



RESEARCH PAPER

The Impact of Technological Gadgets on the Socialization of Children at Early Childhood Developmental Stage

¹Sadrudin Bahadur Qutoshi ²Farah Deeba ³Sarfraz Khan *

1. Assistant Professor, Department of Educational Development, Karakorum International University, Gilgit-Baltistan, Pakistan
2. BS Student, Department of Educational Development, Karakorum International University, Gilgit-Baltistan, Pakistan
3. Assistant Professor, Department of Sociology, Quaid-e-Azam University, Islamabad Pakistan

PAPER INFO

Received:

July 17, 2020

Accepted:

August 25, 2020

Online:

September 30, 2020

Keywords:

Advantages,
Children at Early
Ages,
Disadvantages,
Socialization,
Technological
Gadgets

*Corresponding Author:

sarfraz@qau.edu.pk

ABSTRACT

The current study examines the impact of technological gadgets on the children's socialization in the context of Gilgit-Baltistan, Pakistan. A closed-ended self-structured questionnaire for data collection was designed and applied in the field. The data were analyzed by using Statistical Package for Social Sciences (SPSS). Both Descriptive (percentages and frequencies) and Inferential (Correlation) statistics were applied. The finding of the study showed that children were more engaged with the usage of technological gadgets. A majority of the children has knowledge regarding technological gadgets and use for more than four hours on daily basis. On the other hand, parents were aware of both the positive and negative impacts of technological gadgets on their children's socialization. Interestingly, parents found a positive relationship between excessive use of technological gadgets and virtual socialization of children. Furthermore, usage of technology has limited children's activities inside the house, less active in community engagements and sometimes showing aggressive behavior on keeping them away from the technological gadgets. The study recommends that parents need to educate and supervise their children's activities and limit their access to technological gadgets in order to focus on physical socialization of their children so as to reduce negative effects of technological gadgets.

Introduction

The 21st century is the world of technology and scientific innovation, where the technology is profoundly involved and highly influenced the children at Early Childhood Development (ECD) level even before they entered in the school. Here, in this research, children at ECD means children at Play Group, Nursery, Grade-I and Grade-II studying at one of the famous private school systems in the context of Gilgit-Baltistan, Pakistan. In the context, these children extensively use technological gadgets in their everyday life at home,

in school, and beyond. Thus, the usage of technological gadgets is now becoming a trend and a common practice both at home and at school among children at ECD level (Bhattacharyya, 2015). Similar studies such as Suler (2004), Young (2009), and Bell (2014) have identified that children at early ages tend to use technological gadgets even before they are presented to books or notebooks.

On one hand, children are growing up with technological skills and knowledge through various technological sources where their studies and academic activities transformed into the technological ways of learning (Brody, 2015). On the other hand, these children become addicted to these technological tools and face many side effects of excessive use of technology in their lives (Sigdel, 2017). Likewise, a study conducted by House (2012) found that the usage of technological gadgets affects the social skills and socialization of children at ECD level by compromising the problem-solving skills as these tools limit children's exposure and dissociates them from their natural environment.

However, the impact in terms of socialization, merits and demerits depends on the time spent on technological tools, the purpose of usage, and nature of the usage in their lives. In the context there is dearth of literature on this particular topic with reference to children at ECD level. Therefore, the objective of this research is to explain the impact of these technological devices on the socialization of children at early ages.

Hypothesis

H₀: There is no relationship between the usage of technological gadgets and its impacts on the socialization among children in their early ages.

H₁: There is a significant relationship between the usage of technological gadgets and its impacts on the socialization of children in their early ages.

Review of Literature

Impact of Technological Gadgets on Socialization

Brown and Broody (2015) found that children at ECD level in 21st century are attentive users or clients of different technological gadgets. This new trend has directly influenced the child's socialization, their intellectual and physical development. According to Moschis and Moore (1979) socialization is a process of learning different social standards, qualities, conduct, norms, values, beliefs and social aptitude according to one's social position through interaction with other people in the society. Similarly, Grusec and Hasting (2007) acknowledged that the procedure of socialization is a perceptual which started at birth and proceeds till death. However, the most influential period is the early years in which a child is generally more responsive and at a fast stage of development and growth.

Many Psychologist, sociologist and anthropologist believe and recognize that the role of family, culture, school, peer groups as the essential agents can effect on the pattern of socialization process of children at the early stages (Wang *et al.*, 2020). Children develop socialization skills from their mother's womb through her engagement with various activities. There are numerous socialization institutions existed in the society such as the

family, school, peer groups and media etc. which influence children at every stage of life (Ergun, 2010). Thus, the influence of technological gadgets is huge on socialization of children at ECD level (Gottschalk, 2019).

Many studies, such as Schepper (2011), Rogow (2007) and Rideout (2007), have been conducted to identify the impacts of technological gadgets and their relationship with the level of children's socialization. The key findings revealed some positive impact of technological gadgets on children's socialization, such as improving their social connection like participating in academic debates, sharing of information and teaming up of knowledge. As technological gadgets offer new progressive and moderate ways of learning and to connect children with their relatives and families who are away from home and this enhances the ability of the child to interact and socialize with the people. In the same way, Jackson (2011) identified that the technological gadgets improve the imagination skills and help the child to learn information and thus enhance their learning ability and improve communication skills.

Likewise, Meyer (2015) founded that, children who are more engaged with technological gadgets isolate from society and parents. Children, who are watching movies, crime scenes, romantic and lovestories etc., are more likely to be criminal in their attitude (Mesch, 2006). Further, Gani (2016), Kuss and Lopez (2016) recognized that children who often use technological gadgets regularly disregard their encircling condition and extremely raise relational and communication issue and disconnects themselves from nature and from their environment.

A study conducted by Bhattacharyya (2017) showed that children at ECD level who are using technological gadgets more than 4-5 times a day are addicted to these gadgets. Suler (2004) and Suhana (2017) also argued that excessive usage of cell phone and high dependency on technological gadgets lead children to be more violent and are unable to control their emotions and feeling when they are upset. Moreover, children at ECD level's dependency on different gadgets in the absence of guardian's supervision results in psychosocial issues such as violence and depression. Some of the other consequences of high dependency and continuous engagement with these devices include less attentiveness, superfluous action, becoming shy, forlornness/dissuasion, absence of motor control, social comfort, eye sight issues/disturbance, social and emotional problems and long-lasting impacts on the child development (Mehra, 2019). Whereas studies conducted by Brody (2015) and Jackson (2011) have shown that the technological gadgets have positive impacts such as enhance learning process and foster learning abilities through animations and videos and audios (Chen, Teo & Nguyen, 2019). In addition, the usage of technological gadgets enhances the children's ability to learn, improve communication skills, language ability, analytical capacity, creative thinking, and extraction of both academic and non-academic activities (Kardefelt-Winther, 2017).

Similarly, Nikolopoulou, (2018) identified that technological gadgets also improve the thematic abilities, like numeracy, aptitudes, tallying and distinguishing shapes among primary school children. Technology has opened new opportunities of learning for children to be creative and now they can share content through online journals, animations, videos and photos all of which help engage children to build up their own skills of innovativeness and uniqueness in schools. Furthermore, children are making new

substances, modifying old substances and connecting new progressive inventive plans to get a message and share with others (Setiawati, Solihatulmillah, Cahyono, & Dewi, 2019).

Material and Methods

The study applied self-designed structured questionnaires within a quantitative approach to conduct research and gather data from parents about the impact of technological gadgets on child socialization at their early ages. By applying the SPSS, the researchers analyzed the data and presented in the form of both descriptive and inferential statistics in order to share key findings of the study. The researchers selected those parents (mother or father) who have at least two children less than 10 years and have some familiarity with using technological gadgets in their lives.

A “sample is a subgroup of the target population ... to study for generalizing about the target population” (Creswell. 2012, p.381). So, using a cluster sampling technique the researchers collected data from one hundred and five (105) respondents in the target population of Gilgit region. The target population was divided into three clusters having 35 samples each.

Table 1
Sample and Sampling Techniques

Target Population	Sample size	Sampling techniques
Parents	105 respondents	The cluster sampling technique was chosen to reach to the respondents in the selective region. The face-to-face interviews were conducted with respondents to record their responses on a well-structured questionnaire.

In the present research the closed-ended well-structured questionnaire was used as a data collection tool. The tool was divided into different sections, like socio-demographic information, psychological impacts, and socialization etc. The reliability of the tool was found to be significant at a value of 0.9. For data analysis, the Statistical Package for Social Sciences (SPSS) was used as a data analysis tool. Both Descriptive (percentages and frequencies) and Inferential (correlations) statistics were applied as the data analysis techniques.

Keeping ethical consideration in mind, an informed consent was obtained from all respondents before starting the data collection. Respondents were briefed about the purpose of research and clearly informed them regarding privacy and confidentiality. Measures were taken to maintain the privacy and confidentiality of the respondent’s data and personal information and all the data was kept under lock and key.

Results and Discussions

The findings of the current research study show that most of the children in sampled households were female (57%) while male were 43%. Majority of these children were belonging to a joint family structure (49%) while 31% of them were inhabiting in a nuclear family setup. In addition to that a reasonable number of children (20%) were

living in an extended family setup. Majority (60%) of the children were spending 1-2 hours with gadgets while 22% and 18% were spending 3-4 hours and 4 hours and above respectively. Similarly, a study by Ergun (2010) found that more than four hours using technological gadgets under ten-year children is harm for their health and physical development, which lead children to isolate them from others.

Majority (45%) of the children were having access to the television while 35% had computer or laptop. Rest of the children (20%) were using mobile phones or tablets. Majority (65%) of these children were using gadgets to watch cartoons while there were about 15% children who were playing games on such gadgets. The rest of the children were using their gadgets for multiple purposes. When it was asked that at what age did your child become familiar with any technological gadget? We came to know that about 42% children get familiarity with gadgets at very early age (under 2 years of age). 54% children get familiarity with gadgets when they were 3-5 years old while only 4% children gained familiarity to the gadgets when they were 6-8 years old.

Table 2
Demographic Profile

<i>Child Gender</i>	%
Male	43%
Female	57%
<i>Family Structure</i>	
Nuclear	31%
Joint	49%
Extended	20%
<i>Child time spend with technological gadgets on daily basis?</i>	
01 to 02 Hours	60%
03 to 04 Hours	22%
Above 4 Hours	18%
<i>Which gadget mostly does he/she use?</i>	
Television	45%
Computer or laptop	35%
Mobile/tablet	20%
<i>Purpose of using technological gadgets</i>	
Watching cartoons	65%
playing games	15%
Other	20%
<i>At what age did your child become familiar with any technological gadget?</i>	
Zero to 02 years	42%
03 to 05 years	54%
06 to 08 years	4%

Findings of the study revealed that 75.2% respondents responded in an agreement with the statement (i.e., Technological gadgets are source of socialization for children), 14.3% respondents disagree with the statement, and 10.5% responded 'don't know' about the statement. Looking at the existing literature, some similarly studies such as Young (2005), Bell (2015), Brody (2015) and Genner (2017) have shown that technological gadgets are considered a powerful agent of socialization, responsible for shaping an individual's socialization process.

Table 3
The Use of Gadgets

Statements	N	%
Use of technological gadgets are beneficial for children	Yes	65 61.9%
	No	25 23.8%
	Don't Know	15 14.3%
Technological gadgets improve your child learning	Yes	67 63.8%
	No	34 32.4%
	Don't Know	4 3.8%
Technological gadgets leads to negative impact on children	Yes	45 42.9%
	No	36 34.3%
	Don't Know	24 22.9%
Children have an eyesight problem.	Yes	55 52.4%
	No	41 39.0%
	Don't Know	9 8.6%
Child is aggressive	Yes	49 46.7%
	No	46 43.8%
	Don't Know	10 9.5%
Children have experience of bones pains	Yes	10 9.5%
	No	82 78.1%
	Don't Know	13 12.4%
Technological gadgets are source of socialization for children	Yes	79 75.2%
	No	15 14.3%
	Don't Know	11 10.5%
Children connects with friends and colleagues through any technological gadget	Yes	65 61.9%
	No	16 15.2%
	Don't Know	24 22.9%
Children active in social work in community	Yes	48 45.7%
	No	35 33.3%
	Don't Know	22 21.0%
Technological gadgets limited children within the room	Yes	58 55.2%
	No	30 28.6%
	Don't Know	17 16.2%
Technological gadgets	Yes	79 75.2%

limited child's social activities	No	14	13.3%
	Don't Know	12	11.4%
Children give more prefer for online games as compare to outdoor games	Yes	82	78.1%
	No	11	10.5%
	Don't Know	12	11.4%

This shows that technology is an influential factor in the life of children at early childhood developmental stage. It is the technology that is affecting the ability of a child to socialize within a particular socio-cultural setting. In so doing, the child seeks support through multiple tools of technological gadgets. So, technological gadgets like the internet, computers, TV, and smart phones are considered as sources of socialization which play a significant role in shaping the life of a child in the domain of socialization.

Answering to a statement "children connect with friends and colleagues through any technological gadget" 61.9% respondents in an agreement, 15.2% disagreed and 22.9% responded 'don't know'. Searching in the literature it was noted that Genner (2017), Schepper (2011), Rogow (2007) and Rideout (2007) have also came up with similar views that children mostly use technological tools to communicate with their friends, family members and classmates. These studies have uncovered that technology such as mobile phone, tablet, laptops and other apps e.g. skype, WhatsApp, Facebook, Instagram seems to be powerful tools to develop connection with others such as families and friends (Muzaffar, et. al, 2019)

This means that children mostly use technological gadgets for communication purposes. In so doing, they search for available tools and applications of technology which help them to connect with others. The children also found using these technological gadgets and social media applications for participating in academic debates, sharing of information and building teams to generate new knowledge. As technological gadgets offer new ways of communication using variety of tools they engage children in learning opportunities.

Further, the present research study identified that majority of respondents 46.7% responded 'Yes', 43.8% responded 'No' and remaining 9.5% responded 'don't know' options about the statements that children become violent and aggressive in their behaviour. Some similar views were discussed by Suler (2004) and Suhana (2017) that excessive usage of cell phone and high dependency on technological gadgets can lead children to be more violent and aggressive. They claimed that children using technology excessively for a longer period of time they become addicted and cannot control their emotions and feelings. So, it is concluded that the more children become dependent on technological devices the more they become vulnerable to negative impacts of technology such as sluggish, dormant, obsessed, destructive, aggressive and violent nature in their behavior.

55.2% respondent agree with a statement that 'technological gadgets limited children within the room' and 28.6% respondents responded 'No' and 16.2% respondents responded 'don't know'. Studies like Gani (2016), Kuss and Lopez (2016) strengthen these ideas that children who often use technological gadgets are confined within a room with no

interaction with friends and relatives. This shows that children who remain connected with gadgets most of the time in their life that lead them to isolation from friends, relatives and even from family members in a physical setting. They remain away from nature and surrounding environment and lose the opportunities to learn from nature and people around them. However, they may connect virtually with others and seek connection with those people who are away from them physically.

75.2% responded in an agreement with a statement (limited child's social activities) and 13.2% responded in disagreement whereas 11.4% responded 'don't know'. Likewise, Gani (2016) revealed that use of technological gadgets disconnects children from social activities and do not help them to participate in social and community work. This means that children who spend more time in front of screen they tend to avoid engaging with social work, community engagement and other physical activities like playing outdoor games etc.

The findings of the study and literature view show that children in the context tend to spend more time on technological gadgets that appears to restrict them towards socialization in a physical setting however, such engagement with technological gadgets help them to connect with others virtually. Thus, the excessive use of technological gadgets appears to be a critical element in deteriorating the physical and health related development of children at early childhood developmental level. Last but not least, usage of technology has both positive and negative impacts on child socialization however, it depends on the nature and intensity and the purpose of its usage.

Table4
Correlation between the Use of Gadgets and Socialization

	Categories	U_T_G	C_S_P
U_T_G	Pearson Correlation	1	.941**
	Sig. (2-tailed)		.000
	N	105	105
C_S_P	Pearson Correlation	.941**	1
	Sig. (2-tailed)	.000	
	N	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

The table 4 shows the correlation between Usage of Technological Gadgets (U_T_G) and Source of Children Socialization (C_S_P). It highlights the Confidence Interval (C.I. 95) and Margin of Error (MoE. 5% which means 0.05). The total number of respondents were N = 105. The sig. value which lays below 0.05 is statistically significance. The results showed that for both U_T_G and C_S_P have the sig value is 0.00 which is less than the alpha value 0.05. In conclusion the table stated that there is strong positive correlation between usage of technological gadgets, and it is an important source of socialization among children in Danyore Gilgit.

Conclusion

It is concluded from the study that usage of technological gadgets has both positive and negative impacts on children's socialization at their early ages. However, the

impact, to a great extent, depends on the nature and purpose of using the technological gadgets. It also depends upon how aware parents are and what is the amount of time parents spend with their children while they use tools of technology and social media applications. For example, the engagement of children with gadgets for educational purposes is a positive sign and it leads children towards improving their knowledge and skills. On the other hand, if children engage most of the time in watching cartoons and games etc. the impact of using technology for such purposes remains negative in many ways such as physically inactive (i.e., remain virtually connected while sitting in a corner of their home) and socially isolated (e.g., limited within a room at home etc.). The study found that parents need to supervise their children and provide these technological tools to their children for a limited period of time. Children who are engaged with excessive usage of technological gadgets limit them to engage with outdoor activities. This unlimited use of technology also hinders on way to develop creative skills, thinking to discover nature, and limit their interaction with friends, family members and relatives. Moreover, excessive usage of technological gadgets has negative effects on physical, mental and emotional health of children at their early ages, which can effect on the later ages.

Recommendations

Based on the findings of the study the research presents following recommendations for parents and teachers:

1. Parents should provide limited time for their children to use technological gadgets.
2. Parents should encourage children to play outside with their friends and relatives and explore the nature environment.
3. Parents should give responsive caregiving and spend enough time with their children while they are engaged with technological gadgets.
4. Parents and teachers should educate children regarding the negative and positive impacts of excessive use of technological gadgets.

References

- Änggård, E. (2015). Digital cameras: Agents in research with children. *Children's Geographies, 13*(1), 1-13.
- Bell, J. S. (2014). A qualitative look at middle SES preschooler: media consumption and Social behaviors. *Lowa state university digital reporting graduate theses and dissertation, 2014*.
- Bhattacharyya, R. (2017). Addiction to modern gadgets and technologies across generations. *Eastern Journal of Psychiatry, 18*(2), 27-37.
- Brody, J. (2015, July 6). Screen Addiction Is Taking a Toll on Children. *The New York Time*. Retrieved from <https://well.blogs.nytimes.com/2015/07/06/screen-addiction-is-taking-a-toll-on-children/>.
- Chen, W., Teo, M. H., & Nguyen, D. (2019). Singapore parents' use of digital devices with young children: Motivations and uses. *The Asia-Pacific Education Researcher, 28*(3), 239-50.
- Ergun, S. (2010). The influence of violence TV cartoons by school in Turkey. *Acta Paulista de Enfermagem, 25*(Special Issue 2), 134-9.
- Gani, S. A. (2016). Parenting digital natives: Cognitive, emotional, and social developmental challenges. Presented at International Conference on Education (pp. 870-80). Retrieved from <https://core.ac.uk/download/pdf/267023557.pdf>.
- Genner, S., & Süß, D. (2017). Socialization as media effect. *The international encyclopedia of media effects*, 1-15.
- Gottschalk, F. (2019). Impacts of technology use on children: Exploring literature on the brain, cognition and well-being. OECD Working Paper No. 195. <https://doi.org/10.1787/8296464e-en>
- Grusec, J. E. & Hastings, P. D. (2007). *Handbook of socialization: Theory and research*. The Guilford press: New York/ London.
- House, R. (2012). The inappropriateness of ICT in early childhood education: Arguments from philosophy, pedagogy, and developmental psychology. In S. Suggate & E. Reese (Eds.), *Contemporary debates in childhood education and development* (pp. 105-121). New York: Routledge.
- Jackson, S. (2011). Quality matters: Defining developmentally appropriate media use for young children. Spotlight on Digital Media and Learning (blog), March 16. Chicago, IL: MacArthur Foundation. <http://spotlight.macfound.org/blog/entry/quality-matters-defining-developmentally-appropriate-media-use-for-young-ch>.

- Kardefelt-Winther, D. (2017). *How does the time children spend using digital technology impact their mental well-being, social relationships and physical activity?: An evidence-focused literature review*. Florence, Italy: UNICEF Office of Research-Innocenti.
- Kuss, D. J., & Lopez-Fernandez, O. (2016). Internet addiction and problematic Internet use: A systematic review of clinical research. *World Journal of Psychiatry*, 6(1), 143–76.
- Mehra, P. S. (2019). *Use of technological gadgets and their effect on health of adolescents: A study on school children* (Doctoral dissertation).
- Mesch, G. S. (2006). Family relations and the internet: Exploring a family boundaries approach. *The Journal of Family Location*, 6(2), 119-38.
- Meyer, B. (Ed.). (2010, December). *ECGBL2009-4th European Conference on Games-Based Learning: ECGBL 2009*. Academic Conferences Limited.
- Moschis, G. P. & Moore, R. L. (1979). Decision making among the young: A socialization perspective. *Journal of Consumer Research*, 6(2), 101-112.
- Muzaffar, M. Chodhry, S. & Afzal, N. (2019). Social Media and Political Awareness in Pakistan: A Case Study of Youth. *Pakistan Social Sciences Review*, 3(2), 1-13, doi:10.35484/psr.2019(3-II)01
- Nikolopoulou, K. (2018). Mobile technologies and early childhood education. In *International Conference on Technology and Innovation in Learning, Teaching and Education* (pp. 444-457). Springer, Cham.
- Rideout, V.J. (2007). *Parents, children, and media: A Kaiser Family Foundation survey*. Menlo Park, CA: The Henry J. Kaiser Family Foundation.
- Rogow, F. (2007). *Two view or not two view: A review of the research literature on the advisability of television viewing for infants and toddlers*. Ithaca, NY: Insighters Education Consulting. <https://a.s.kqed.net/pdf/education/earlylearning/media-symposium/tv-under-two-rogow.pdf?trackurl=true>.
- Rowan, C. (2009). The impact of technology on child sensory and motor development. <http://www.sensomotorische-integratie.nl/CrisRowan.pdf>.
- Schepper, R. (2011). Introducing let's move! child care: Tools for child and day care centers and family-care homes. Let's Move (blog), www.letsmove.gov/blog/2011/06/08/introducing-let%E2%80%99smove-child-care-tools-child-and-day-care-centers-and-family-care-h.
- Setiawati, E., Solihatulmillah, E., Cahyono, H., & Dewi, A. (2019, July). The effect of gadget on children's social capability. *Journal of Physics: Conference Series*, 1179, 1-6. <https://doi.org/10.1088/1742-6596/1179/1/012113>

- Sigdel, S. (2017). *Technology and learning capacity of children: A positive impact of technology in early childhood*. MBA Student Scholarship, 56. https://scholarsarchive.jwu.edu/mba_student/56.
- Suhana, M. (2017). Influence of gadget usage on children's social-emotional development. *Advances in Social Science, Education and Humanities Research (ASSEHR)*, 169. (International Conference of Early Childhood Education-ICECE), 224-27.
- Suler, J. (2004). The psychology of text relationships. In R. Kraus, J. S. Zack, & G. Stricker (Eds.), *Online counseling: A handbook for mental health professionals* (p. 19–50). Elsevier Science.
- Wang, M. T., Henry, D. A., Smith, L. V., Huguley, J. P., & Guo, J. (2020). Parental ethnic-racial socialization practices and children of color's psychosocial and behavioral adjustment: A systematic review and meta-analysis. *American Psychologist*, 75(1), 1-22. doi: 10.1037/amp0000464.
- Young, K. (2009). Understanding online gaming addiction and treatment issues for adolescents. *The American Journal of Family Therapy*, 37(5), 355-72. Doi: 10.1080/01926180902942191.