

The Excess Use of Mobile Phone Among Young Children and Its Effect on Their Academics

Dr. Aziz-un-Nisa & Dr. Naila Siddiqua

Abstract

Globalization has changed our lives in multiples ways, but the most important change in our lives, is due to our way of communication. Mobile phone is popular device since the late 1990s having reached to seven billion users' worldwide and unique mobile subscription of over 3.5 billion. the recent technological advancements and the innovation in computers and advancement in the field of information and technology brings about the birth of mobile phones and its multi-functions such as voice calls, messaging, data use, games (online and offline) and use of social media apps. Mobile phones have almost become an essential part of our daily lives. Smart phones were invented for the use of adult people, especially probably for people who are working or students of higher level for their better achievements in academics. But now a day's smart phones are serving the medium of learning to young children/learners. Excessive use of mobile (smart) phone among young learners leads to multiple learning difficulties and behavior disorders, emotional, moral and social development

disorders of young children. It has eventually affected the academic performance of young children. The positive and negative effects of the mobile gadgets are affecting the overall development of young children. Educators and psychologist pointed out those using digital devices in the preschooler have negative effect as well, which is mainly linked to using those devices without any time bound.

Keywords: Excess use, Mobile phone, young children, academic performance

Introduction

Thomas Larsson, Swedish journalist wrote in his book, “The Race to the Top: The Real Story of Globalization (2001) stated that globalization: “is the process of world shrinkage, of distances getting shorter, things moving closer. It pertains to the increasing ease with which somebody on one side of the world can interact, to mutual benefit, with somebody on the other side of the world (Stieglitz, J.E. 2002)” Globalization has changed our lives in many ways, but the most important change that occurred because of globalization in lives, is our way of communication to one-another. Mobile phone is popular since the late 1990’s (Meek, 2006) up till now. “With seven (7) billion mobile connections worldwide and unique mobile subscription of over 3.5 billion”, said (Twum, 2011).

The recent technological advancements and the innovation in computers and advancement in the field of information and technology brings about the birth of mobile phones and its multi-functions such as voice calls, messaging, data use, games (online and offline) and use of social media apps (Jackson, Zhao, Khao, Kolenic, Fityerald, Herold and Venoye,2008).

According to Ling (2004) mobile phones have almost become an essential part of our daily lives, since their rapid growth in the late 1990's. In 2010 a nationwide survey was conducted in which the results showed that the mobile phones are the most essential medium of communication.

Excessive use of smart phone among young learners leads to multiple learning difficulties and behavior disorders, emotional, moral and social development disorders of young children. Which eventually affect the academic performance of young children?

Literature Review

This section of the study includes a brief review of the literature to frame the study. The study of "The excess use of mobile phone among young children and its effect on their academics" provides the necessary information about the use of mobile phone in both positive and negative aspects among young children. In the 21st century, babies to school-age children are digital consumers, often using TV, computers, gaming systems, even smart phones and tablets. From the time they can grasp an object in their hands, children begin to play with their parents' smart phones or tablets. One can find more than 40,000 YouTube video uploads about infants or toddlers playing with such devices (Michalos, 2014).

Dalton Conley, a journalist has reported in Time Magazine that "Our children's digital lives are turning them into much different creatures from us –and not necessarily for the better." Studies suggest that excessive media use (computers or video games) at an earlier age are associated with lower academic achievement later in life. *Dehmler (2009) asserts that children today are growing up in an interconnected, networked World.* A recent study found that 47% of infants under the age of 1 years watch online television or DVD's on the daily basis and spend an average of nearly 2 hours a day doing so (Rideout, 2011).

A most recent study found that at 2 years of age or even younger, 89% of children had Touched or scrolled the screen of a mobile gadgets, and 77% had used app's (Rideout, 2013).

Rideout (2013) stated that, mobile/smart phone used by infants have subsequently increased from 2011-2013 from 10% - 38%. By 1 years of age 14% of the children were using mobile/smart phone media at least one hour a day, as the number increased up to 26% by the age of 2 years (Panek, E. 2014).

Many researchers have studied that young children spent average of their time on using Different gadgets like TV, Game boy, Xbox, iPod, iPad, smart phones, laptops and tablets.

Young children use gadgets for playing games, watching videos, listening to songs or poems.

Mobile phones have become most popular with the young people around the globe. When young children spent average time on using smart phones, they lack paying attention to their sitting posture, distance of the screen from their eyes and its brightness, that ultimately affect their health, vision and behavior (Polit, 1999).

Theoretical Background

Theories are formulated to explain, predict and understand a phenomenon and in many cases to challenge and extend existing knowledge within the limits of critical bounding expectations (Robertson, I, 1987).

The theoretical framework is the arrangement that can support a theory of a research study. In my research study the research is grounded on the Lev Vygotsky's (1934) Sociocultural Theory of Cognitive Development.

a). Levvygotsky's Sociocultural Theory of Cognitive Development:

A Russian psychologist, who lived during the Russian Revolution, developed a theory of development known as the Sociocultural Theory of Cognitive Development in the early twentieth century. The work of Lev Vygotsky (1934) has become the foundation of much research and theory in Cognitive Development over the past several decades, particularly of what has become known As Social Development Theory. The child seeks to understand the actions or instructions provided by the tutor (often the parent or teacher) then internalize the information, using it to guide or regulate their own performance. To gain a comprehensive understanding of Vygotsky's theories on cognitive development one must understand two main principles of Vygotsky's work: the More Knowledgeable Other (MKO) and Zone of Proximal Development (ZPD).

b). More Knowledgeable Other:

The More Knowledgeable Other (MKO) is somewhat self-explanatory; it refers to someone who has a better understanding or a higher ability level than the learner, with respect to a task, process or concept. Although the implication is that the MKO is a teacher, parent or an

Older adult, this is not necessarily in case. Many times, a child's peers or an adult's child may

Be the individuals with more knowledge or experience.

c). Zone of Proximal Development:

The concept of the More Knowledgeable Other is integrally related to the second important principle of Vygotsky's work, the Zone of Proximal Development. This is an important concept that relates to the difference between what a child can achieve independently and what a child can achieve with guidance and encouragement from the skilled partner. Vygotsky (1978) views the ZPD as the area

where the most sensitive instructions or guidance shall be given-allowing the child to develop skills they will use on their own-developing higher mental functions. He suggested that teachers in classrooms should use cooperative learning experiences where children with fewer competencies could develop with help of there more skilled peers, within the Zone of Proximal Development.

d). Evidence for vygotsky and zpd:

In 1990 Freund conducted a research in which children had to decide which item of furniture they should place in a particular place of a doll house. Whereas, some children could play with their mothers in a similar situation they had attempted it alone (ZPD) while others could work on their own and discover (Piaget's discovery learning). The conclusion which he came to was that, guided learning within ZPD leads to greater understanding/performance than working alone (discovery learning). Similarly, now a day the excessive use of smart phone is increasing day by day. Using a smart phone is becoming a culture and each person is following this culture no matter which age group he/she may belong. Parents of young children also portray similar culture to their young children. Young parents now offer their smart phone to young pupil for the sake of playing games or listening to poems/songs or even keeping them busy from disturbing others. Parent neglect the harmful effect of the usage by exposing their children to bright screens.

Growth and development:

(a). According to Hurlock "Growth is changing in size, in proportion, disappearance of Old features and acquisition of new ones. Examples are; height, weight, appearance of temporary teeth and acquisition of permanent teeth."

(b). According to crow and crow (1962): "Growth refers to structural and physiological changes."

(c). According to Hurlock (1959) “Development means a progressive series of changes that occur in an orderly predictable pattern as a result of maturation and experience.”

(d). According to J.E. Anderson (1950) “Development does not consist merely of adding inches to one’s height or improvement of one’s abilities. Instead development is a complex process of integrating many structures and functions.”

Cognitive development:

Piaget believed that the driving force behind intellectual development is our biological development (maturation) amidst experiences with the environment. Our cognitive development is shaped by error we make and by our active attempts to make and make sense of the world. Cognitive development is the construction of thought processes including remembering, problem solving and decision making from childhood through adolescence to adulthood (Brown, 1967).

(a). Early childhood development:

Early childhood is the most and rapid period of development in human’s life. The years from conception through birth to eight years of age are critical to the complete and healthy cognitive, emotional and physical growth of children. The rapid development of children’s brains begins in the prenatal stage and continues after birth. Early childhood is a period in development where environment has an important impact on determining how the brain and central nervous system grows and develops. Early Childhood Development refers to the physical, cognitive, linguistic and socio-emotional development of a child from prenatal stage to eight years of age (Anning, Culler and Flear, 2005).

Positive impact of smart phone usage on young children

(a). Improve Cognitive Skills:

Cognitive skills are the ability to process information, reasoning and related objects with others. In today's world technology help faster and better development of cognitive skills in young children. Jean Piaget believed that the driving force behind intellectual development is our biological development, amidst experiences with the environment. Our cognitive development is shaped by the error we make and our attempts to make sense of the world (Lobo, 1974).

(b). Sense of Competition:

Young children love to play with their adults or peers especially in games, no matter these games are physical or video games. While playing they develop the sense of competition with others, they love to challenge others in their favorite game to build a competitive situation and try their utmost to win the competition (Kim, 2013).

(c). Help in developing better eye hand coordination:

Young children while using smart phones or electronic gadgets develop better eye hand coordination as they play games on flat screens in their hands. By using one hand on holding the gadget and other to pinpoint on the screen while play which eventually help them develop a better eye-hand coordination to those who don't use (Ipagani, 2010).

(d). Fun for younger ones:

Gadgets prove to be a fun element for young children. They highly enjoy playing games on them or listening to favorite poems. They simply understand the Cause and effect. These devices have a vast impact on their learning in a fun and enjoyable manner (Hofferth, 2010).

(e). Help in educating young children:

Electronic device serves as the most helpful Device in educating individual of all age. Young children can access the educational websites and learning in a most enjoyable way, site like Baby TV help parents in educating their young one's in the most suitable way. Educational site like this help children develop visual perception and interactive learning. Kids can learn play various brainstorming games (Ahmed, I. and Qazi. T.F. 2011).

Negative impact of smartphone usage on young children:

(a). Speech or language delay:

Speech and language are two different things. Firstly, speech refers to a verbal form of communication used by human beings. Whereas, language refers to whole system of communication i.e. spoken or written, verbal or non-verbal. A child with language delay might pronounce words well but only be able to put two words together. Whereas, a child with speech delays might use words or phrases to express his/her ideas which might be difficult for others to understand and comprehend. Speech delay is also known as **Alalia**.

Researcher says that, children who are frequently exposed to smart phones, tablets, and handheld devices are more likely to face delay in speech (Junco, R. 2102)).

Researchers say that, children who use electronic gadgets in abundance usually lack Communication skills and social adjustment. Researchers also say that children spending one

Minute on screen is one-minute fewer that he could speak or learn with others (Tylor, 2001).

Dr. Jenny Brodsky of Boston Medical Center became concerned when she noticed the lack of interaction between parents and children. She had observed that smart phones and handheld devices

were interfering with bonding and parental attention. Radesky said, “They (children) learn language, they learn about their own emotions, they learn how to regulate them. They learn by watching us how to have a conversation, how to read other people’s facial expressions. (<https://www.yourdictionary.com/academic-achievement>).

(b). Attention deficits

Attention Deficit Hyperactivity Disorder (ADHD) is a mental disorder which allows children to lack attention on certain assigned task. Children with ADHD Problem pay less attention, extremely hyper (in temperament and physical activities), difficult to control, always disturb others by their actions intentionally or unintentionally, usually throw tantrums at others. (Coon, D. 2004; Smith, E.E. et.al. 2003 and Myers, D.G, 1995). This cause problem at school and at home for child itself and others (Anderson, M.L, Scarppitti, F.R, 1992 and Turner, 1974).

(c). Learning problems:

Young children who use smart phone frequently come up with learning difficulties. As they lack, interaction and communication with their parents, siblings, guardians and peers, and hence, lack vocabulary in verbal and written form. They pay less attention to things around them which result in learning problems. Smart phones and the Internet also affect communication skills and the emotional development of humans. If a child relies on electronics to communicate, they risk weakening their people skills. Dr. Small suggests that children can become detached from others’ feelings.

(f). Anxiety:

Anxiety refers to the fear about near future events and reaction to current situations and events. Such feeling may lead to various physical symptoms, like shakiness or fast heartbeat. But children who suffer from anxiety, experience nervousness, shyness, fear. They tend to avoid interacting with people and involving in group

activities. This feeling magically vanishes as soon as they are handed over the devices. Such shift in behavior can easily be noticed.

Dr. Graham says that; “Child gets upset or shows anger when by small things and when they get online, they become calmer. He also said that, parents should not the signs of agitation, anxiety and irritation in children”. Dr. Watt also states; “It’s pretty normal if a child gets upset not being able to online with one’s friends, but if a child continuously shows anger or depression not being online then it’s time to start a conversation.”

(g). Childhood depression:

Childhood depression is very common and severe medical illness that negatively affects child behavior. The way they think and act. Jean Twenge, psychology professor at San Diego State University and a graduate of the University of Chicago in the US, has written a lot on young people and mental health. The finding is based on data compiled by the Centre for Disease Control and Prevention in the US and teen-related surveys. Nearly half of the teens who said they spend five or more hours a day on a smart phone, laptop, or tablet said they had thought about, planned, or attempted suicide at least once – compared to 28 per cent of those who said they spend less than an hour a day on a device.

Data from Britain shows almost it is estimated that 25 percent of children between the ages of 2 and 5 have a smart phone. Too much gadgets use introduces depression in young children and adolescence.

Review of previous studies:

(a). Smart phones:

A **smart phone** is a hand held personal computer. It possesses extensive computing capabilities. A smart phone is a mobile phone with highly advanced features. A typical smart phone has a high-

resolution touch screen display, Wi-Fi connectivity, Web browsing capabilities, and the ability to accept sophisticated applications. The majority of these devices run on any of these popular mobile operating systems.

(b). Preschoolers:

Preschool is an early childhood program in which children combine learning with playing a program run by professionally trained adults. Children are most commonly enrolled in preschools between the ages of three and five though those as young as two can attend some schools.

(b). Academic Performance:

Academic achievement or (academic) performance is the extent to which a student, teacher or institution has achieved their short or long-term educational goals. Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts (Alexander, C.M. 2102).

Methodology of the Study

Quantitative research methods are being used in this study that is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. Through such research we can analyse the various factors which motivate people to behave in a manner or which make people like or dislike a thing. It may be stated, however, that to apply qualitative research in practice is relatively a difficult job and therefore, while doing such research, one should seek guidance from experimental psychologists (Minichiello, V. et.al. 2004).

Quantitative is a type of research that is formal and systematic application of scientific methods to study problems related to education. Donald Ary states that, “educational research is more

widely defined as a systematic and empirical enquiry for solving problems that new knowledge for its solution. C.V Good also says, that educational research is the study and investigation in the field of education or bearing upon educational problems L.R. G., 2011)

Significance of the Study

The study generally focuses on the effects of mobile phone on young children and its positive and negative effect on their education.

The study in hand is beneficial for the parents, teachers, and higher authorities of department of education for educating young people. Young students who are being affected by excessive use of mobile phones would also benefit from suggestions of the present study.

Significance of the study is visible and would provide guidelines for policy makers at the lower and higher levels as well a way forward to legislators in making future legislations.

Objectives of the study

Following are the specific objectives of this study:

1. To examine the time spent by the young children with their gadgets.
5. To study the positive and negative effects of smart phone on young children's behavior.
3. To find out the intentions behind the use of mobile phone by young students.
4. To determine the influences of frequency of smart phone usage on the academic performance.
5. To explore the impacts of the addictive, use of the smart phone and services on mental physical, social, spiritual and environmental health of young children.

Hypotheses

1. There is significant influence of the smart phone usage on the academic performance of young children.
2. YOUNG Children spent significant time using gadgets for fun play and amusement.
3. Excessive use of smart phone damages the social development of young children.
4. The addictive use of smart phone disturbs the mental health of young children.
5. Young children learn the use of gadgets fast and far better than adults do.

Results

Q1: Do you think excessive use of smart phone effects your child's mental development?

Null hypothesis:

In the opinion of parents there is no significant effect of smart phone on your child's mental development.

Significance level:

$\alpha = 95\% (0.05)$

Test statistics

<u>DESCRIPTION</u>	<u>AGREE</u>	<u>NEUTRAL</u>	<u>DISAGREE</u>	<u>TOTAL</u>
f_o	56	11	3	70
f_e	23.33	23.33	23.33	70

$$X^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

$$X^2 = \frac{(56 - 23.33)^2}{23.33} + \frac{(11 - 23.33)^2}{23.33} + \frac{(3 - 23.33)^2}{23.33}$$

$$X^2 = \frac{(32.67)^2}{23.33} + \frac{(12.33)^2}{23.33} + \frac{(20.33)^2}{23.33}$$

$$X^2 = \frac{(1067.32)}{23.33} + \frac{(152.028)}{23.33} + \frac{(413.308)}{23.33}$$

$$X^2 = 45.749 + 6.5164 + 17.715$$

$$X^2 = 69.381$$

Degree Of Freedom

$$df = 2$$

Tabulated value

Tabulated value=5.991

Decision rule

H_0 is rejected if $Cal > tab$

Conclusion

$Cal > tab$

$69.381 > 5.991$

Hence, the calculated value (**69.381**) is greater than tabulated value (**5.991**); therefore, the H_0 (Null Hypothesis) is rejected.

Q2: Too much exposure to electronic gadgets at an early age can cause learning problems.

Null Hypothesis

In the opinion of parents there is no significant exposure to electronic gadgets at an early age can cause learning problems.

Significance level

$\alpha = 95\% (0.05)$

Test statistics

<u>DESCRIPTION</u>	<u>AGREE</u>	<u>NEUTRAL</u>	<u>DISAGREE</u>	<u>TOTAL</u>
f_o	51	12	37	70
f_e	23.33	23.33	23.33	70

$$X^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

$$X^2 = \frac{(51 - 23.33)^2}{23.33} + \frac{(12 - 23.33)^2}{23.33} + \frac{(37 - 23.33)^2}{23.33}$$

$$X^2 = \frac{(27.67)^2}{23.33} + \frac{(-11.33)^2}{23.33} + \frac{(13.67)^2}{23.33}$$

$$X^2 = \frac{(765.62)}{23.33} + \frac{(128.36)}{23.33} + \frac{(186.86)}{23.33}$$

$$X^2 = 32.81 + 5.50 + 8.00$$

$$X^2 = 46.31$$

Defgree of freedom

$$df = 2$$

Tabulated value

Tabulated value = 5.991

Decision rule

H_0 is rejected if $Cal > tab$

Conclusion

$$Cal > tab$$

$$46.31 > 5.991$$

Hence, the calculated value (**46.31**) is greater than tabulated value (**5.991**), therefore the H_0 (Null Hypothesis) is rejected. Therefore, too much exposure to electronic gadgets at an early age can cause learning problems hence proved.

Testing hypothesis

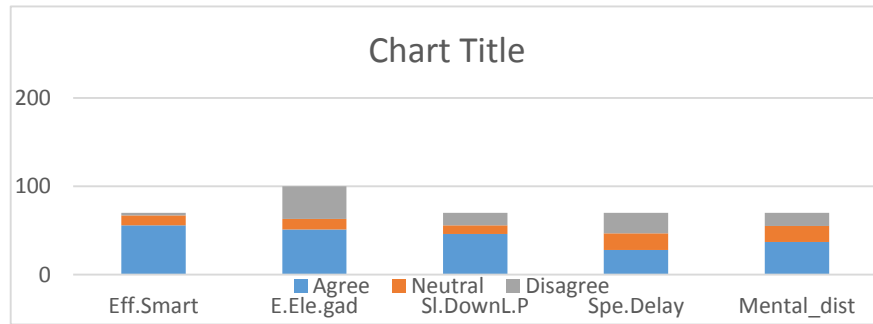
In this research study five (5) hypothesis were constructed, based on those hypotheses twenty-five (25) items were structured to collect the data for the research. The data was collected through online survey questionnaire; the data was analyzed statistically by applying Chi-Square.

Hypothesis No: 1

1. There is significant influence of the smart phone usage on the academic performance of young children.

Table No: 1

NO. OF QUESTIONS	CALCULATED VALUES	TABULATED VALUE
01	69.38	5.991
02	46.31	5.991
03	33.36	5.991
04	6.01	5.991
05	12.18	5.991
TOTAL	167.24	29.995



Result

Five questions were formulated according to hypothesis no.01. The calculated value is greater than the tabulated value $167.24 > 29.995$. Therefore, hypothesis no.01 is accepted.

Conclusion

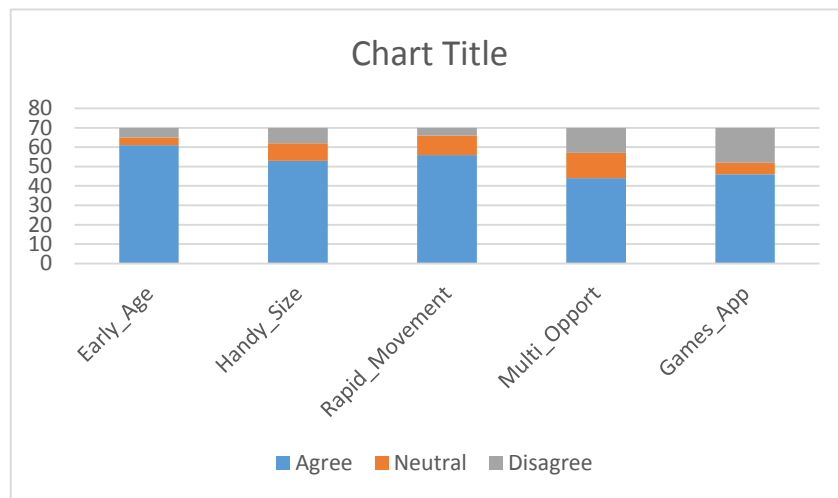
We can conclude that *“There is significant influence of the smart phone usage on the academic performance of young children.”*

Hypothesis No: 2

2. Children spent significant time using gadgets for fun play and amusement.

Table No: 2

NO. OF QUESTIONS	CALCULATED VALUES	TABULATED VALUE
01	91.23	5.991
02	18.92	5.991
03	69.36	5.991
04	141.93	5.991
05	36.1	5.991
TOTAL	357.54	29.995



Result:

Five questions were formulated according to hypothesis no.02. The calculated value is greater than the tabulated value $357.54 > 29.995$. Therefore, hypothesis no.02 is accepted.

Conclusion:

We can conclude that *“Children spent significant time using gadgets for fun play and amusement.”*

Recommendations for parents:

- Children under the age of 10 years should be strictly monitored while they use smart phone. The brain of young children is very sensitive and it bears negative effects of the radiation emitting from smart phone.
- Children under the age of 3 years should not be exposed to electronic gadgets.
- Parents should provide quality time to their young one's in order to enrich them with parent-child bond.
- Parents should maintain balance between use of smart phone and physical activity of the child.
- Young children under the age of 3 years should be encouraged to learn more from their surrounding rather than electronic gadgets.
- If parents are allowing their children to use smart phone than they should set time limit for young children. This should not be more than an hour.

- Parents should choose quality app's and games for their children who enrich vocabulary, creativity and logical thinking of young children.
- Smart phones should be kept out of reach of children.
- Parents should always remind youngsters that it is your phone.
- Parents should teach and model putting the phone down to their young children.
- Parents should keep a watchful eye on young children especially in terms of their behavior and emotional alteration.
- Parents should take keen interest in toddler's social interaction and social behavior with their peers.
- Parents should keep themselves updated with behavioral issues and should notice any alteration in their child's behavior.
- Parents should encourage their young ones to be as much physically as they can to better understand themselves and learn new things.
- Parents should witness if their child is being hyper active than they should immediately take notice of it.
- Try keeping your child distended from gadgets when they are involved in any academic activities.
- Involve young children in family healthy conversation to foster healthy family relationship.
- Try to make your child independent rather than being dependent on gadgets and smart phone for fun and amusement.
- Always encourage your child to do things that interest them the most.

- Parents should take their children to parks and play lands so they find opportunities to mingle with their age group children and learn socialization.

Recommendations for the future study:

This research study is a creation of new facts and figures. The existing facts are studied and hence, new findings, idea and approach have giving birth. This study provides information regarding the issue of excessive use of smart phone and its effect on young children academic performance. This research study might contain information and analysis of past studies which may lead to new conclusion:

- A study should be conducted on the impact of smart phone usage on teenager's emotional development.
- Analyze the effects of smart phone on teenager's academic achievement.
- Examine the relationship between teenager's emotional development and academic achievement.

Conclusion:

In this research study, the researcher came to the conclusion that smart phone do affect the academic performance of young children in both positive and negative way. Smartphone proves to be attractive yet it can be damaging for young children in their learning. For young children smart phone is merely a tool of fun and amusement but in reality, it can seriously affect their health, emotions, behavior and can hinder their learning. This research also reveals that parents should be well aware of their child's activities and changes taking place in them.

Therefore, it can be concluded that smart phones provide multiple opportunities to children to play games. This research also witness that young smart phone user can have poor social skills,

adjustment problems and mood swings. This research also demonstrates that young children become hyper active while using smart phone. The overall conclusion of this research study turns out to be that excessive use of smart phone affects the academic performance of young children. We can say that technology is rapidly growing and it's getting out of our control especially in the case of children. It is primarily parent's concern to keep a watchful eye on their young children. Smartphone can get in the way of young children exploration, learning and socialization era. It is parents who have to take charge to limit the use of gadgets and upsurge time for physical activity and interaction with peers and family members.

References

- Ahmed, I. and Qazi. T.F. (2011) A Lookout for Academics of Social Networking Sites, A Student based perspective, African Journal of Business Management 5 (12): 5022-5031.
- Alexander, C.M. (2102) Face book Usage and Academic Achievement of High School Students, A quantitative Analysis, ProQuest LLC. 789 East Eisenhower Parkway.
- Anderson, M.L. and Scarpitti, F.R. (1992) Social Problems, Delaware: HarperCollins Publishers.
- Anning, A. Culler, J. and fleer, M. (2005) Early Childhood Education, Society and Culture), London: Sage publications.
- Brown, F.J. (1967) Educational Sociology, Tokyo: Prentice-Hall.
- Coon, D. Introduction to Psychology, Gateway to Mind and Behavior, Australia: Thomson.
- Gay, L. R. and P. L. (2011) Research Methods for Business and Management Authors: Edition illustrated, Publisher Macmillan, Publishing Company, 1992 Original from Pennsylvania State University, Digitized 31 May 2011
- Hofferth, S. L. (2010). Home media and children's achievement and behavior. *Child development*, 81(5), 1598-1619.
- IPagani, L. S., Fitzpatrick, C., Barnett, T. A., & Dubow, E. (2010). Prospective associations between early childhood television exposure and academic, psychosocial and physical well-being by middle childhood. *Archives of Pediatrics and Adolescent Medicine*, 164(5), 425-431.
- Junco, R. (2102) In class Multitasking and Academic Performance, Computer in Human Behaviour, <http://dx.doi.org10.1061/j.chb>

- Kim, Y. (2013). Young children in the digital age. *Fact sheet (University of Nevada Cooperative Extension)*; 13-22.
- Lobo, A.T. (1974) Educational Ideas and Their Impact, Karachi: Rotti Press.
- Michalos, A. C. (Ed.). (2014). *Encyclopedia of quality of life and well-being research*. Dordrecht: Springer Netherlands.
- Minichiello, V. et.al. Ed) (2004) Handbook of Research for Nursing and Health Science, Malaysia/Australia: Prentice Hall,
- Myers, D.G. Psychology, Holland, Michigan: Worth Publishers.
- Panek, E. (2014) 'Left to Their Own Devices: College Students Guilty' Guilty Pleasure, Media Use and Time Management, *Communication Research*, 41(4): 561-577.
- Polit, D.F., Hungler, B.P. (1999). *Nursing Research: Principles and Methods* (6th edn). Philadelphia: J.B. Lippincott
- Robertson, I, (1987) *Sociology* (Third Edition), New York: Worth Publishers.
- Smith, E.E. (2003) *Introduction to Psychology*, Michigan: Thomson, Wordsworth.
- Stieglitz, J.E. (2002) *Globalization and its Discontents*, New York: W.W. Norton and Company.
- Taylor, A. F., Kuo, F. E., & Sullivan, W. C. (2001). Coping with ADD: The surprising connection to green play settings. *Environment and behavior*, 33(1), 54-77.
- Turner, F.J, (1974) *Social Work Treatment*, New York: The Free Press.

WEBLIOGRAPHY:

Some important web references those are helpful for understanding this study:

[http://ddeku.edu.in/Files/2cfa4584-5afe-43ce-aa4b-ad936cc9d3be/Custom/Educational %20Research.pdf](http://ddeku.edu.in/Files/2cfa4584-5afe-43ce-aa4b-ad936cc9d3be/Custom/Educational%20Research.pdf).

http://shodhganga.inflibnet.ac.in/bitstream/10603/22020/7/07_chapter-3.pdf

<http://siteresources.worldbank.org/EXTAFRREGTOPEDUCATION/Resources/444707-1291071725351/ECCD-factsheet-final.pdf>

<http://www.healthofchildren.com/P/Preschool.html>

[http://www.healthofchildren.com/P/Preschool.html#ixzz5Sq4aiz1i,](http://www.healthofchildren.com/P/Preschool.html#ixzz5Sq4aiz1i)

https://en.wikipedia.org/wiki/Academic_achievement

<https://explorable.com/research-population>

<https://files.eric.ed.gov/fulltext/EJ1103022.pdf>

<https://psychcentral.com/lib/how-do-smartphones-affect-childhood-psychology/>

<https://slideplayer.com/slide/10918503/>

<https://study.com/academy/lesson/chi-square-definition-analysis.html>

<https://www.researchgate.net/publication/267687748/download>