

Patterns and Usages of electronic gadgets among children in the city of Guwahati, Assam

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Abstract: Over the past 20 years, humans have experienced a huge paradigm shift from traditional society to digital society. Using electronic gadgets is a common scenario that is seen everywhere and in every situation. With this digitization, children became the major user of electronic gadgets. This usage of electronic gadgets among children is influenced by various conditions. But most of the previous works have focused mainly on some individual factors like screening time, living behind other important influencing factors which are interrelated to each other. Such as family income, education qualification etc. The main objective of this study is to find out the socio- economic patterns and conditions of using electronic gadgets by the children in the study area. Both primary and secondary source is used in this research. Stratified sampling technique of probabilistic method and convenience sampling technique of non-probabilistic method is employed for collection of primary data. The field survey is carried out with 4 different group of people namely children of age-group between 0 and 16, parents or caretakers, teachers and doctors comprising 4 survey schedule with thorough observation. The study finds out that more the family income than more will be the availability of gadgets and with the increase of availability of electronic gadgets there is increase in the usage among the children which is controlled by the age, parents or elders and socio- economic factors of the study area.

Keywords: Paradigm, Digitization, Gadgets, Socio-economic

I. INTRODUCTION

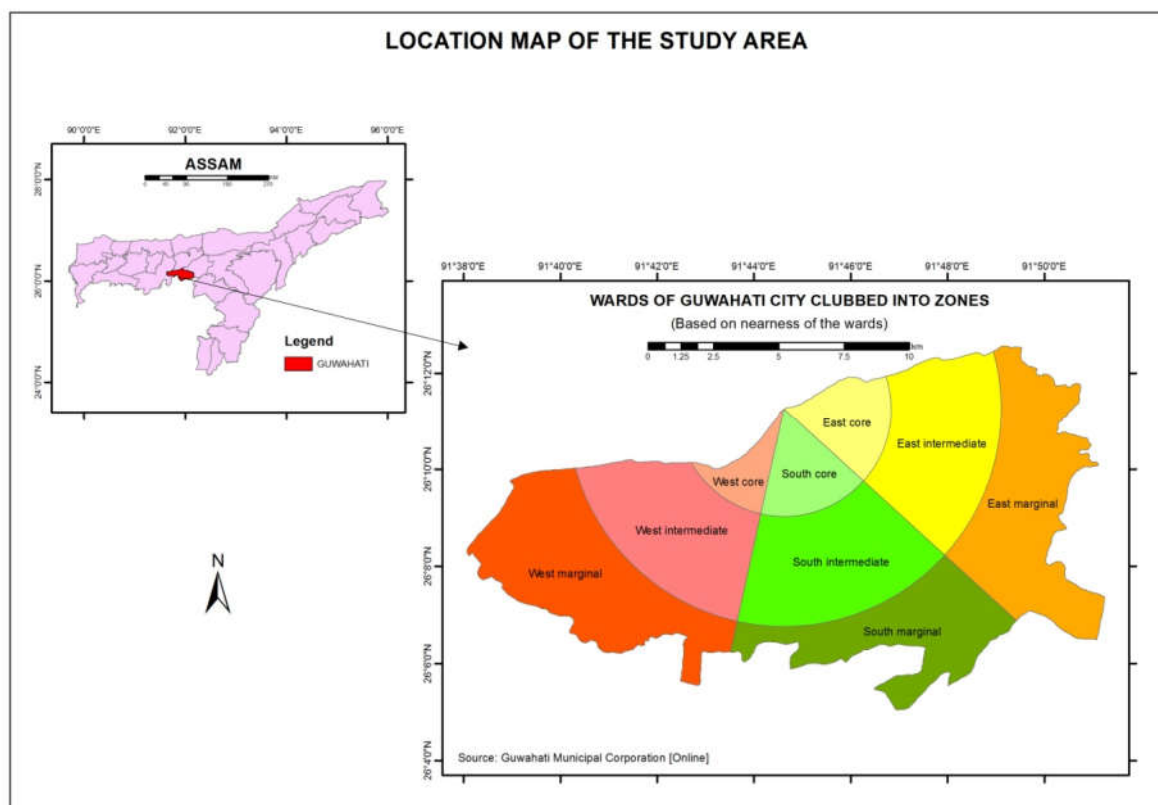
The electronic gadgets are the small, unique-use mechanical or electronic devices that have revolutionized the way of our life. It has experienced vast expansion in recent years, leading to its extensive use by each and every generation of people. The increasing use of this gadgets among children have led to public debates across the globe on the ways how childhood being transformed to digital childhood. We all observed children now a days, where they spend most of the day detached from other activities, hanging on the fringes, head down, watching or playing on their smart phones (Ives, 2013). Developmentally appropriate use of technology in early childhood education have focused largely on screen time which have failed to capture the important nuances, such as what type of media a child is accessing and whether technology use is taking place solo or with peers (Daugherty et. al., 2014). In this paper, patterns and usages of using electronic gadgets among children reflect the true picture of how gadgets are being used by the children in the study area. This is a purely field based chapter and refers to the children's answers of the questions what, when, why and how gadgets are used by them. Pattern in this chapter reflects the characteristics of surveyed children and households which include the number and sex, type of family, activities of children, available gadgets, personal gadgets of children etc.,. Whereas, usages emphasis on conditions, how and

why children are using electronic gadgets as well as the factors and cause related with the increasing usages of electronic gadgets among children.

II. STUDY AREA

The present study has been carried out in Guwahati, an urban hub which is growing fastly located in the district of Kamrup Metropolitan of state Assam. The extension of the area is 26° 5'N - 26°12'35"N latitude and 91°35'E - 91°52'E longitude (Fig.- 1). It is situated on the south bank of the Brahmaputra which is bordered by the foothills of the Shillong plateau in the south, Deepor beel, Rani Reserve Forest and LCB International Airport to the west and the town of Narengi to the east. It comprises an area of 264 sq km. The city is the most populous area in Northeast India comprising 957352 populations as per 2011 census with a density of 2900 person / sq km. Its urban form radiates from the central core with growth corridors radiating and extending towards the south, east and west. From the last few decades, southern Guwahati areas such as Ganeshguri, Beltola, Hatigaon, Sixmile and Panjabari as well as western areas of Maligaon, Jalukbari, Adabari and Chandmari, Silpukhuri in the east began forming a sub-centre surrounding the core areas of Pan Bazaar, Paltan Bazaar, Fancy Bazaar and Uzan Bazaar.

Figure 1: Location Map of the study area



III. OBJECTIVES

- a) To explore the socio-spatial variation in the use of electronic gadgets among the school children in Guwahati city.
- b) To find out the reasons behind the use of electronic gadgets by the school children of different age groups (up to 16 years) and the causes associated with prevailing variation in this respect in the city area.

IV. DATABASE AND METHODOLOGY

The present study is mainly based on mixed method approach for this study to better understand the subject in the project and their reported behaviors. The research applied both probability sampling and non-probability sampling method of survey. Convenience sampling method of non-probability technique and stratified sampling method of probability technique is employed in this study. The study is conducted in Guwahati city which have been divided into 9 sectors based on direction and equal distance from the city center covering all the wards taking data from 108 households, 18 schools, few doctors and a total of 158 children are taken into consideration for collecting data. Each sector is named according to the direction and distance from the centre, i.e., West Core, West Intermediate, West Marginal, South Core, South Intermediate, South Marginal, East Core, East Intermediate and East Marginal. From each sector two areas were selected for the sample survey. Tabulation and Statistical computation has been done in MS Excel and MS Word as well as ArcGIS software is used for mapping.

V. RESULTS AND DISCUSSION

A. Number and Sex of the children in the surveyed area

The number and sex of children will provide the base for further work on children of the area. It will provide answer to the question about the variation of using gadgets by the children like which age-group or which sex etc.

Number and Sex of children in the surveyed area								
S.No.	Sector	No. of Children	Age Group				Sex of children	
			0 - 4	4 to 8	8 to 12	12 to 16	Male	Female
1	East Core	19	3	8	5	3	10	9
2	South Core	19	3	4	8	4	10	9
3	West Core	18	4	6	4	4	8	10
4	East Intermediate	16	5	6	3	2	8	8
5	South Intermediate	17	5	4	5	3	10	7
6	West Intermediate	15	4	5	3	3	7	8
7	East Marginal	16	4	7	3	2	8	8
8	South Marginal	19	6	7	3	3	7	12

9	West Marginal	19	2	8	5	4	8	11
TOTAL		158	36	55	39	28	76	82

Table 1: Number and Sex of children in the surveyed area

Source: Field survey data through survey schedule method in the month of April, May and June (2018)

B. Types of family

Sharaievskia (U.S Census 2010)]defines family as “a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing. The survival, intimacy and love among family members cannot be build up without the institution of family. The family institution is responsible for the rearing and caring of its members and enculturation of cultural values and norms”. In modern society most people prefer nuclear family. In metro areas number of the same seems to be more as disclose by the field data itself.

Types of family				
S.No.	Sector	Type of family		
		Nuclear	Joint	Extended
1	East Core	7	3	2
2	South Core	8	3	1
3	West Core	9	2	1
4	East Intermediate	10	1	1
5	South Intermediate	7	4	1
6	West Intermediate	7	4	1
7	East Marginal	5	4	3
8	South Marginal	4	6	2
9	West Marginal	6	4	2
	TOTAL	63	31	14
	Percentage	58.34	28.7	12.96

Table 2: Types of family

Source: Field survey data through survey schedule method in the month of April, May and June (2018)

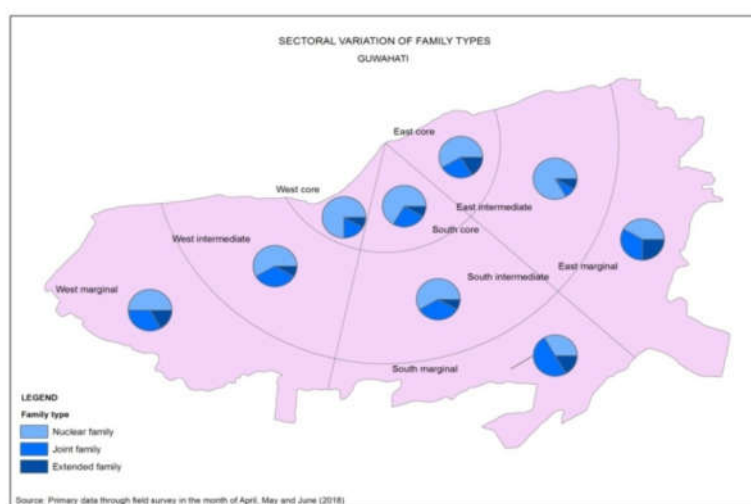


Figure.2: Types of family

Source: Field survey data through survey schedule method in the month of April, May and June (2018)

The study area is a growing urban city which have undergone through various changes in terms of geographical, societal, economical as well as political. This changes have influence the family types which increases to nuclear family from joint and extended type. Joint or extended family has more members other than parents and those members could give time, love and support to their little ones. They could also provide quality time to them which is very necessary for the upbringing of the children. The family also performs various social functions to maintain the ties among its members which increase family bonding. But, the new generations of parents are unaware of the norms of children's growth and development making it difficult for them towards their upbringing. This new generation parents are paying more attention towards their career compromising their family which effects their child growth and development. Childs upbringing is a new task for this new generation parents as they are influence by the waves of globalization and modernization which is a newly and rapidly growing phenomena. Therefore, family types play an important role in the upbringing of the future generation in this modernized world and for these reasons type of family is considered in the study.

C. Activities children are engaged in before and after school in regular basis

Activity is the state or quality of being active. It is the work, especially in elementary school, that involves direct experience by the student rather than textbook study. It determines the children temperaments at what they are interested in. Children activities determine their level or state of development. The report of "Zero to Eight" of Park (2014) also stated that "the concerns regarding young children's screen time focuses on the displacement of time spent on other activities such as play and social interaction both important to children's cognitive, social and physical development" (Linn, 2010). Among the surveyed household, using modern gadgets is one of the major activity children are mostly engaged in most of the time. As using gadgets by children now a days is one common activity that are seen among them which have reduces the time for other activities of them. Among the total of 158 surveyed children, 144 children get engaged with electronic gadgets for many different reasons for more than 3 hours per day. The majority of children of the area are involved in gadgets before and after school whether it is television viewing or using mobile, smartphone or other gadgets for various purposes such as entertainment, followed by studying because of their vast syllabus and homework's.

D. Availability of modern electronic gadgets at home and its quantity

Technology is increasing all over the world and will be increasing day by day. The varied economic condition and income level among the household, determine the number of available gadgets in each households mostly, though other factors have their influence too. An economically developed household is assumed to have more electronic gadgets than an economically backward household. The availability of modern gadgets in the households determines the impact of use among children to some extent. Although many families purchase computers with the goal of improving their child's academic knowledge, children avoided these kinds of engagement and used their home computer for anything else" (Giacquinta, Bauer and Levin, 1993). Today in this competitive modernized world people want to compete with his neighborhoods by showing the high number of gadgets and want to maintain high class so that he/she gets more importance among his friends though he/she is

economically not sound. In this study, these factors are taken into account and that is why every class of family is taken into consideration whether be it high or low class family. The tables below will shows the availability of modern electronic gadgets among surveyed 108 households of the study area and its quantity which are found through the field survey.

Availability of electronic gadgets in each sector										
Sector	Available Gadgets									Total Gadgets in sectors
	MOBILE	T.V	COMPUTER OR LAPTOP	SMARTPHONE	VIDEO GAMES	TABLET	DIGITAL CAMERA	DSLR/ SLR	OTHERS	
East Core	12	16	11	21	3	4	6	1	4	78
South Core	10	14	10	20	2	3	7	1	2	69
West Core	11	12	12	17	3	1	6	0	4	66
East Intermediate	11	15	12	23	1	3	5	1	2	73
South Intermediate	10	14	9	19	2	1	5	0	2	62
West Intermediate	15	12	11	17	3	2	4	1	1	66
East Marginal	17	11	11	23	3	1	5	0	0	71
South Marginal	16	11	8	20	2	1	3	1	1	63
West Marginal	13	11	5	20	1	1	3	0	0	54
TOTAL	115	116	89	180	20	17	44	5	16	602

Table 3: Availability of electronic gadgets in each sector

Source: Field survey data through survey schedule method in the month of April, May and June (2018)

The average availability of gadgets is more in the core sector which accounts for 71 gadgets, whereas intermediate sector and marginal sector comprises 67 and 62.67 gadgets respectively. The core sector of the study area includes the city centers which are more prone to all modern facilities such as shopping centers, play zones, internet connection, Wi-Fi connectivity, fancy items and availability of modern equipments, tools and gadgets. On the other hand, marginal area has less access to these facilities found in the core areas which influence the number of gadgets that seems decreasing outwards the core. This available modern facilities get diffuses towards the outer side of the

city center. Due to lack of open space children cannot play or go outside in leisure time which keeps them glued to electronic gadgets.

E. Variation in the use of electronic gadgets among children

Use of electronic gadgets by children is very common to see in today's era. Children can handle most of the gadgets by themselves. There are ranges of gadgets with varied functionality which are used by children. Variation of using electronic gadgets among children here studies about the types of electronic gadgets use by children, personal gadgets owned by children, the reason behind their gadgets use and the duration children employed using electronic gadgets.

1. Types of electronic gadgets commonly used by children

Children are familiar with all types of gadgets now days. Television is the most common and traditional electronic media or gadget which is watched by each and every child. From about two decades mobile, tablet and smart phone are commonly used modern gadgets among children. In fact, many parents can be seen giving their children their smart phones or tablets to amuse them as they wait in line or wait for a meal in a restaurant" (Cooper, 2005; Monroe & Fodeman, 2009; Priyanka, 2010). Smart phones spread rapidly among infants and toddlers, without particular restraints of parents. Video games, Computer or Laptop and other digital gadgets like digital watch, music player etc is also popular among kids and they use it too. The table 6 shows the types of electronic gadgets used by children among the total households:

Types of gadgets used by children among surveyed households			
S.No	Types	Number of Households	Percentage
1	Mobile/ Smartphone/ Tablet	3	2.78
2	Mobile and Television	4	3.70
3	Smartphone and Television	15	13.89
4	Mobile, Television, Smartphone/Tablet and Video games	5	4.63
5	Mobile, T.V and Smartphone/ Tablet	45	41.67
6	Smartphone/Tablet, T.V and Videogames	3	2.78
7	Mobile, T.V, Smartphone/Tablet, Video games, Computer/Laptop, Digital Camera/Others	33	30.55
	TOTAL	108	100

Table 4: Types of gadgets used by children in surveyed households
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

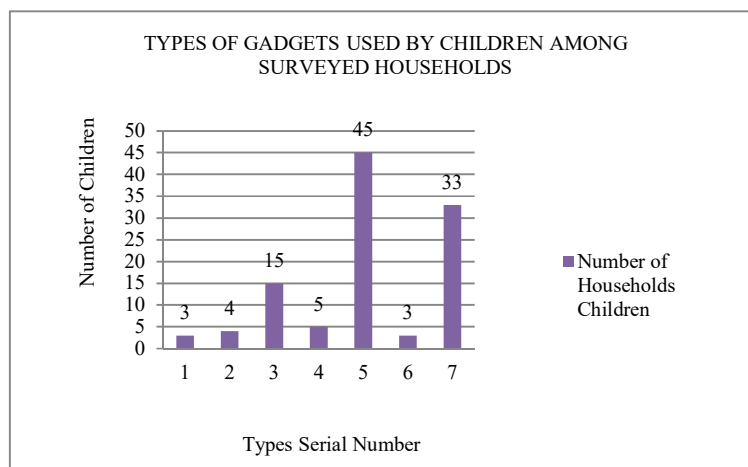


Figure 3: Types of gadgets used by children in surveyed households
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

Children not only use a single gadgets but different types of gadgets at different time for range of purposes. They use their household electronic gadgets owned by their parents and elders usually but today most of them have their own gadget. Below 8 years children can easily use smartphone. They can search for anything in internet easily because of the audio search function if they could not know the exact spelling of any word to be needed for searching. In the study area, the entire selected household children use electronic modern gadget of different types and their purpose of use differ accordingly.

2. Personal gadgets owned by the children

Children of today's era not only use gadgets owned by their parents or elders but they have their own electronic gadgets too that differ in types. The field data in the table 8 reveals the number of electronic gadgets owned by children themselves.

Personal gadgets owned by the children in surveyed households			
S.no.	Gadgets	No. of Children	Age group
1	Mobile	9	Above 8
2	Smartphone	6	12 - 16
3	Video games	3	0 –12
4	Others (digital watch, kindle, digital music player)	2	Above 4
5	Mobile and other like digital watch, kindle)	1	Above 4
6	Smartphone and Video games	2	12 – 16
7	Smartphone, Video games and Others	2	12 - 16

8	Mobile, Smartphone, Video games, Others	1	12 - 16
9	Digital Camera	2	12 - 16
10	Smartphone , Digital Camera and Others	1	12 - 16
11	Digital Camera and Others	1	Above 8
12	Video games and Others	1	All
13	Video games and Digital Camera	1	Above 4
14	Smartphone and Others	1	12 - 16
	Total Number of Children owing personal gadgets	33	

Table 5: Personal gadgets owned by the children in surveyed households
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

From the table we came to know that children of age-group 12 – 16 have highest proportion of personal gadgets of different types. Children owing single personal gadgets have a mobile phone or a smartphone or other type of gadget that is use for variety of purposes such as communication, studying, surfing internet and entertainment etc. Others owing 2 or more gadgets may have different type of gadgets with age group variation above 4. Mobile phone constitute the highest proportion among the gadgets owned by the children because parents provide it for keeping in touch with them during emergency or when needed which is followed by Smartphone because it is one of the essential tool for their upbringing as access to Smartphone with internet connection provides ample information to the children helping them in their studies. Parental attitude and other factors like, type of parents, family income, child upbringing, etc, determine the owing of electronic gadgets and its number among children.

3: Purpose of using electronic gadgets by children

People generally agrees that for children to participate socially, economically, and politically in this new and different world, they must acquire a certain level of comfort and competence in using computers (Papert, 2000). Education policies indicate widespread support for providing children with access to computers to enable them to learn adequate computer skills and improve their education. Children use modern electronic gadgets for the purposes of playing games, surfing the internet, use for doing homework and projects, communication via online or off mostly. There are many other purposes of using gadgets by children such as for banking, reading newspaper, calculating, GPS, weather forecast tracking, cooking and so on. The table 6 and figure 4 here shows the variation in purpose of using electronic gadgets among children.

Purpose of using electronic gadgets by children in surveyed households				
S.No	Purpose	Age- group	No. of children	Percentage
1	Studying, Internet and Communication	Above 8	38	24.05

2	Entertainment	0 - 4	41	25.95
3	Communication and Entertainment	All	12	7.59
4	All	Above 8	67	42.41
	TOTAL		158	100

Table 6: Purpose of using electronic gadgets by children in surveyed households
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

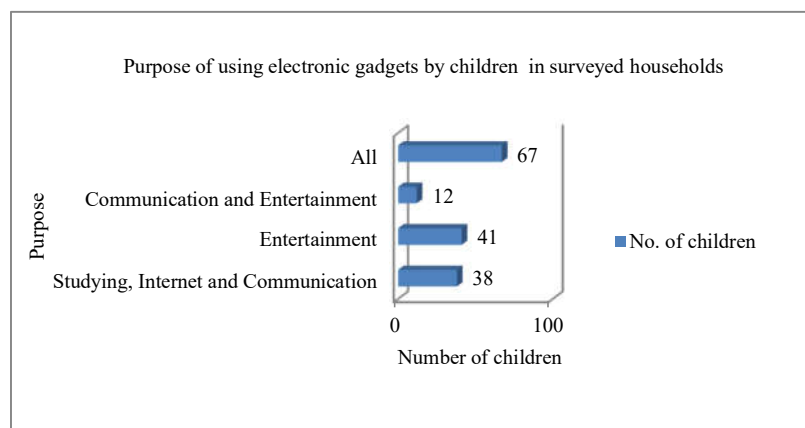


Figure 4: Purpose of using electronic gadgets by children in surveyed households
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

The survey data reveal that, most parents and children view computers and Internet considering it as a positive strength in their lives, despite concerns about exposure to inappropriate commercial, sexual, and violent content with increasing viewing duration. The field data reported that (majority) 42.41% children use gadget for many different purpose ranging from simple function of calculation to surfing internet and children age-group above 8 are included in this group, 25.95% children use it only for entertainment purpose which constitute age-group of 0 – 4, 24.05% of them use it for study, communication and for web surfing purposes having age above 8 and 7.59% of them use gadgets for communication and entertainment purpose with age groups between 0 and 16 years. Children love to play in gadgets as it is easy to handle and its function attract them. It was also found that parents provided mobile phones to children for using it in emergency and to stay in touch with them as well as with their friends in need. Children used gadgets for acquiring knowledge, such as they use app for gathering general knowledge and collecting information's. They also use it for learning different things like pronunciation, rhymes etc.

4: Duration of using electronic gadgets among children

Much of the concern regarding electronic gadgets is based on the average number of hours a day children spend watching electronic media, this is now often referred to as the 'dose' of screen media 'consumed' (Sigman, 2010). Variation in the duration of using gadgets among children is disclosed through the field data in the table 7 and figure 5 below.

Duration of use of electronic gadgets by children			
Duration	No. of children	Age-group	Percentage
Less than 1 hour/day	5	0 - 4	3
1 – 2 hour/day	13	0 - 4, 12-16	8
2 – 3 hour/ day	25	4 - 16	16
More than 3 hour / day	115	4 - 16	73
Total	158		100

Table 7: Duration of use of electronic gadgets by children
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

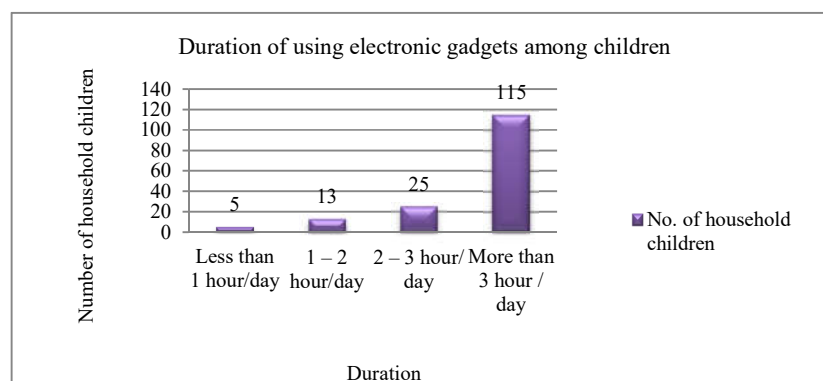


Figure 5: Duration of use of electronic gadgets by children
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

According to the field survey, highest proportion of children use gadgets for more than 3 hours per day accounting for 73 per cent, some among them even engaged with it for more than 5 hours a day. Another 16 per cent and 8 per cent of children use gadgets for 2 – 3 hours and 1-2 hours per day respectively. And a minimum portion of children use the same for less than an hour comprising an amount of 3 per cent only. Now days, people make videos or capture photos of infant instantly after being born. From the birth itself infants and toddlers get used to Smartphone or other hand-held devices, where their activities are being captured by hand-held electronic gadgets. By seeing their elders and parents, children too adopt those behaviors and attitudes of using electronic gadgets for hours. And when they get to use those gadgets they get fascinated and more curious about it and become more desirous which ultimately increases the duration of using gadgets by them.

F. Quality time given to the children by their parents, grandparents and elders

In a paper, Saleem et al notes that “mobile phone is another gadget due to which distance between parents and children relationship has been widened. Mostly parents remain busy on their mobile phones and never give time to their children” (Olson 2000). Olson also notes that “due to increased use of ICT gadgets the parents-children

relationship has been affected in a way that they rarely interact with each other even when they are living under the same roof.

According to the survey data, the majority (41 %) of household's parents could not give time to their children and a portion (32 %) of parents respond of giving time to their children for sometimes only and only a proportion of 27 per cent respondent (includes parents or family members) provide quality time to their children. Most parents have to leave their children with their maids or neighbors house or in other organizations where their children are being babysitter by the matron or other people in charge. Parents also left their children at home for the entire day. They are running towards developing their own careers and earnings. After work, when they get home, they again get involved with their works in laptops or in their Smartphone. And for these reasons, most of the parents could not give quality time to their children. Parents get tired of whole day workload, get tensed and also have to do the household chores so they can't give quality time to their children. Nuclear family with dual earner parents can't even give half an hour time to their children a day.

G: Parents perception towards electronic gadgets

In a paper named "a study on smartphone use condition of infants and toddlers" Baek et al refers that mother being the influential factor on young children in infancy and early childhood when young children are exposed to smart phones in a number of ways. Parent's perception is very important factor in the use of gadgets among children because it determines the usable conditions of using gadgets by their children's. One can't deny the fact that gadgets provides new and easy access to information to them but at the same time it makes adverse impact on the education as well as health of the children. The positive views about using gadgets by children are given by about 21.3 % household parents. According to them, gadgets can make their child smart as well as fluent in speaking. Through gadgets children can easily communicate with their friends, teachers and parents and have many more facilities. Another sum of people responds negatively about the use of gadgets by their children which include for 29.63%. They responded that children may suffer from health diseases like eye problem, headache, body pain etc by excessive use of gadgets. Majority (45.37%) of parents view gadgets as having both positive and negative effect. Though gadgets help children in many ways they can also learn and collect bad information from internet and some may even isolate themselves from friends, guest or neighbors. Despite of being literate, parents could not minimize the excessive use of electronic gadgets by their children as these new generations of parents are unaware of the norms of children's growth and development making it difficult for them towards their upbringing.

H. Rules and regulations on using electronic gadgets by children

A report by Park, 2014, avowed that parenting can be divided into three types, those are authoritarian, permissive, and responsive. Authoritarian is one-way and rigorous way of raising children, strictly controlling their children. Permissive is full of affection, inconsistent, and laissez faire. On the other hand, responsive is respecting children's autonomy, being consistent. Children from authoritarian parents lack their own goals or judgments, exclusive and aggressive. Children from permissive parents are impulsive, selfish, stubborn, and hysteric. Children from responsive parents have clear goals and decision of their own, self-regulated and having high self-trust, they

are likely to have positive and harmonious interpersonal relationships. Therefore, permissive parents are most likely to have children with higher smart phone addiction rate than the children of responsive parent. (Kerig and Wenar, 2006).

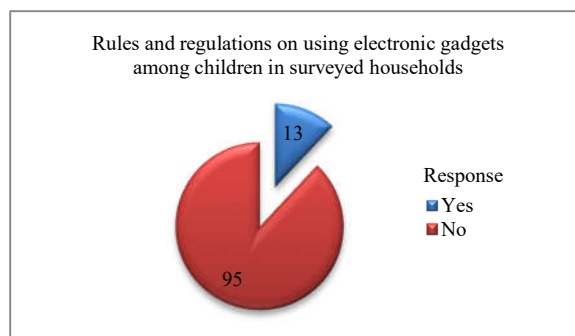


Figure 6: Rules and regulations on using electronic gadgets among children in surveyed households
Source: Field survey data through survey schedule method in the month of April, May and June (2018)

From the field data in the figure 6, we can notice that majority of households don't have any rules and regulation for their children of using gadgets which constitute a proportion of 88 per cent which is very high and a minimal per cent of 12, holds rules and regulation of using gadgets by their children. Children among these surveyed household having rules and regulations have to use gadgets for a certain time period per day as well as they have to ask for permission for using gadgets (except viewing T.V). But other group of parents who does not impose rules and regulation of using gadgets on children are lenient in nature allowing them more screening duration. They even allow them to use all types of electronic gadgets available at their home, for whatever purpose they want. The usages of electronic gadgets among these children are very high in terms of duration. Parent's attitude towards electronic gadgets is another factor for imposing rules and regulation on children of using it. Parents with positive attitude does not impose rules to their children for using gadgets whereas parents with negative attitude impose rules of using gadgets on children in terms of duration and purpose of using as well as types of gadgets children use.

VI. CONCLUSION

The study analyze the patterns of using electronic gadgets by children, which want to reveal the know-how about the children who use gadgets, how much in total, what are their age-group and sex, what type of family they belong to, which children use more gadgets among them, what type of activities they engaged in, types of gadgets use by them, duration of using gadgets and the causes and factors associated with the increasing use of electronic gadgets among children. The cause and factors of using electronic gadgets among children are disclose by the availability of gadgets in their household, gadgets use by the children, gadgets owned by children, parents perception etc which are stated and reported with the field data. Usages of electronic gadgets among children are significantly higher in the core sectors than the other two sectors of the study area. Various factors enhance the use of electronic gadgets among children. However, among these factors, socio-economic conditions and nearness to the city centers plays vital role. Household with high socio-economic condition add to more availability of electronic gadgets. Availability of

electronic gadgets is highest in the core region with an amount for 35.38 percent followed by intermediate (33.39 percent) and marginal sector (31.23 percent). Similarly, nearness to the city centers increases the availability of electronic gadgets among children in the core region. Family pattern is also a major factor causing sectoral variation in the use of electronic gadgets among children. Core and Intermediate region constitute more percentage of nuclear family which boosted the use of gadgets. It can be said that more the number of nuclear family type than more will be the use of electronic gadgets among children. Parent's perception also contributes in the practice of using electronic gadgets among children as well as nature of parent matters too. Among the total of 108 surveyed household, a large proportion (45 per cent) of parent have viewed electronic gadgets as a useful tools when it is used appropriately and a major population (21 per cent) of parent have positive attitude towards it. And because of this sum of parents, the screening hour of electronic gadgets among children is more. The screening hour is found to be less among children with strict and responsive parents who impose rules and regulation in using electronic gadgets accounting for only a small proportion of 12 per cent than those parents who are lenient towards their children including a major proportion of 88 per cent. Maximum percentage of children is found to be spending more time with electronic gadgets than in any other activities except for sleeping in case of infants and toddlers. Among all electronic gadgets used by children, Smartphone and Television are found to be highest in the study area. Smart phone have replace other forms of hand-held gadgets such as Mobile, Tablet, Video games, Radio etc. Majority (42 percent) of children of the study area use electronic gadgets for the purpose ranging from a simple text message to online gaming. Entertainment and Communication is the common purpose of using electronic gadgets among the children responded by more than 80 percent of the children. The duration of using electronic gadgets among children is considerably high among the children above 4 years as compared to infants and toddlers. Among the total children (158), almost 75 percent (n = 115) children with age above 4 years, use electronic gadgets for more than 3 hours per day (i.e. above the limit given by American Academy of Pediatrics) except for children under 4 years spend less than an hour per day. The study therefore tries to reveal that the usage of electronic gadgets among children is influenced by various socio- economic and cultural conditions for which there is increase of usage among them and it needs to be given much emphasis for the better growth and development of them.

VI. REFERENCES

- 1) Alghamdi, Y. (2016). Negative Effects of Technology on Children of Today.
- 2) American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub..
- 3) Barone, D. (2012). Exploring home and school involvement of young children with Web 2.0 and social media. *Research in the Schools*, 19(1), 1.
- 4) Bhadoria, A. S., & Kapil, U. (2015). Author's Reply: Television Viewing and Overweight and Obesity amongst Children. *Biomedical journal*, 38(1), 96.

- 5) Borgohain, K.M., Bhattarai, S., Boruah, D. (2019). Impact of using electronic gadgets among children in Guwahati city, Assam. *Thematic Journal of Geography*, 8(4), 790-799.
- 6) Daugherty, L., Dossani, R., Johnson, E. E., & Wright, C. (2014). Moving beyond Screen Time: Redefining Developmentally Appropriate Technology Use in Early Childhood Education. Policy Brief. *RAND Corporation*.
- 7) Grant, J. P., & Unicef. (1990). *The state of the world's children 1991*. Oxford University Press for UNICEF.
- 8) Holloway, D., Green, L., & Livingstone, S. (2013). Zero to eight. *Young children and their internet use*.
- 9) Lee, J. M., & Education, E. C. (2013). A study on smart phone use condition of infants and toddlers. *International Journal of Smart Home*, 7(6), 123-132.
- 10) Nair, A. (2006). Mobile phones and the internet: Legal issues in the protection of children. *International Review of Law Computers & Technology*, 20(1-2), 177-185.
- 11) Nair, P. (2016). The Indian Child: Growing Young, Urbane and Liberal with Digital Games. *Indian Anthropologist*, 79-92.
- 12) Park, C., & Park, Y. R. (2014). The conceptual model on smart phone addiction among early childhood. *International Journal of Social Science and Humanity*, 4(2), 147.
- 13) Plowman, L., McPake, J., & Stephen, C. (2010). The technologisation of childhood? Young children and technology in the home. *Children & Society*, 24(1), 63-74.
- 14) Saleem, H., Fatima, Z., Hadi, S. A., Nasir, A., & Riaz, M. (2015). Family in globalization era: A study on ICT. *Explorer*, 1(2), 29-33.
- 15) Shields, M. K., & Behrman, R. E. (2000). Children and computer technology: Analysis and recommendations. *The future of children*, 4-30.
- 16) Sigman, A. (2012). The impact of screen media on children: a Eurovision for parliament. *Improving the quality of childhood in Europe*, 3, 88-121.