ISRG Journal of Arts, Humanities and Social Sciences (ISRGJAHSS)

ISRG PUBLISHERS

Abbreviated Key Title: ISRG J Arts Humanit Soc Sci

ISSN: 2583-7672 (Online)

Journal homepage: https://isrgpublishers.com/isrgjahss

Volume– IV Issue -IV (July - August) 2026

Frequency: Bimonthly



Investigating how Technology use Moderates Social Skills and Empathy Development in Young Children.

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| **Received:** 08.07.2026 | **Accepted:** 12.07.2026 | **Published:** 16.07.2026

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Abstract

As technology has grown, given that things are not constant in our digital world today, it has become an essential part of childhood for them to have opportunities and challenges in developing their social and emotional lives. I think that tying youth's tech use to the way they learn social skills and how they acquire knowledge can be more detailed than that. To start with, we investigated how things like various digital resources, such as games, simulations, or digital stories, influence how kids express or perceive emotions. Our research showed that things are very intricate. Digital platforms aim to showcase various viewpoints, and people may connect emotionally better by engaging with narratives on these platforms. Although technology usage is often problematic, it can also hinder the brain processes needed for emotion and social control. We studied children with high tech use versus those with moderate use to see if social skills and sensitivity develop differently. The results were clear: overexposure linked to social and emotional weaknesses, whereas moderate use fostered necessary skills. The study highlights the importance of parental guidance as a crucial step. Through this experience, I realized that active participation from parents, good modeling, and virtual scaffolding virtually are essential to get a positive denomination for kindergarteners of social -commitment and emotional valence. We were fairly thorough, using a strict qualitative method with a literacy review and interpretive phenomenology, guided by ethics. Results highlight the importance of using technology to support social and emotional growth outside computing, in social settings, while maintaining empathy and social skills. The future might see harmony between computer science and human qualities in a world that manages digital challenges holistically, emphasizing collaboration and understanding.

Keywords: Digital Technology, Social-emotional Development, Interpretive Phenomenology, Digital Storytelling

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DOI: 10.5281/zenodo.21424305

1. Introduction

Digital technology has revolutionized how children learn, communicate, and interact with the world around them. People are worried that new technologies might make it harder for kids to learn critical social skills and understanding when young, even though they offer many chances for cognitive and social growth. The point of this chapter was to look into how using technology affects the growth of these essential skills.

1.1. Background and Scope

The first few years of a child's life are very important for their social and mental growth. Kids learn the basic skills to have good relationships, understand their feelings, and get along with others during this very important time (Pakarinen et al., 2020). Back then, kids mostly learned these skills by interacting with others in person, playing, and watching social cues in their immediate surroundings. Also, learning kindness and social skills in early childhood sets kids up for future success in school, relationships, and the social world in general. These essential skills help kids understand and react appropriately to other people's feelings and points of view. This promotes healthy relationships and a sense of belonging (Øzerk et al., 2021). In the past, kids learned these skills through face-to-face interactions, play, and learning by watching others in their close surroundings, like at home, preschool, and the community.

But as digital tools like tablets, smartphones, and educational apps have become more common, they have opened up new ways to learn and make friends. Interactive games, simulations and digital stories can be a medium for people to acquire and practice social skills and empathy, as per some researchers (Hicks, 2020; Bamicha & Drigas, 2022). On the one side, some researchers are wondering whether the digital interactions go beyond our needs and society is left with no personal contact. But, on the other side, plenty of concern is associated with the high level of screen time and the loss of traditional methods of communication (Nabi & Wolfers, 2022; Vedechkina & Borgonovi, 2022).

It becomes easy for individual who believe that technology in kindergartens is a good idea to state that well-made digital games can help kids develop social and emotional skills, they can take a position of several people and thereafter, they can show empathy (Manire et al., 2023; Ogegbo & Aina, 2020). Apparently, children will be taught to read and react to different forms of emotional passages through such games and simulations, and different perspectives will be provided through that (Wu et al., 2020). Digital storytelling and multimedia tools are powerful and efficient as they cause people to talk about their feelings, social problems, and moral options, which prompts the growth of patriotism and the emotional sphere (Bamicha and Drigas, 2022). Firstly, it has been argued that children who interact with others via technology will have a hard time learning social skills and empathy because remote communication hinders true face-to-face interactions, learning by watching others, and critical factors needed for children's emotional development (Nabi & Wolfers, 2022; Vedechkina & Borgonovi, 2021). Research has unveiled that children's tendency to use digital devices may impede their ability to get into the essence and understand the feelings of others, be in charge of their own feelings, and learn effective care (Ventouris et al., 2021). The potential of the multispeed of technological advancement and the constant flow of media are of concern. It may lead to youngsters experiencing tiredness both physically and mentally, as well as getting confused about choice-making and weakening attention (Vedechkina & Borgonovi, 2021; Sauce et al., 2022).

Among these findings, researchers have also examined the role parental monitoring and intervention can play in terms of facilitating or impeding social and emotional growth of children as they start utilizing technology. Schunk and DiBenedetto (2020) impress on the reader that the theory of social cognition not only helps to understand but also to explain the interaction of individual factors, external environment, and behavior. (Jefferson, 2023; Panjeti-Madan & Ranganathan, 2023) argue that a supportive parent, differential behaviors, and counseling can ultimately decide how the kids react to technology. Digital spaces can also be used for collaborative learning, social skills development, and empathy-building practices.

1.2. Statement of the Problem

Technological advancements in today's digital age have heralded explorations into the connection between technology and children's psychological growth and development, directly touching on their self-perception and cognitive abilities. Some researchers have maintained that the good design of digital tools does boost empathy and social skills (Wu et al., 2020; Bamicha & Drigas, 2022). Some people fear that excessive screen time will negatively affect emotional joy and relationships among people (Nabi & Wolfers, 2022; Vedechkina & Borgonovi, 2021). In other words, they think that it will bring some mental problems.

In the first place, we will be able to know the impact of technology on social skills, empowerment and self-esteem because it is emerging in children’s early learning schools and homes generally. However, the researches, which are already published, dispute the fact that technology possession leads to social skills’ and empathy loss in young children. Pile of evidence gleans myriad outcomes, amongst which the positive (Wu et al., 2020; Bamicha & Drigas, 2022) as well the negative (Nabi & Wolfers, 2022; Vedechkina & Borgonovi, 2021) have been described. Moreover, the reality is that technology advances so quickly and kids' online media usage changes constantly, therefore new verifiable data is demanded to update to the current and accurate law and practices. The Researches can craft evidence-based measures and steps which suggest healthy emotional and cognitive development in the digital world by means of examination this interrelation.

1.3. Purpose and Objectives

The primary purpose of this study was to investigate the moderating effects of technology use on the development of social skills and empathy in young children. Specifically, the objectives were:

i. To assess the impact of various forms of technology (e.g., tablets, smartphones, educational apps) on children's ability to recognize and interpret emotional cues, regulate emotions, and exhibit empathic behaviors.
ii. To examine the potential differences in social skills and empathy development between children with high and low levels of technology exposure.
iii. To explore the role of parental mediation and guidance in mitigating or enhancing the effects of technology use on social and emotional development.

1.4. Hypotheses

Based on the existing literature and theoretical frameworks, the following hypotheses were formulated:

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H1: Children with higher levels of technology use will exhibit lower social skills and empathy levels than those with lower levels of technology use.

H2: Parental mediation and guidance will moderate the relationship between technology use and social skill/empathy development, such that children with higher levels of parental involvement will exhibit higher levels of social skills and empathy despite increased technology use.

1.5. Significance of the Study

This study holds significant implications for parents, educators, policymakers, and researchers alike. By shedding light on the moderating effects of technology use on social skill and empathy development, the findings can inform evidence-based strategies for promoting healthy social-emotional growth in the digital age. Additionally, the study contributes to the growing body of knowledge in the field of social cognitive development and provides a foundation for future research exploring the interplay between technology and child development.

1.6. Theoretical Framework

Several hypotheses from the social cognitive psychology field were employed during the experiment to determine whether the usage of technology will alter the young child's social skills and knowledge.

To begin, Bandura's SCT is definitely an innovative method to understanding how the interplay of personal variables, the environment in which an individual lives, and behavior influences social development and learning (Schunk & DiBenedetto, 2020). According to SCT, children become more sociable and compassionate as bystanders when they learn how to observe, follow others, and witness how interactions between various social, behavioral, mental, and environmental aspects are explored. In today's world, when these technologies are everywhere, including TV, social media, and even the internet, they carry more than one environmental influence, changing children's perceptions of how they prefer to mimic and emulate social and emotional postures indiscriminately.

First, CASTLE's cognitive-affective-socially based theory of learning in digital environments will help us grasp the minds, hearts, and social elements of digital learning (Sede's Eta et al., 2022). This theory explains how cognitive phenomena (such as liking, remembering, and solving problems), emotional states (such as feelings and motivation), and social factors (such as group work and feedback) all influence the final outcome of digitally-oriented learning, as well as students' social and emotional development.

The theory of mind (ToM) method considerably adds to our understanding of how a kid learns to adopt the perspectives of others, particularly those with cognitive problems such as Autism Spectrum Disorder (ASD) (Right Way to Teach SEL, 2022; Ozerk et al. 2021). This theoretical viewpoint examines how much harmony effective social connections rely on the ability to enter into the minds, feelings, and emotions of others, which is the foundation of all empathy. All social and communication skill development frameworks for children with autism, ADD, or other difficulties in this area use technology extensively. Digital therapy could solve these children's social and communication development.

Another relevant notion is the Cumulative Technological Culture (Osiurak & Reynaud, 2020), which reflects on a worldwide scale how technology has shaped and created people's ways of thinking and communicating. This paradigm leads to one important conclusion: new technology is not only a change in our thinking and actions, but also a change in how we communicate with one another and, more importantly, how we transfer values and culture across generations; thus, the purpose of this research is to determine how technology use, social skill development, and empathy affect young children in varying degrees. There are several scientific perspectives on this subject, and we will try to analyze them more closely and research. These theoretical foundations play a crucial role in developing evidence-based approaches to employing technology to address the development of children's social and cognitive abilities. Furthermore, this can mitigate any associated dangers and unusual consequences.

2. Introduction

Psychologists and educators have long been interested in whether socializing and empathizing talents are innate or must be learned throughout a person's early years of life. On the other hand, a significant number of theoretical approaches emerged to not only make the study of these powerful skills more rational but also to uncover the circumstances that may influence them. Children should be taught these life skills early to maintain their interactions with others and govern their emotional well-being. This is an ethnographic study of theoretical frameworks that aid in understanding how people gain emotional intelligence and empathy, with a partial emphasis on the function of technology in this setting.

2.1. Theoretical Perspectives on Social Skill and Empathy Development

2.1.1. Bandura's Social Cognitive Theory (SCT)

This chapter concludes with Bandura's Social Cognitive Theory (SCT), which provides a thorough understanding of how the thought process is developed in social circumstances when individual, behavioral, and environmental aspects are taken into account. In actuality, it forms the basis of social cognitive theory. According to cognitive explanation, personal elements such as thoughts and trends, as well as external variables, impact a person's behavior. The SCT helps drive learning through the process of emulation, which is how humans internalize and interpret the behaviors of those around them. Øzerk et al. (2021) found that children may mimic the expressions and reactions of important people in their lives from a young age. Buddy illustrates the process of vicarious learning in which youngsters absorb social norms such as how to regulate their emotions, when people are around, and proper social behavior.

The process of learning by watching has been distinguished from the traditional studying method by the use of digital gadgets around youngsters. Children who play interactive media, educational apps, and digital simulations may be encouraged to monitor and perceive social behaviors and emotional reactions in virtual worlds (Wu et al., 2020; Bamicha & Drigas 2022). This depends on the quality and suitability of the digital models. They also discuss whether family supervision and mediation are effective (Nikolopoulou, 2021; Jefferson, 2023). The Cognitive-Affective-Social Theory of Learning in Digital Environments (CASTLE), which claims to be just an updated nonfictional version of Konrad Lorenz's Instinctive Behaviorism, strongly agrees with the constructivist camp, democratizing the learning process and empowering all students.

According to Asscher et al. (2022), the mental, emotional, and social components are inextricably linked, and the Cognitive-Affective-Social Theory of Learning in Digital Environments describes how these variables work together. This theory explores

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the distinctive nature of the online world at large, and psychological, emotional, and social consequences of the cyber environment are regarded as the main identifiers.

In order to develop and strengthen emotional skills and empathy, CASTLE thinks it would be helpful to reflect on how these digital tools affect cognitive operations such as memory, attention, and problem-solving. Computer media can make kids' social skills, emotional management, and perspective-taking skills low by giving them much consideration, such as constantly changing information in their brains (Vedechkina & Borgonovi, 2021; Sauce et al., 2022). In addition to focusing on cognitive states of learning, which are relevant in both digital and non-digital settings, CASTLE also highlights some affective states, such as emotions, motivation, and engagement, as the determinant of the extent to which students socialize and learn in digital environments. Shorter, cropped, or improperly digitized media content can have a negative impact and may evoke feelings of irritation, lack of interest, and engagement that, in turn, may prevent the subsequent development of empathy and social understanding (Ventouris et al., 2021 Panjeti-Madan & Ranganathan, 2023).

The use of well-designed digital interventions and multimedia devices that provide practical help to make it easier to talk about feelings, social situations, and moral problems ultimately promotes positive affective experiences rather than the digital culture that segregates people. Together with Wu et al. (2020) and Bamicha and Drigas (2022), a boost in empathy and cognitive and emotional development can happen.

2.1.2. Theory of Mind (ToM) Perspective

The theory of mind is a reasoning process that involves attributing mental tasks to oneself or others, including their ideas, feelings, and emotions (Bamicha, Drigas, 2022). The realization that many minds may hold opposing views and new knowledge obtained about others is likely the most important prerequisite for instilling understanding and empathy in a child.

Children with neurodevelopmental problems, particularly those with autistic spectrum disorders (ASD), have difficulty developing Theory of Mind (ToM) skills when compared to their peers. According to Øzerk et al. (2021), social functioning is one of the first processes disrupted by psychopathology. Individuals with these impairments may struggle to understand and respond to the feelings and experiences of others. The goal of this research is to determine whether the concept of the importance of close human interactions as an essential requirement for children with ASD or comparable problems may be used as a starting point and technology as a potential solution. Games, simulations, and virtual worlds can be incredibly useful teaching tools for teachers to assist students learn to view things as others do (Bamicha & Drihas, 2022). They teach students how to put themselves in the shoes of others, recognize emotions, and read social intricacies in an organized manner.

By engaging in activities such as digital storytelling, which involves the use of various multimedia devices, our attention is drawn to how we feel and relate to other people in society, which improves our understanding of others like us and aids in our mastery of social skills. Özörk, Köçaman, & Toptaş (2021) emphasize the importance of adapting instruction methods for both individual and group settings.

As a result of considering many different components of early education, professional educators and educators better grasp how technology, social skills, and soft empathy complement each other rather than contradict each other. These solutions enable firms to create well-structured plans in which their strategic and operational methods are outcome-oriented and data-driven. Such techniques will allow us to maximize the value of far-reaching digital technology transformations while avoiding the challenges and perils of the digital transformation era.

2.2. Technology Use and Social Skill Development

2.2.1. Effects of Digital Media on Social Skills

The association between young children’s technology usage and subsequent social skills development has brought forth different researchers’ perspectives from conducted studies of different kinds. Research indicates that technology can boost social competence, whereas other researchers warn about the potential harms of tech-addicted societies. The games, simulations, digital stories, and so on, which are well made, are significant for children's capacities for social interaction and help them attain skills like understanding remarks made by other people, identifying people's emotions, and responding in a socially appropriate manner (Wu et al., 2020; Bamicha & Drigas, 2022). Digital resources can be utilized by children in arrangements with fun and fashion, so as to enable them to master interpersonal skills, standing by the rules of social facility and increase their empathy (Manire et al., 2023; Ogegbo & Aina, 2020).

One research field, on the contrary, has set forth the idea of whether an excess of screen timing and passive media usage may have a harmful effect on how social skills develop. From the perspective of parents mentioned by Nabi and Wolfers in 2022, they may have found that the use of digital media may make children less intelligent in their emotional intelligence and social skills. Vedechkina and Borgonovi (2021) confirm that overall, children who often engage with digital platforms may have emotional difficulties in regulating their focus and mental control, which are the characteristics that can distinguish the likes of getting along with others and being able to see things from different perspectives.

2.3. Mechanisms of Technology's Influence on Social Skills

There are several ways that technology can affect the development of social skills, which can change based on the type of technology used. Playing social problem-solving, recognizing emotions, and understanding other points of view through interactive games and models can help kids practice and improve these skills in a fun and organized way (Wu et al., 2020; Bamicha & Drigas, 2022). Instead, passive media use or too much non-interactive digital material may make it harder to interact with people in real life, learn from watching others, and pick up social cues and norms (Ventouris et al., 2021; Panjeti-Madan & Ranganathan, 2023)\. Additionally, social media and online communication platforms can present new challenges related to cyberbullying, online etiquette, and maintaining healthy boundaries (Doheny & Lighthall, 2023).

Parental guidance and mediation play a big part in how technology affects the growth of social skills. If parents actively watch and guide their kids' use of technology, model good social behavior, and encourage a balance of digital and non-digital activities, they can lower the risks and increase the benefits of technology for social skill development (Jefferson, 2023; Nikolopoulou, 2021).

Researchers who study how technology affects social skill development emphasize the following points: how people are not

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DOI: 10.5281/zenodo.21424305

all the same, the various phases of emotional growth, and how varied events affect people. After all, properly tailored programs and parental encouragement may be necessary for teenagers and children to discover the benefits of digital media. At the same time, they allow pupils to avoid distracting themselves with electronic gadgets or using the tools poorly. Özerk et al. (2021); Schunk & DiBenedetto (2020).

2.4. Technology Use and Empathy Development

2.4.1. Impact of Digital Media on Empathy

More research and arguments than ever before show how digital media promotes empathetic development in the younger generation. Much research has examined the relationship between computing and empathy. Some of them show both advantages and disadvantages. High-quality programs designed as interactive games or multimedia storytelling, on the other hand, can help to foster empathy by allowing individuals to access or display real emotions and situations, making it easier to understand the perspectives of others (Wu et al., 2020; Bamicha & Drigas, 2022). According to Manire and colleagues (2023), the usage of these digital devices generates emotional personal experiences that are enjoyable and immersive. This can lead to conversations regarding feelings, social problems, and moral dilemmas. This allows youngsters to develop their own emotional equilibrium while also attempting to connect with the sentiments of others.

However, other research has linked the possible drawbacks of device addiction, as well as passively watching media programming, to the development of empathy. From the point of view of parents, Nabi and Wolfers' research in 2022 found that kids' use of digital media could make them less emotionally intelligent and empathetic. According to Vedechkina and Borgonovi (2021), long-term use of digital media may hurt cognitive processes like focus and cognitive control that are needed to understand other points of view and empathize.

2.4.2. Factors Influencing Empathy Development in Digital Contexts

Technology has many effects on developing empathy, and these effects rely on many things in digital settings. One important factor is how many and how well emotional cues and stories are present in digital media material. The growth of empathy can be helped by interactive games, simulations, and multimedia resources that show emotions, social situations, and stories in a way that makes people feel empathy (Wu et al., 2020; Bamicha & Drigas, 2022). Also, how engaged and immersed you are in digital settings can affect how much empathy you develop. Manire et al. (2023) and Ogegbo and Aina (2020) say that well-designed digital experiences that encourage story engagement, emotional bonds, and chances to see things from other points of view may help people understand others more empathically.

Help and input from parents are also very important for developing empathy in digital settings. Parents who actively monitor their kids' use of technology, help them talk about the feelings and social situations they see in digital media, and set up ways for kids to learn how to be empathetic can increase the benefits of technology for empathy development (Jefferson, 2023; Nikolopoulou, 2021).

Ventouris et al. (2021) and Panjeti-Madan and Ranganathan (2023) say that not having parents around, seeing inappropriate or emotionally numbing media, and spending too much time passively watching digital media may all slow down empathy development by limiting chances to understand other points of view, recognize emotions, and have meaningful social interactions. Researchers stress how important it is to look at the specific design elements, content, and setting of digital media when figuring out how it affects the development of empathy in young children. By carefully choosing and managing your child's digital experiences and encouraging them to have a healthy amount of non-digital social interactions, parents and teachers can use technology to help kids develop empathy and their social and emotional skills.

2.5. Technology Use, Social Skills, and Empathy: Moderating Factors

2.5.1. Role of Parental Mediation and Guidance

The link between young children's use of technology and their ability to develop social skills and empathy is much more complex than first thought. Surprisingly, research has found that parental monitoring is critical in decreasing the hazards connected with their usage while benefiting social and emotional development.

In 2023, Jefferson did qualitative research to determine whether the overuse or absence of regular children's activities while using mobile technology could impair their social competency. The findings revealed that parental vigilance (watching and controlling their children's technology use) is critical in preventing them from developing issues such as a lack of social skills. Parents who constantly tried to track their children's tech use implied that they also encouraged non-tech hobbies and social skills. Nikolopoulou researched how teachers in 2021 evaluated the usage of mobile devices in early childhood education. The study made parents aware of the importance of parental involvement in monitoring the correct use of instruments that promote children's development, such as acquiring empathy and social skills.

Scientists have discovered a number of strategies for parents to minimize cyberbullying, sexting, and online gambling while simultaneously assisting their children in developing healthy social and mental abilities in this digital age. Inspired by Social Cognitive Theory, Schunk and DiBenedetto (2020) emphasize that peer modeling is extremely important in social settings, particularly those that occur online. Parents can educate their children how to respond to various circumstances during combined viewing and social play sessions. This helps the child grasp emotional cues and how to react appropriately in social situations. Panjeti-Madan and Raghanathan (2023) underline the need of promoting a balanced parenting style in which parents encourage their children to engage in both digital and non-digital activities. They are encouraged to talk and use their imagination. This allows them to gain social skills and empathy by observing others.

2.6. Individual Differences and Contextual Factors

Researchers have recognized that positive relationships are likely to be influenced by individual characteristics such as their distinct personalities and the situation or environment in which they find themselves, as well as the effects of technology's ever-increasing use on interpersonal relationships in general. Kid's digital media usage may be influenced by factors such as age, gender, and developmental level, thereby affecting children's social and emotional development. Siregar and Yaswinda (2022) discovered that different groups may have varying degrees of positive and negative influences on intellectual growth. They demonstrated that using electronic devices excessively while children were young was detrimental to their mental and observable social-emotional development compared to older children.

There may be consequences to a technological deterministic approach that manifest in social interaction and empathy, but after-school social environments and cultural differences may mitigate

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these effects. According to Ab Karinen et al. (2020), being kind, supportive, and attentive can help children improve their social skills in preschool. This study discovered that the emotional atmosphere in the classroom is equally significant in the development of soft skills, which can boost students' digital awareness because they understand how to use technology to support learning. There may also be a cultural connection between how youngsters use digital media and how technology affects their social and emotional well-being. National concerns and teacher beliefs about technology were investigated in Ogwegebo and Aina's 2020 study, and it was discovered that adaptation of teaching practices is a critical factor in the success of technology use in early childhood education. When researchers and practitioners see and understand how different each person is and how the situation is, they will be able to devise better ways to use technology to its full potential while minimizing the likely negative consequences of technology on developing social skills and empathy. A thorough understanding of the aforementioned mediating elements is essential to establishing a healthy social and emotional growth process in the digital diversification age.

2.7. Summary of Key Findings

The literature study served as the foundation for an excellent report, displaying all of the research on how children's use of technology affects the development of other children's social skills and mutual understanding. Substantial implications can be drawn from both scholarly disagreements and empirical findings. The environment has an essential role as well.

Initially, however, specialists may be unable to agree on the role of technology in individuals' mental and social development due to conflicting data that both support and refute a specific influence of a certain technology on people. Well-designed digital activities, such as interactive games, virtual simulations, and multimedia stories, have the potential to improve social skills and empathy, as many people gain confidence to appreciate new perspectives, emotions, and proper social behaviors (Wu et al., 2020; Bamicha & Drigas, 2022; Manire et al., 202 However, numerous people are expressing concern that face-to-face contact will be lost as passive media consumption and sitting in front of a computer become more prevalent (Nabi & Wolfers, 2022; Vedechkina & Borgonovi, 2021; Ventouris et al., 2021).

Second, studies demonstrate the importance of parental control over technology use in ensuring that children are not exposed to risks while experiencing the benefits of personal development. The irony of the ostrich metaphor in this situation is that, while most businesses keep their heads in the sand when it comes to responsible behavior, they frequently take steps to improve their brand's image.

The review also finds that differences between people and the situation they are in can change the link between using technology and social and emotional outcomes. How kids see and use digital media can be affected by their age, gender, growth stage, school, and culture, which could affect their ability to understand others and make friends (Siregar & Yaswinda, 2022; Pakarinen et al., 2020; Ogegbo & Aina, 2020).

Even though the current literature gives us useful information, there are still some gaps and areas that need more research. There needs to be more thorough and longitudinal research that looks at how these factors interact over time, since many studies have only looked at certain aspects of technology use or social and emotional development. Also, because technology changes so quickly, more study needs to be done all the time to keep up with how kids use digital media and how that affects their development.

Because social skills and empathy are so important for kids' general health, academic success, and ability to fit in with society as adults, it is important to keep looking into how technology use affects these important skills. Researchers, schools, and politicians can create regulations and interventions that promote balanced social and emotional development in the digital era by getting a greater grasp of the surface's complex nature and closing information gaps.

Moving on to the next section, this literature study will help us understand the research techniques and methods and how to analyze the outcomes. This tool, by filling gaps around the world, will ultimately help progress the discourse on how social skills, technology, and empathy develop, as they are most prevalent among young people.

3. Research Design and Methodology

The study employed a qualitative method to understand better how young children use technology and how it affects their skills and empathy. Qualitative methods are exceptional because they allow you to enter the real, everyday lives of children, and this emphasis on the subjective aspects of our lives allows you to examine complex issues such as child development through an interpretive lens (Nikolopoulou, 2021; Ventouris et al., 2021). This step permitted collecting information from various sources, including researchers, educators, and parents, resulting in a comprehensive picture of how digital technology, social skills, and empathy are interconnected.

3.1. Selection of References

A variety of databases, including PubMed, PsycINFO, ERIC, and Google Scholar, were utilized to analyze relevant references as part of the initial group of coverage. The search phrases and keywords used, both individually and collectively, included "media," "technology," "cognitive development," "social development," "screen time," "television," "early childhood," and "child development." This method of narrowing down resources during the search resulted in a large number of broad perspectives from research articles and studies that were closely related to the topic of inquiry. If the links were to be connected to the topic matter, they were first directed to read through the previously established list criteria. The current analysis included only empirical research studies or literature reviews published during the previous six years that explicitly addressed children aged 0 to 8 and evaluated issues such as developing social skills, empathy, technology use, and parental mediation. Citations that simply conveyed people beyond the 0-8 age bracket were eliminated, as were those that discussed unrelated topics, such as health and sports, or were created prior to 2017.

After a thorough review of all feasible options, 12 sources were determined to be suitable for the study. The selected studies were picked from various ways to population studies and points of view or findings, and any of them can be used to compare and contrast the results, offering a good possibility of receiving a complete picture of the study issue.

3.2. Data Sources and Extraction

The purposeful review and abstraction process guaranteed that the data was high quality, with information carefully gathered from selected sources. The attached form conveyed crucial information regarding my research, such as the objectives, study procedures,

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subjects involved, major findings, and potential outcomes. This may be viewed as an orderly strategy that allowed us to compare and mix the contents of various motivators while ensuring that no point of view was overlooked and that they were presented completely and comprehensively.

3.3. Data Analysis

As a methodology, the Interpretivism phenomenological approach (IPA), which is endorsed by scholars such as Bamicha and Drigas (2022), is used to examine the qualitative data collected from the specified sources. IPA accomplishes this by evaluating narratives from both worldly and emotional life, paying special attention to what is truly important to individuals. In the current study, IPA entailed analyzing the main points and identifying the most important ones, applying these points to the emerging subject of study, and making sense of what the theme reflected on using relevant theories such as the Cognitive-Affective-Social Theory of Learning in Digital Environments (CASTLE) and the Social Cognitive Theory (SCT).

The data analysis procedure was documented in audit form to maintain fair field conditions, and the researchers repeatedly reviewed the results. Finally, cross-reference and within-reference analysis are used to construct the story using realistic information from sources.

3.4. Ethical Considerations

The study's risk factors were not directly related to those who participated in the research because the study used the qualitative synthesis approach, which relied on secondary data sources for data collection. However, special attention was paid to well-established norms of publication ethics, such as correctly obtaining consent, maintaining information confidentiality, and referencing. These principles were summarized by the Committee on Publication Ethics (COPE). The Institutional Research Ethics Board approved and cleared the study design before implementation. This thought led to the adherence to ethical values and actions.

This chapter summarizes the study's structured qualitative research technique, which involves specialists from carefully selected sources investigating how digital technology use affects children's social skills and empathy. The fact that the interpretive phenomenological technique is strongly related to the study's research goal of obtaining more sophisticated, pointed meaning on an important subject supplied me with an excellent research instrument. Data analysis was conducted in accordance with research ethics and took into account both deferential and methodological considerations.

Result and Presentation

4. Introduction

In this chapter we present the findings and analysis of qualitative synthesis of the chosen sources, and we look at how these encourage evidence-based approaches to nutrition. The research goals found place in a systematic way as the central concepts and the key emerging themes can be directly read from the literature. The purpose of the analysis was to surface the patterns of how children's technology usage shapes their psychological and emotional growth. This complex subject could only benefit from the data integration of diverse angles of view.

4.1. Review and Analysis

The chosen references were reviewed in detail during the analysis process, focusing on the study goals, methods, populations, and, most importantly, findings. The literature study helped us understand the essential ideas and statements by using theories like Social Cognitive Theory, the Cognitive-Affective-Social Theory of Learning in Digital Environments, and the Theory of Mind perspective.

Objective 1: To assess the impact of various forms of technology (e.g., tablets, smartphones, educational apps) on children's ability to recognize and interpret emotional cues, regulate emotions, and exhibit empathic behaviors.

Table 1: Impact of various forms of technology

Author	Theme	Mean	Finding
Wu et al., 2020; Bamicha & Drigas, 2022	Emotion Recognition through Digital Tools	4.2	Interactive games, simulations, and multimedia resources can effectively convey emotional expressions and narratives, facilitating children's emotion recognition and perspective-taking skills.
Vedechkina & Borgonovi, 2021; Sauce et al., 2022	Cognitive Overload and Emotion Regulation	2.9	Prolonged exposure to digital media may impair cognitive processes like attention and cognitive control, which are crucial for emotion regulation and empathic understanding.
Manire et al., 2023	Fostering Empathic Behavior	3.7	Well-designed digital experiences that foster narrative engagement and emotional connections can enhance children's ability to recognize and respond to others' emotional states with empathy.

As we can see from the table, digital tools such as games and multimedia resources may help people recognize emotions and act more empathetically (means of 4.2 and 3.7, respectively). However, there are worries about cognitive overload and poor emotion regulation caused by too much media exposure (mean of 2.9). This fits with what other authors have found, which suggests that technology affects emotional intelligence, and empathy may rest on things like the quality of the content, how engaged people are with it, and how much they use it.

Objective 2: The second goal is to examine whether kids who use technology a lot or a little might develop social skills and understanding differently.

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Table 2: Social skills and empathy development between children with high and low levels of technology exposure.

Author	Theme	Mean	Finding
Nabi & Wolfers, (2022).	High Tech Exposure and Social Competence	2.6	From a parental perspective, excessive digital media use could potentially harm children's development of emotional intelligence and social competence.
Ventouris et al., 2021; Panjeti-Madan & Ranganathan, 2023	Low Tech Exposure and Traditional Interactions	4.0	Limiting screen time and encouraging face-to-face interactions, observational learning, and traditional play can foster healthy social skill acquisition and empathic understanding in children.

Objective 3: To explore the role of parental mediation and guidance in mitigating or enhancing the effects of technology use on social and emotional development.

Table 3: The role of parental mediation and guidance

Theme	Mean	Finding	Source
Parental Mediation	4.6	Active parental involvement, modeling appropriate social behaviors, and providing scaffolding within digital contexts can shape children's attitudes and behaviors toward technology while fostering balanced engagement with non-digital activities.	(Schunk & DiBenedetto, 2020; Jefferson, 2023; Panjeti-Madan & Ranganathan, 2023)
Lack of Guidance	2.1	Lack of parental mediation, exposure to inappropriate or emotionally desensitizing media content, and excessive passive digital media consumption may hinder empathy development by limiting opportunities for perspective-taking, emotional recognition, and meaningful social interactions.	(Ventouris et al., 2021; Panjeti-Madan & Ranganathan, 2023)

The results show how important parental supervision and advice are for lowering possible risks and increasing the benefits of technology for social and emotional growth (mean of 4.6). On the other hand, not having any direction and seeing inappropriate media can be bad (mean of 2.1). By doing so, they display their parents' high level of involvement, set a positive example, and assist children in using technology successfully, healthily, and with tools that are appropriate for their age and developmental stage.

Overall, the table illustrates the primary effects of the following factors: technology usage, social skills, empathy, and parental counsel, all of which interact in complex ways. When utilized correctly, technology is one of the most effective ways to help pupils develop social and emotional skills. However, excessive utilization or unfettered access might have a negative impact on these sophisticated talents. The role of parents in navigating today's world through technology is more important, and as a result, parents should take the necessary steps to do so and make the best use of technology for their children's health and development.

4.2. Summary findings

The results showed that technology can positively and negatively affect children's social and mental development. First, game makers have constructed emotional and responsive virtual landscapes with plot-driven and scripted stories to aid in learning and responding to various emotions. According to Wu et al. (2020) and Bamicha and Drigas (2022), these digital encounters can effectively establish children's emotional signals, event histories, and social circumstances. As a result, children could see the world through the eyes of others and walk in their shoes to experience their feelings. A mean score of 4.2 for recognizing emotions through digital tools in our data backs this up.

Today, however, we cannot ignore the possible harmful effects of too much screen time. Concerns raised by Vedechkina and Borgonovi (2021) and Sauce et al. (2022) about cognitive overload and problems controlling emotions because of too much media exposure are true. Our results, which show a mean score of 2.9 for cognitive overload and emotion control challenges, support this idea. They show that too much of a good thing (in this case, technology) can be harmful. Also, the differences were apparent when we looked at kids who used technology a lot vs. kids who used it little. Nabi and Wolfers (2022) agreed with parents' worry that too much digital media use could hurt the development of emotional intelligence and social skills. This matched our mean score of 2.6 for high-tech exposure and social skills.

On the other hand, Ventouris et al. (2021) and Panjeti-Madan & Ranganathan (2023) found that limiting screen time and encouraging face-to-face interactions, learning through observation, and traditional play seemed to build healthy social skills and empathy. Our data showed a mean score of 4.0 for low-tech exposure and traditional relationships.

The role of parental advice is interesting. Schunk and DiBenedetto (2020) and Jefferson (2023) went beyond emphasizing parent personal training by delving into certain essential functions that parents perform in the digital realm. As a result, our joint work is recognized with an average score of 4.6 for family problem mediation, indicating that family involvement in post-conflict recovery is appropriate. It illustrates that while parents can reap all of the benefits technology can provide for their children, they must equally mitigate the risks. However, Ventouris et al. (2021) and Panjeti-Madan & Ranganathan (2023) caution that if unsolved problems at home are combined with digital media and perverted human sensations, you may develop some emotional numbness. Our poll results show an average grade of 2.1 for a lack of advice. It demonstrates the importance of the parent's role in developing essential social and emotional skills during the 'age' of the digital era.

More importantly, technology may educate youngsters to be polite to their peers and to demonstrate compassion, but can these be done painlessly and pleasantly if controlled? According to Schunk and DiBenedetto's (2020) interpretation of Bandura's Social Cognitive Theory, instruction and scaffolds are critical in social

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DOI: 10.5281/zenodo.21424305

learning. This can facilitate the learning process; therefore, effective parent-child interactions should occur even in digital areas. Similarly, the cognitive-affective-social learning theory in digital contexts (Schneider et al., 2022) should be mentioned here. The cognitive, emotive, and social processes describe how humans interact with their mechanical equipment.

Despite being stated, for parents, educating their children how to use the internet in a safe and secure manner is just as important as helping their children relate and grow emotionally and socially. Technology can be an effective medium if used with appropriate social and emotional exercises to train the next generation.

5. Discussion and Conclusion

This finding shed more light on how challenging it can be for young kids to use technology and build their social and emotional skills simultaneously. There is no right or wrong way to view digital tools; the truth is in the middle. On the one hand, we have seen how well-made interactive games, simulations, and multimedia tools can help people understand other people's feelings, recognize their own, and take their point of view. The Cognitive-Affective-Social Theory of Learning in Digital Environments (Schneider et al., 2022) says that these digital experiences use people's natural ability to connect with stories and feel emotions. With careful planning, they can be used to make immersive spaces where kids can safely and naturally experience social situations, feelings, and moral dilemmas.

However, we cannot ignore the potential pitfalls of excessive or inappropriate technology use. Our results back up what Vedechkina & Borgonovi (2021) and Sauce et al. (2022) said about brain overload, trouble paying attention, and problems controlling emotions, all of which can make it harder to learn social skills and understand how others feel. This is a strong reminder that technology, like any other tool, should be used in moderation and with careful thought to how it might affect minds that are still growing.

The most important thing we learned from our study is probably how important parental advice and mediation are. Following the ideas of Social Cognitive Theory (Schunk & DiBenedetto, 2020), we've seen how parents can positively influence their children's attitudes and behaviors toward technology by being involved, showing them how to behave in social situations, and giving them support in digital settings. Parents who actively choose their child's digital experiences, help them talk about their feelings and social situations, and encourage a healthy mix of digital and non-digital activities can get the most out of technology while minimizing its risks.

On the other hand, not having parents around and seeing incorrect or emotionally numbing media can really slow down social and emotional development, as our results and those of Ventouris et al. (2021) and Panjeti-Madan & Ranganathan (2023) show. Technology does not work independently; it requires assistance to function correctly. Technology works in a variety of ways: it can be utilized as a tool, or the way people use it might help or hinder it.

Researchers have concluded that we must strike a balance and be mindful when children use technology, even when young. Digital tools are not about serving for or as a digital bad; instead, they are about adhering to the ideals that symbolize good and a possible current approach. It is about knowing the good and bad effects they can have and using parental advice to make a space that supports healthy social and emotional growth. By looking at things in this way, we can use technology to its fullest while preserving the essential human relationships and experiences that build empathy, emotional intelligence, and social skills.

Despite the results, the study had its limitations. It only examined a small group of people and didn't examine any other groups. This meant that our results might not work for all people and settings.

5.1. Conclusion

Today, we acknowledge digital age technology as part of our everyday routines, especially for the younger generation growing up in this period. Our results have also assisted us in raising our children in a computer-driven environment, providing them with all the social and mental abilities they will need for the rest of their lives. The study taught us that technology is neither good nor bad in and of itself; it depends on how we use it and the situation in which it is presented. Interactive games and video stories are two examples of well-designed digital tools that can help people understand other people's feelings, recognize their own, and take their points of view. These immersive experiences use our natural ability to connect with stories and make emotional connections, giving kids safe places to explore social situations and moral challenges. In this era, we cannot ignore the risks, though, of using technology too much or in the wrong way. Concerns about cognitive overload, trouble paying attention, and problems controlling emotions were repeated in our study. These problems can all make it harder to learn social skills and understand how others feel. Technology, like any other tool, should be used in balance and with careful thought for how it might affect minds that are still growing.

For parenting advice and to settle disagreements. Our results were in line with the ideas behind Social Cognitive Theory. They showed that having parents actively involved, setting a good example of how to behave in social situations, and giving kids support in digital settings can positively affect how they feel and act around technology. Parents who actively choose their child's digital experiences, help them talk about their feelings and social situations, and encourage a healthy mix of digital and non-digital activities can get the most out of technology while minimizing its risks.

On the other hand, not having parents around to help and seeing wrong or emotionally numbing media can slow down social and emotional development. It serves as a lesson that technology does not work in a vacuum; how it is used and the help that's given can make all the difference. So, experts and teachers should look at how kids use technology in the early years from various angles. We should put much effort into making well-designed digital tools that help kids learn social and emotional skills. We should also give parents the information and tools they need to manage this terrain effectively. They should also make spaces where technology and more traditional interaction can coexist peacefully. This will help people make the links and have the necessary experiences for empathy, emotional intelligence, and social competence.

Modern parents have more responsibilities than their parents do, and in this digital age, parents should take on the duties of teachers and mentors. The decision-making process is to determine what your child enjoys and is appropriate for their age while still ensuring constant face-to-face interactions, pretend play and the need for old-fashioned storytelling. Use the internet to demonstrate healthy behavior to others and steer the conversation about

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DOI: 10.5281/zenodo.21424305

emotions, interpersonal communication, and appropriate digital behavior.

Along the same lines, we can instill the ability to control digital material while maintaining the "human touch" that is the foundation of childhood education if technology is carefully considered and used in moderation during the early years of learning. People will advance with technology, so we must try to create a future in which empathy, emotional intelligence, and social skills are examples of what people will do in the future. As a result, all children will have the ability and care to navigate the digital environment with empathy and regard since they comprehend the essence of being human.

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DOI: 10.5281/zenodo.21424305