). The sample of 200 students was selected from different Higher Secondary Schools of Jammu district using simple random sampling technique. The investigator used Smartphone Addiction Scale by Dr. Vijayshri and Dr. Masaud Ansari based on Likert scale. The findings of the study revealed that no significant impact has been found in addiction of smartphone in higher secondary school students gender-wise (i.e. boys and girls), locality-wise (i.e. rural and urban) and no interactional effect of significant difference in addiction of smartphone in higher secondary school students under the joint influence of gender (boy and girl) and locality (rural and urban).

Keywords: Smartphone, Higher Secondary school students.

INTRODUCTION

Technology came into the existence a very long time, but in the 21st century, it started to expand rapidly. As a result the changes we can see in the world are still the best changes so far. The transformation and development of technology that not only improves our communication system but also makes our lifestyle a lot easier than never anybody can dream of. The unique invention of this technology is the mobile. We cannot think of living life without mobile phones in the present day. In India, approximately every person seems to have one. This mobile can be seen from a rickshaw puller to a high trader. Nowadays mobile phone is not just used for communication, in addition, mobile phones allow people to access different types of content, and for example, weather update, news report, educational information, sports content, music videos and much more. Technological appliances are now very useful for higher education such as a laptop, desktop, mobile, tablet, note etc. As we know that mobile is very much used by students and they also used it for gathering information. Generally, it is easily accessible for everyone, because of the low price than other technological equipment's and it can be easily moved anywhere.

Studies have proven that rampant use of social networking, texting and chatting on mobile phones result in lower grades and poor academic performance of students. While people of various ages find mobile phones convenient and useful, younger generations tend to appreciate them more and be more dependent on them. The researches proven that some students have the habit of keeping their mobile phones on during classes and studies, even in the library, thereby distracting others.

Smartphone is a mobile phone with advanced computing ability, combining the functions of a multimedia player (allowing for music/video storage and playback) and a personal digital assistant (PDA), offering mobile Internet

connectivity, built-in GPS and camera, and the ability to run a wide variety of third party applications (such as games, communication software, applications offering weather or traffic information etc. Smart phones have now become an essential part of life. However, despite the convenience it brings to use, sometimes it might affect our daily life in a negative sense. One of the typical examples is the overuse of smart phone. Smartphone can easily get our attention and distracts us. People, especially students, therefore are easily overusing the smart phone. The distractions lower students' productivity and take their time. It also lowers the quality of the work done. Today mobile phone has occupied the place like our daily necessities. It is essential for different types of works. In this context, it can be said that the efficiency of the mobile phone has increased due to fast internet connectivity. As its being small for that it can be taken anywhere, and easily collects a lot of information. Our education system has a specific time and it is not possible to answers all the questions of the students within this time period.

Additionally, other journals and books issued by commercial organizations do not have a control unit including editors and referees. Many of the sites on the Internet enable anybody to submit any kind of information without being controlled, and many of the sites known as reliable are restricted to open access for commercial purposes or security requirements (IP restriction, membership). This limits the accessibility for students and deprives them of these sites. Frequent mobile use affects human physiology and socialization. Not all researchers agree that there is such a thing as smart phone addiction, and others think "addiction" is an inappropriate term to describe the disordered behaviors associated with excessive smart phone use. While the condition is characterized more by the addictive behaviors, such as replacing friends with social networking, addicted individuals might spend an average of 38 hours a week online for personal use. Addiction refers to irrepressible urge which is often accompanied by loss of control. Hence, smart phone addiction imparts that peoples develop problems from their uncontrollable abuse of smart phone usage which is associated with other pathologies such as depression, loneliness and social anxiety. Indeed, the impact of smart phone addiction recognized as the bundle of dilemma such as; psychological aspects, interpersonal, physical, work and behavioral problems.

REVIEW OF RELATED LITERATURE

Hayat, Arshad, and Hussain (2014) conducted a study on the impact of mobile phone on academic achievement. The sample size of the study was 120, i.e. 60 male and 60 female. The samples were drawn from two departments, Sociology and Chemistry Department of Government College, Faisalabad by using simple random sampling technique. An interviewing schedule was prepared to get the required information. The result revealed that usage of mobile phone was satisfactory technology as mobile phone gave more information regarding their study and duration of exams. Majority of the subjects also stated that the usage of mobile phone did not affect much on the academic performance as they turned off their mobile phone during the examination period.

Bhardwaj and Ashok (2015) studied mobile phone addiction & loneliness among 100 teenagers (N=100, 50 boys, 50 girls) of Mumbai, India. The ages of the subjects were ranged between 13 to 17 years and were recruited for the study through random sampling method. This study used survey method and data were collected by using personal information form, Mobile phone addiction scale by Dr. A. Velayudhan & Dr. S. Srividya and Loneliness Inventory by Uma, Meenakshi R. & Prof. K. Krishnan. This study has treated the data through statistical method, like, correlation, t test. The study found high level of mobile phone addiction among teenagers, but no gender difference was found to be existed on mobile phone addiction. Besides, the result also highlighted that in terms of loneliness, though high level of loneliness was found among teenagers, but no gender differences was found there. Finally, it was indicated that mobile phone addiction was significantly associated with loneliness ($r=.456$). Kibona and Mgaya (2015) had undertaken a study a study in Ruaha Catholic University – Iringa, Tanzania with an aim to find out the impact of smart phones on academic performance of higher learning students. The study was carried out on 100 students who were having smart phones. The result of the study concluded that the smart phone bring negative results or progression on students' performance academically in Tanzania.

Bhutia and Tariang (2016) studied Mobile phone addiction among 159 college students. The aim of the study was to find out the mobile phone addiction based on gender and the stream students are enrolled in. The data for the study were collected from Shillong, Meghalaya by using a psychological scale titled as, Mobile Phone Addiction Scale (MPAS) developed by A. Velayudhan and S. Srividya. Statistical techniques Mean, SD, t-test and Pearson's Product-moment Correlations were the used and found that was found that students moderately addicted to mobile phone. The researchers were found no gender and stream impact on the mobile phone addiction.

Kumari (2016) studied the relationship between mobile phone addiction and mental health among 100 adolescent students of Rewari district. To collect data, two psychological scales titled Mobile addiction scale developed by Dr. A.Velayudhan and Dr. Srividya and Mental health scale by Pramod kumar were used. The data were collected by using random sampling technique. In this study, Mean and Correlation valued was calculated and was found that mobile addiction puts no or very little effect on mental health.

Fawareh & Jusoh (2017) studied the use and effects of Smartphone on academic staffs at a university level, especially in the Kingdom of Saudi Arabia. Questionnaires were used to get information. The questionnaires were randomly distributed to 66 academic staffs who own a smart phone at the Northern Border University. This

study discovers the smart phone had replaced a computer, and an email application was mostly used. The academic staffs also had utilized smart phone as a means for knowledge sharing. Social media applications were greatly used in teaching and learning. Despite the benefits of smart phone use, academic staffs had been negatively affected. This study also reveals that having a smart phone diverted academic staffs' focus at work. Cha and Seo (2018) examined smart phone use patterns, smart phone addiction characteristics, and the predictive factors of the smart phone addiction in middle school students in South Korea. According to the Smartphone Addiction Proneness Scale scores, 563 (30.9%) were classified as a risk group for smart phone addiction and 1261 (69.1%) were identified as a normal user group. The adolescents used mobile messengers for the longest, followed by Internet surfing, gaming, and social networking service use. The two groups showed significant differences in smart phone use duration, awareness of game overuse, and purposes of playing games. The predictive factors of smart phone addiction were daily smart phone and social networking service use duration, and the awareness of game overuse.

Sethuraman, et al., (2018) results of the present study provide an initial insight into smart phone usage among medical college students in Andaman and Nicobar Islands and suggest that they are more vulnerable for smart phone addiction. Therefore it was the requirement of the hour for planning of intervention programs at college settings involving the parents, psychiatrists, counselors, and other mental health professionals emphasizing the addictive potential of smart phones and finding remedies like involving them in sports, dance drama, book reading in library etc. during their free hours to wean them off from these technological addiction.

Mahrooqi, et al., (2020) study showed a high level of smart phone addiction based on SAS-SV scores and found a significant positive correlation between smart phone addiction scores and depression scores. This high prevalence is alarming, and action should be considered to address this. Authors suggest the following in order to raise awareness about smart phone addiction. First, as most of the participants have had smart phones since school age, education programmers about the risk of smart phone addiction should be introduced early to school children and their caregivers. Media can play a major role in educating people about the risk of smart phone addiction and its negative consequences. For university students, further research was warranted to understand whether smart phone addiction is a possible cause of depression or depression is a possible cause of smart phone addiction.

Raza, et al., (2020) findings concluded that smart phone addiction decreases academic performance of students as students lower their focus on academic learning and get addicted to smart phones for cyber loafing. Therefore, the universities should make policy regulations for students regarding the use of smart phones in the classroom. Also, students should be provided awareness about the negative impact of smart phone addiction on their personal and academic life, and also on their health through a variety of awareness seminars.

Heo & Lee (2018) conducted a study on smart phone addiction and school life adjustment among higher secondary school students. The objective of the study was the casual relationship between smart phone addition and school adjustment has not been clearly demonstrated. The result of the study can serve as groundwork for the development of programs to improve school adjustment among higher secondary school students.

Gangadharan, Borle & Basu (2022) conducted a study on smart phone addiction as an emerging behavioral form of addiction among higher secondary school students. The objective of the study was to determine the prevalence of smartphone addiction among higher secondary school students and kits associated risk factors among higher secondary school students. The findings of the study was the mean time spent on smart phones was significantly higher among those with addiction but no significant gender difference was found between time spent on phones and addiction.

Review of related literature highlighted that smartphone addiction is a major concern for higher secondary school students. The smart phone addiction has negative impacts on student learning and overall academic performance. The greater the use of a smartphone while studying, the greater the negative impact on learning. The skills and cognitive abilities students needed for academic success is negatively affected by excessive phone use. Education should be such that it inculcates in children such experiences which may help them to grow physically, intellectually, emotionally, socially and morally.

OBJECTIVES OF THE STUDY

- To find the significant difference in smart phone addiction of Higher Secondary School students gender-wise (i.e. boys and girls).
- To find the significant difference in the smart phone addiction of Higher Secondary School students locality-wise (i.e. rural and urban).
- To find the interactional effect of significant difference in the smart phone addiction of Higher Secondary School students under the joint influence of gender (boy and girl) and locality (rural and urban) when smart phone addiction scores are taken as dependent variable.

HYPOTHESES OF THE STUDY

The following hypotheses have formulated for the present study:

1. There is insignificant difference in smart phone addiction of Higher Secondary School students gender-wise (i.e. boys and girls).
2. There is insignificant difference in the smart phone addiction of Higher Secondary School students locality-wise (i.e. rural and urban).
3. There is no interactional effect of significant difference in the smart phone addiction of Higher Secondary School students in interactional effect of gender (boy and girl) and locality (rural and urban) when smart phone addiction scores are taken as dependent variable.

DELIMITATIONS OF THE STUDY

1. The study was conducted in Jammu district only.
2. Only 10 Higher Secondary Schools were included in the present study.
3. The study was delimited to the sample of 200 (100 boys and 100 girls) higher secondary school students.
4. The study was delimited to the usage of smartphone among 11th and 12th class students.

RESEARCH METHODOLOGY

In the present study the sample of 200 students was selected from different higher secondary schools of Jammu district. The simple random sampling technique was used. The investigator used Smartphone Addiction Scale by Dr. Vijayshri and Dr. Masaud Ansari based on Likert scale.

SCORING PROCEDURE

The five points were quantified by giving score ranging from 1 for strongly disagree to 5 for strongly agree for positive statements. The other categories of response such as disagree, undecided, agree were given 2, 3 and 4 scores. The procedure of scoring for negative statements was reversed. Negative statements were given scores of 1, 2, 3, 4 and 5 for strongly agree, agree, undecided, disagree and strongly disagree respectively.

	Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
Positive	5	4	3	2	1
Negative	1	2	3	4	5

STATISTICAL TECHNIQUES USED

Two-way Analysis of variance with 2x2 factorial designs was applied in order to study the smartphone addiction among Higher Secondary School students belonging to different gender and locality.

ANALYSIS AND INTERPRETATION OF DATA

Table A: Showing the summary of two way ANOVA for 2x2 factorial design

Sources Of Variance	SS	DF	MS	F	Level Of Significance
A (Gender)	180.63	1	180.63	1.888	Not Significant
B (Locality)	378.225	1	378.225	3.953	Not Significant
AxB	365.97	1	365.97	3.825	Not Significant
Within	3444.105	36	95.669		

INTERPRETATION

The mean of rural school boys is 55.0 and urban school boys is 67.2. It can be interpreted that urban school boys have high smartphone addiction than the rural school boys. Similarly, the mean of rural school girls is 56.8 and urban school girl is 56.9. So it can be interpreted that urban school girls have high smartphone addiction than the rural school girls. There may be various reasons for smartphone addiction among urban school students like teaching is not according to the mental level of the students, poor condition of urban schools, etc.

The F-ratio for the factor A (Gender i.e. boys and girls) came out to be 1.888 and the table values for the significance are 4.11 and 7.40 at 0.05 and 0.01 level of significance respectively against df 1 and 36. It means that there is insignificant difference in smartphone addiction of Higher Secondary School students belonging to different gender (boys and girls). Hence hypotheses 1 stating that there is insignificant difference in smart phone addiction of Higher Secondary School students belonging to different gender (boys and girls) is accepted.

The F-ratio for the factor B (Locality i.e. rural and urban) came out to be 3.953 and the table value for significance are 4.11 and 7.40 at 0.05 and 0.01 level of significance respectively against df 1 and 36. It means that there is insignificant difference in the smartphone addiction of Higher Secondary School students belonging to different

locality (rural and urban). Hence hypotheses 2 stating that there is insignificant difference in the smartphone addiction of Higher Secondary School students belonging to different locality (urban and rural) is accepted.

The F-ratio for the interaction (AxB) i.e. Gender (boys and girls) and Locality (rural and urban) has been found to be 3.825 which is less than the table value 4.11 and 7.40 at 0.05 and 0.01 level of significance respectively against degree of difference and 36 level. Hence hypotheses 3 stating that there is no interactional effect of significant difference in the smartphone addiction of Higher Secondary School students under joint influence of gender (boys and girls) and locality (rural and urban) is accepted.

FINDINGS OF THE STUDY

1. No significant impact has been found in the smartphone addiction of Higher Secondary School students gender-wise (i.e. boys and girls).
2. No significant impact has been found in the smartphone addiction of Higher Secondary School students locality-wise (i.e. rural and urban).
3. No interactional effect of significant difference in the smartphone addiction of Higher Secondary School students under the joint influence of gender (boy and girl) and locality (rural and urban).

CONCLUSIONS

From the findings of the study it can be realized that policy makers must realize the need for availability of smartphone in the schools as part of the teaching aids to enhance learning. Learning environment become more interactive through the use of smartphone whereby students are highly alert in the classrooms; instead of mere passive listener. They take active part in the learning activities, thus enhancing the level of retention, understanding and comprehension. The proper use of smartphone arouses learner's interest. Students get anxious and develop a learning habit when the teaching method or medium appear real to them. The material helps the teacher to present her lesson clearly and effectively and this in turn catches the attention of the pupils.

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PSYCHOLOGY OF KNOWLEDGE

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Abstract

This is an era of knowledge where it is available everywhere, but the way in which it is acquired is neglected. This paper talks about the ways in which knowledge can be acquired. It merges two branches i.e.; cognitive psychology and knowledge epistemology and this multidisciplinary paper gives suggestions to inculcate these ways into curriculum and pedagogy.

Keywords: psychology, knowledge, epistemology, pedagogy

INTRODUCTION

The earliest cited instance in the English language of the word knowledge was from the 13th century in northern England as knaulage.

The term was coined in the 13th century, but the prevalence of knowledge has been much before that. But as time passes, humans have begun to understand and recognize the importance of knowledge.

Knowledge has been prevailing since the very beginning, but the way in which humans acquire knowledge has been evolving. The sources of knowledge acquisition have been changing from generation to generation.

If we can understand the sources of knowledge in the current era, then acquisition tools and techniques can be made extremely effective. Knowledge has been expanding day by day, but its sources have not been identified in the current times. It can be identified by understanding the psychology of knowledge acquisition in the present generation.

This study tries to fill this gap and deals with four primary sources of knowledge i.e., Idealism, Empiricism, Rationalism, and Spiritualism. This paper describes the evolution of these sources, and their relevance in the present generation, and suggests their applicability in various fields.

Psychology

Psychology is the study of the mind and behaviour, according to the American Psychological Association. It is the study of the mind, how it works, and how it affects behaviour.

There are different types of psychology, such as cognitive, forensic, social, and developmental psychology.

Cognitive Psychology

Cognitive psychology investigates internal mental processes, such as problem-solving, memory, learning, and language. It looks at how people think, perceive, communicate, remember, learn and how they acquire, process, and store information.

Practical applications include how to improve memory, increase the accuracy of decision-making, or how to set up educational programs to boost learning.

Knowledge

Knowledge is a highly valued state in which a person is in cognitive contact with reality (Zagzebski, L., 2017).

Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning.

Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning.

Knowledge acquisition involves complex cognitive processes: perception, communication, and reasoning; while knowledge is also said to be related to the capacity of acknowledgment in human beings.

Epistemology

Epistemology is the philosophy of knowledge, or the study of knowledge itself, what it is and how it is possible

Epistemology is the theory of knowledge. It is concerned with the mind's relation to reality. What is it for this relation to be one of knowledge? Do we know things? And if we do, how and when do we know things?

RESEARCH GAP

In this era, knowledge is endless and the sources of knowledge are numerous, but the exact way an individual acquires it is still unknown. These two separate branches can be combined to get a clear understanding of how

people acquire knowledge. By joining the two disciplines, cognitive psychology, and knowledge we can gain an understanding in this direction.

This multidisciplinary study has not been conducted previously. Both branches have been studied separately, but how cognitive psychology works in knowledge acquisition has not been studied.

RATIONALE OF STUDY

If we can understand the ways of knowledge acquisition, then it can be very useful to design the process of giving knowledge. Especially if we can understand the way students acquire knowledge, then the curriculum can be designed keeping that in mind and education can be made extremely effective.

OBJECTIVES

- To understand the ways of knowledge acquisition
- To understand the relationship between cognitive psychology and knowledge
- To use the multidisciplinary study in framing an effective curriculum
- To use this correlation in framing models of knowledge acquisitions
- To create models of epistemology and pedagogy

Psychology of Knowledge

There are multiple ways in which knowledge can be acquired and it differs from person to person. This study has tried to explain four major ways in which knowledge can be acquired i.e., Idealism, Empiricism, Rationalism, and Spiritualism.

Idealism

In philosophy, the term idealism identifies and describes metaphysical perspectives which assert that reality is indistinguishable and inseparable from perception and understanding; that reality is a mental construct closely connected to ideas. Epistemological idealism is a subjectivist position in epistemology that holds that what one knows about an object exists only in one's mind

Empiricism

The term empiricism comes from the Greek word for experience: *empeiria*. Empiricism is the idea that all learning comes from only experience and observations. In, empiricism, knowledge is spoken of as a *posteriori*, or "from the latter," meaning gained from experience.

Rationalism

Rationalism means reliance on reason. A psychological characterization of rationalism would describe it as an overly deductive way of thinking and to the moulding of reality to fit one's theoretical understanding. More specifically, rationalism is the epistemological theory that significant knowledge of the world can best be achieved by *a priori* means; it therefore stands in contrast to empiricism.

Spiritualism

Spiritualism, in philosophy, a characteristic of any system of thought that affirms the existence of immaterial reality imperceptible to the senses. So defined, it's a higher level of knowledge obtained through a higher source.

Observation

These are the four basic ways of knowledge acquisition. But our education system seems to touch upon rationalism and idealism which has slipped into it. The other two very essential forms i.e., empiricism and spiritualism are neglected upon.

Application

The curriculum and pedagogy can be made extremely effective if all four sources are given equal justice. Empiricism can be brought in by adding experiential learning tools where students experience and learn from that.

For spiritualism, meditation, yoga, prayers, etc could be made as a main subject wherein they can discover themselves as well as many other things above human understanding.

To frame self-development and skill based educational models