



Screen Time to Bedtime: Technology Habit of Generation Alpha

Priya Mishra

Chitkara University Institute of Engineering and Technology

Chitkara University, Punjab, India

Dr. Priyanka Gupta

Chitkara University Institute of Engineering and Technology

DCSE, Chitkara University, Punjab, India

Abstract—Generation Alpha: The first generation to be born completely in the digital age, a period of unparalleled technological advancements. The generation between, 2010 to 2024 is known as Generation Alpha. Technology is now essential to everyone's social, emotional, and well-being, but particularly for those who are still growing. Today's generation relies on technology for everything from schoolwork to co-curricular activities, they use chat-bots instead of their brains. This prevents the proper development of their brain, which is responsible for their creative thinking. The prefrontal cortex, the area of the brain involved in thinking, oversees several critical processes such as executive functioning, memory, attention, and emotion control. Overuse of smartphones may increase the threat of emotional, behavioral, and cognitive disorders in teenagers. It is crucial to build a balanced connection that supports their overall development and well-being. With the increasing accessibility of digital gadgets, students' screen time has increased rapidly, raising concerns about the possible long-term effects. As Generation Alpha adopts technology from childhood, parents and teachers confront the difficulty of controlling screen time and creating healthy digital habits. This generation represents that the more technology they use, the less developed their brains are compared to all previous generations. By understanding the multiple impacts of technology on younger generations, this paper aims to make the education system and parents aware of the urgent

need to address this issue. Given the risks, it is natural to wonder whether there is a necessity to protect children from the rapid growth of technology. The answer is yes. But how to do that? The most crucial step is education. Children should be aware of emerging technology, how it works, and what the potential concerns are. Teach them that technologies like AI are not real intelligence, it is artificial intelligence. There is nothing more brilliant than the human brain, so instead of abusing its power, students should learn how to make proper use of it.

Keywords— Cognitive development, Generation Alpha, Digital natives, Screen time, Negative impacts

I. INTRODUCTION

The primary reasons why Generation Alpha is so different from previous generations is because the use of technology has taken over every aspect of existence. They are growing up during a period of rapid change. Generation Alpha, who is sometimes known as “Digital Babies,” started using digital devices while still in kindergarten and is proficient at surfing the browser. This generation tends to devote a significant amount of time to screen-related activities, with watching movies and theater ranking among their preferred pastimes. Approximately 59% of them indicated that their favorite leisure activity revolves

around viewing movies and series. These kids have no idea what it is like to play outside with friends or spend time with their families, as they spend most of their time on screens. Moreover digital devices highly convenient and enjoyable, yet they are quite addicting. Research shows that excessive screen usage may lead to a lack of social skills, a short attention span, and poor sleep quality. They mostly use digital gadgets to connect, which results in the absence of communication skills. Digital babies start using technology at the age of two or three. Using digital devices early and for a prolonged period can increase the hazard of developing myopia in children around the world. It is estimated that by 2050, about 5 billion people globally will have developed myopia. Teachers say the most toxic behavior in the classroom comes from privileged kids in two-parent households. This generation surpasses others in screen time consumption, dedicating more hours to screen engagement.

II. LITERATURE SURVEY

[1] Amrit Kumar Jha: "*Understanding the Alpha Generation*"; they argue the significance of instilling the essence of being human, controlling emotions, developing strong relationships, and practicing good technology habits in everyday life. [2] K. Rust & Z.Z. Nagy: "*Digital Device Use and Changing Habits among the Alpha Generation in Hungary*"; Research Paper (2023); is a documentary that discusses how excessive usage of digital gadgets may result in the rise of myopia and other general eye and back problems. [3] Abu Rayhan's book "*HOW TECHNOLOGY IS HARMING OUR KIDS: Understanding and Overcoming the Negative Effects of Screen Time*" (2023) emphasizes the necessity for parents and teachers to encourage responsible technology use and reduce the negative effects of screen time on children. [4] Tim Schulz van Endert: "*Addictive Use of Digital Devices in Young Children: Associations with Delay Discounting, Self-Control, and Academic Performance*" (2022). This study adds to the literature by demonstrating behavioral parallels between addictive use of digital devices and other problematic behaviors, and highlighting the important role that self-control appears to play in the context of digital addiction. [5] Sudheer Kumar Muppalla, Sravya Vuppallapati, Apeksha Reddy Pulliahgaru, and Himabindu Sreenivasulu: "*Impact of Excessive Screen Time on Child Development: An Updated Review and Strategies for Management*"; [2023] This research examines screen time has an influence on several developmental areas and ways for monitoring and reducing children's screen usage. [6] Mr. Luis Santos and Dr. Richard Reeve: "*Screen time and youth health issues*"; research found negative correlation between screen time exposure and health outcomes. [7] Teelia L Lowery, "*The Impact of Digital Technology on Children's Social Interaction: A Literature Review*"; The aim of this paper is to promote the positive use of digital media and take steps to mitigate the negative consequences by providing a detailed understanding of the complex relationship

between digital technology and children's social interaction. [8] Edyta Swider, Cios a, Anouk Vermeij ab, Margriet M. Sitskoorn: "*Young children and screen-based media: Effects on cognitive and socioemotional development and the importance of parental mediation*"; focuses on the influence of screen media on children between the age of 0 and 5, as this is a period of brain development. [9] Pierpaolo Limone and Giusi Antonia Toto: "*Psychological and emotional effects of Digital technology on children in COVID-19 Pandemic*"; During lockdown, there was an increase in the usage of electronics among teenagers and children, which had an influence on their life, either positively or negatively. Disturbance in brain function is thought to be caused by a lack of neuroplasticity in the nerves.

III. PROBLEM STATEMENT

Identification of adverse effects:

Relying solely on digital gadgets can help with problem-solving and critical thinking skills. Excessive screen usage might lead to delays in language development and communication skills.

Exposure to blue light emitted by the screen is a disorder that blocks the production of Melatonin, the body's natural signal for sleep.

Understanding developmental impacts -

Cognitive development : excessive screen usage might lead to decrease in attention span, hinder problem-solving and critical thinking skills, and cause delays.

Impact on physical health : among the alpha generation, increased screen time can lead to obesity, bad posture, an inadequate attention span, and delays in problem-solving and critical thinking skills.

Social development challenges : Reliance on digital communication may impact their ability to build strong relationships and develop emotional intelligence.

Cyberbullying and online safety:

According to the study, approximately

- 66% of the Gen Alpha children would be exposed to adult content if not supervised by parents.
- 69% of the children would be at risk of developing screen addiction.

- 49% of the children were at risk of becoming cyberbully.
- 35% of children would have been at risk of identity theft.

IV. OBJECTIVES OF STUDY

- i. To identify the cognitive impacts of technology use on Generation Alpha
- ii. To explore the psychological impact of excessive screen time.
- iii. To understand Generation Alpha's technological exposure
- iv. To identify adverse effects of technology
- v. To understand parental roles and practices
- vi. To promote responsible technology use among Generation

V. RESEARCH METHODOLOGY

Objective

Examine the influence of technology use on children's social, cognitive, and academic development.

Methods and Data Collection

- ❖ Methodology: online survey
- ❖ Demographics: Collect data about the child's age.
- ❖ Sampling: Parents with children in a specified age range are the target population.
- ❖ Sample method: random sample using online surveys and parent groups.

Data Collection and Analysis:

Analyze the data to find patterns and relationships between technology use and children's social, cognitive, and academic development

Limitations:

- The study relies on self-reported data from parents, which may be subject to bias.
- The chosen sample may not be representative of the entire population.

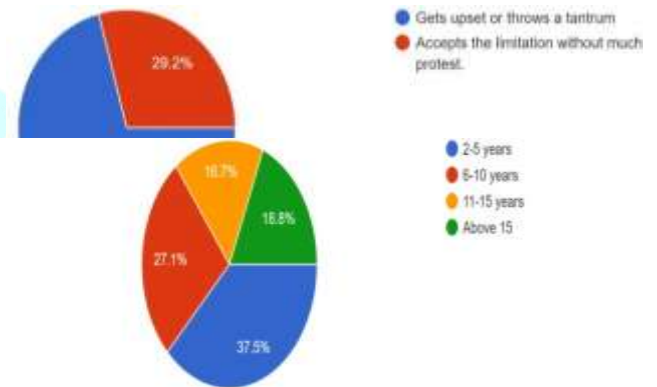
This research will give important insights regarding the impact of technology usage on children's development.

The findings can inform parents, educators, and policymakers about creating healthy technology habits for children.

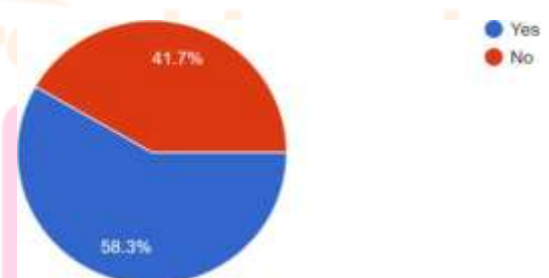
VI. RESULTS AND DISCUSSIONS

☐ What age did your child begin using technological devices :

☐ How does your child respond to phone restriction ?



☐ Have you seen any negative impacts of technology on your child's academic performance or motivation to learn?



VII. OBSERVATIONS

A survey was conducted among the parents and teachers through online survey, these are the observations derived.

VIII. CONCLUSION

As Generation Alpha continues to grow, mobile addiction will continue to be a problem for parents and teachers. Many parents do not consider this as an issue, and instead of responding to their children's phone demands, they simply give them what they want without considering the consequences. By setting limits on screen time, encouraging alternative activities, and promoting healthy technology habits, we can ensure that children use technology in a responsible and balanced way. For future scope, examine how Generation Alpha's lifestyle and excessive screen time affect their physical health, considering bad posture, eye strain, and sleep problems. Conduct long-term studies to monitor the long-term consequences of technology use on Generation Alpha's physical, cognitive, and psychological well-being as they go through various phases of life.

IX. FUTURE SCOPE

The future scope of the negative impacts of technology on Generation Alpha and children brings up various opportunities for further study including:

- A. Broaden research to cover a wide range of demographic groups from different socioeconomic backgrounds, geographies and cultures. This would help us understand how technology's impacts are influenced by these factors.
- B. Intervention strategies: Explore the effects of various forms of technology (such as social media, educational apps, and video games) on children.

This will help in determining which technologies are more useful or dangerous.

Parents/teachers response	Percentage (out of 53 response)
From the age of 2-5 years usage of electronic device is the highest	34% i.e the highest
Has technology usage affected child's social interactions	52.8% agreed to this
Does technology has had a positive or negative impact on child's cognitive development	69.8% agreed to this
How does child react when their screen time is limited or restricted	67.9% claims ,gets upset and throws a tantrum

- C. Parental and educational counseling: Explore the roles of parental and educational supervision in overseeing technology use. Research could focus on developing recommendations and best practices for parents and educators.
- D. Real world applications: Translate study findings into practical applications such as creating kid-friendly technologies, creating balanced digital environments, and promoting healthy technology habits in Generation Alpha and future generations.
- E. Psychological and emotional effects: Explore the psychological and emotional consequences of technology use, including anxiety, depression and attention problems. This would facilitate a more comprehensive study of the effect on children's well-being.

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