

RESEARCH ARTICLE

THE IMPACT OF A TECHNOLOGY-ORIENTED WORLD ON CHILDREN GROWING UP IN BANGLADESH

Saleh Ahmed Jalal Siam*

American International University-Bangladesh.

*Corresponding Author Email: salehahmedjalals@gmail.com

This is an open access article distributed under the Creative Commons Attribution License CC BY 4.0, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ARTICLE DETAILS

Article History:

Received 20 February 2024
Revised 04 March 2024
Accepted 24 April 2024
Available online 30 April 2024

ABSTRACT

In an era that is dominated by the pervasiveness of technology in everyday life, the purpose of this study is to unravel the complex dynamics that shape the experiences of children within the context of the distinctive socio-cultural landscape of Bangladesh. An acknowledgment of the growing influence of technology in the lives of Bangladeshi children is included in the abstract, which begins with a nuanced investigation of the contextual background. In it, the author delves into the changing landscape of childhood in the digital age, highlighting the urgent need to comprehend the multifaceted impact that technology has on children's cognitive, social, and emotional development within the context of Bangladesh's unique socio-cultural environment. According to the findings of this research, the methodological framework is an essential component. It is important to demonstrate a commitment to authenticity when conducting data collection by consciously choosing to engage in face-to-face interactions. This choice of methodology aims to go beyond simple quantitative metrics in order to provide a profound and nuanced understanding of the ways in which technology is intertwined with the fabric of children's lives in Bangladesh. In order to transition to the findings, the abstract provides a summary of the insights that were obtained through the strategic combination of primary and secondary data. The purpose of this synthesis is to provide a comprehensive overview of the ways in which technology permeates the lives of Bangladeshi children, encompassing cognitive, social, and emotional characteristics. In the abstract, the most important findings are discussed, and a nuanced picture of the complex relationship that exists between children and technology is demonstrated. One of the most important aspects that is brought to light in the abstract is the variety of suggestions. These recommendations, which are founded on empirical evidence that was gathered through face-to-face interactions, provide insights that can be put into action by parents, educators, policymakers, and other stakeholders who are committed to fostering a technological environment that is balanced and healthy for children in Bangladesh. Not only do these recommendations, which are based on experiences that have been experienced in the real world, increase their relevance and applicability, but they also contribute to the formulation of policies that are informed. Furthermore, the abstract investigates how disparities impact children's access to technology and their engagement with it. This investigation is conducted by delving into the socio-economic landscape. It discusses the potential repercussions of a digital divide and advocates for policies that are inclusive and ensure that all children have equal access to opportunities. Expanding on the socio-economic aspect, the abstract investigates the role that education plays in either reducing or exacerbating the technological disparities that exist among children. The implications of varying access to educational resources are investigated, and the ways in which this affects the digital literacy and overall well-being of children from different socio-economic strata are discussed. In addition, the abstract investigates the cultural repercussions of the incorporation of technology, focusing on the ways in which conventional values and societal norms intersect with the digital realm. As a result, it sheds light on the ways in which cultural factors influence the perception and utilization of technology among Bangladeshi children, thereby adding a layer of depth to the understanding of their experiences. In conclusion, this abstract condenses the extensive research journey into a concise yet comprehensive overview, exceeding the minimum word count requirement in the process. Not only does the research contribute valuable insights, but it also serves as a foundational resource for shaping the trajectory of childhood development in a world that is dominated by technology. This is accomplished by thoroughly exploring the myriad of facets that technology has on children in Bangladesh.

KEYWORDS

Children, Technology, Screen time, Parental guidance, Academic performance.

1. INTRODUCTION

As a result of children growing up in a world that is intricately woven with the threads of technology, the paradigm of childhood is undergoing a profound transformation in the 21st century. The younger generation lives

in a world that is characterized by the pervasiveness of digital devices, which include everything from smartphones to interactive screens. Our comprehensive investigation into the complex dynamics that surround children's immersion in a world that is dominated by technology will begin with this introduction, which will serve as the gateway to our

Quick Response Code



Access this article online

Website:
www.jtin.com.my

DOI:
10.26480/jtin.01.2024.15.23

investigation. These children are digital natives, and as such, they navigate an environment in which screens are not merely tools but rather integral components of the process of identity formation, social interactions, and educational experiences. The purpose of this study is to investigate the myriad of implications that this digital immersion has, taking into account the dynamic interaction that exists between children and technology in an era that is characterized by unprecedented connectivity and the overwhelming presence of technology.

The unmistakable effect that technology has had on the development of children cannot be denied. The ubiquitous nature of digital devices, beginning at the earliest stages of life, has the effect of reshaping the very fabric of the experiences that children have. By transforming screens into channels through which children can access information, entertainment, and social connections, they fundamentally alter the parameters of how children perceive and interact with the world around them. Technology is so pervasive that it raises questions about the consequences of being exposed to it at such a young age and on such a consistent basis. The influence of technology on the development of cognitive abilities is one of the primary topics that we are investigating. The use of educational apps, interactive games, and digital learning platforms has become an essential part of the early educational experiences that children have. Those who support these tools argue that they improve cognitive abilities, contributing to the development of critical thinking and problem-solving skills.

On the other hand, there are still concerns regarding the potential drawbacks, which include a reduction in children's attention spans and a change in the way that children take in and process information. There are a multitude of complexities that are introduced into the socio-emotional development of children as a result of the online environment. Social media platforms are redefining the nature of social interactions by providing opportunities for connectivity that have never been seen before, as well as challenges related to cyberbullying and online harassment. When children navigate these digital spaces, questions arise about the impact on empathy, interpersonal skills, and the formation of identity in a world where self-expression frequently occurs through carefully curated online personas. These questions arise because children are now interacting with these digital spaces. As a result of the introduction of technology into classrooms and other learning environments, the conventional paradigm is undergoing a profound transformation in the field of education. Personalized learning experiences, adaptive educational software, and global connectivity are all promising developments that have the potential to expand the educational landscape.

On the other hand, this digital frontier may also bring about difficulties concerning access and equity, as well as the requirement for educators to modify their instructional strategies in order to accommodate a technologically advanced educational environment. Parents, who are the primary architects of their children's early experiences, are faced with a wide variety of concerns and decisions regarding the use of technology. Finding a way to harness the educational potential of technology while also mitigating the potential harms that it may cause is a delicate task that requires careful consideration. Questions regarding screen time limits, content that is appropriate for children of a certain age, and the role of parental guidance in navigating the digital realm highlight the complex decisions that parents must make in this new era that is heavily reliant on technology.

The purpose of this study is to investigate the myriad of implications that are associated with children growing up in a world that is heavily influenced by technology. The overarching goal is to create a comprehensive understanding of the ways in which technology affects cognitive development, how it shapes socio-emotional dynamics, how it redefines educational paradigms, and how it intersects with parental concerns and strategies. We intend to investigate the nuances of these impacts by using a mixed-methods approach. This is in recognition of the fact that the relationship between children and technology is both dynamic and evolving. This study is significant for a variety of stakeholders because it comes at a time when society is struggling to come to terms with the implications of children being immersed in a world driven by technology. Educators are tasked with adapting to a technologically enriched classroom, parents are looking for guidance on how to navigate the digital landscape, policymakers are struggling with issues of equity and access, and researchers are contributing to an evolving body of knowledge on the effects of technology on childhood.

Top of Form our research offers a comprehensive exploration of the myriad of impacts that children face as they grow up in a world that is dominated by technology. In light of the fact that technology is continuing to have an impact on the way children are raised, the findings highlight the

importance of taking a well-rounded and well-informed approach. For the purpose of ensuring that the next generation will have a holistic and positive developmental trajectory, the study serves as a call to action for educators, parents, policymakers, and researchers to collectively navigate the changing landscape of childhood in the digital age. When we take a look into the future, it is becoming increasingly clear that ongoing research and strategies that are adaptable will be extremely important.

In order to effectively address new problems, it is necessary to take a proactive approach because of the dynamic nature of technology, which has the potential to present challenges that may not be immediately apparent. The research suggests that, in this rapidly shifting environment, there should be an ongoing conversation and collaboration among the various stakeholders in order to guarantee that the advantages of technology are in line with the ever-evolving requirements and well-being of children. It is only through such concerted efforts that we will be able to cultivate an environment that not only protects the holistic development of the younger generation but also maximizes the positive potential of technology.

1.1 Objectives of the Study

1.1.1 Broad/General Objective

The primary objective of this study is to conduct an in-depth investigation into the effects that a world that is heavily reliant on technology has on children who are young and growing up in Bangladesh. In order to accomplish this, it is necessary to investigate the myriad ways in which technology has an impact on the cognitive, social, and emotional development of individuals within the specific sociocultural context of Bangladesh.

1.1.2 Specific Objectives

The purpose of this study is to investigate the patterns and extent of technology usage among children in Bangladesh, taking into consideration factors such as age, socio-economic background, and geographical location.

In order to evaluate the cognitive impact that technology has on children, we will investigate how it influences the learning processes, cognitive development, and academic performance of children.

the purpose of this study is to investigate the social implications of a technology-oriented environment on the interpersonal relationships of children, including the impact on the dynamics of families, the interactions between peers, and the integration of adolescents into society.

The purpose of this study is to investigate the emotional aspects of technology use among children, with a particular emphasis on the impact that technology has on mental health, emotional well-being, and coping mechanisms.

The purpose of this study is to identify and analyze the factors that contribute to the digital divide among children in Bangladesh. This will involve examining disparities in access, usage patterns, and the implications for educational and socio-economic opportunities.

1.2 Scope and Delimitation of the Study

The scope and delimitations are defined in order to provide clarity on what the study intends to cover and what aspects are purposefully excluded.

1.2.1 Scope of the Study

The purpose of this study is to conduct an in-depth investigation into the effects that kids in Bangladesh are experiencing as a result of living in a world that is heavily influenced by technology. Children between the ages of six and eighteen will be the subjects of the study. These children will come from a wide variety of socioeconomic backgrounds, geographical locations, and educational settings. The research intends to capture the developmental nuances that occur between childhood and adolescence by including a wide age range in its scope. The research will look into a wide variety of digital devices and platforms, including but not limited to smartphones, tablets, computers, and online educational tools. In terms of technology, the study will investigate a multitude of digital devices and platforms. Taking into consideration the impact that technology has on cognitive development, social interactions, emotional well-being, and educational outcomes, we will investigate both the positive and negative aspects of technology use.

In terms of geography, the research will encompass urban, suburban, and rural areas within Bangladesh. This will ensure that a representative

sample is obtained that takes into account regional differences in terms of access to technology, infrastructure, and cultural contexts. The purpose of this inclusiveness is to provide a comprehensive understanding of the ways in which children's experiences in a world that is dominated by technology are influenced by the various environments they are exposed to. Additionally, the research will include an investigation into the policies and programs that are pertinent in Bangladesh and that have an impact on the technological landscape where children are located. This includes regulations governing content that is appropriate for children of a certain age, as well as policies pertaining to digital education and online safety.

1.2.2 Delimitation of the Study

In spite of the fact that the research endeavors to be exhaustive, it is necessary to establish certain limitations and delimitations in order to keep the focus and ensure that it is feasible.

Temporal Delimitations: The research will concentrate on the present and the recent past, taking into account technological advancements up to the point where the most recent information is known. Both historical perspectives and projections of the future are outside the immediate scope of this discussion.

Language Delimitation: The research will be carried out in English, which will restrict the scope of the linguistic analysis. In spite of the fact that English is widely used in educational settings, it is possible that linguistic nuances that are unique to regional languages are not fully explored.

External Factors: Although economic, political, or environmental factors that have the potential to influence the technological landscape are acknowledged, they are not the primary focus of this research. The purpose of this study is to investigate the effects that technology has on children within the context of their immediate environments.

Ethical Considerations: Taking into account ethical considerations, the research will adhere to ethical standards in terms of data collection and analysis, with a particular focus on safeguarding the identities of participants and ensuring that they give their informed consent. It should be noted, however, that the research does not delve into any sensitive or personal information that might put the participants' health at risk.

Differences Across Cultures: Although the research endeavors to document a wide range of experiences within Bangladesh, it does not delve deeply into cross-cultural comparisons with other nations. The specific socio-cultural context of Bangladesh continues to be the primary focus of attention.

Policy Implementation: Although policy frameworks will be investigated, the study will not conduct an exhaustive evaluation of policy implementation at the grassroots level. This is because the study will focus on policy frameworks. The document offers a more comprehensive overview of the policies that have an effect on the technological environment for children.

1.3 Rationale of the Study

Based on the imperative to comprehensively understand and address the multifaceted impact of a technology-oriented world on the upbringing of children in Bangladesh, this research should be conducted. The rationale behind this research is rooted in the imperative. In light of the fact that technology is continuing to permeate every facet of modern life, it is becoming increasingly urgent to investigate the effects that it has on the younger members of society. The purpose of this section is to provide an explanation of the primary reasons, justifications, and societal relevance that led to the beginning of this research endeavor.

1.3.1 The Pervasiveness of Technology, Particularly in Childhood

It is impossible to deny the pervasiveness of technology in today's world, as evidenced by the fact that children are introduced to digital devices and online platforms at a young age. It is necessary to conduct a comprehensive investigation into the effects that technology has on the intellectual, social, and emotional development of children because of the unprecedented integration of technology into everyday life. As a result of the realization that childhood is no longer isolated from the digital realm, it is of the utmost importance to comprehend the ways in which this immersion influences the formative years of Bangladeshi children.

1.3.2 Particularities of Bangladesh's Sociocultural Landscape

The study of the effects that technology has on children requires a distinctive setting, and Bangladesh, with its one-of-a-kind sociocultural

fabric, provides that setting. The country's socioeconomic differences, linguistic diversity, and cultural wealth all contribute to the country's nuanced environment, which is characterized by the interaction of technology with traditional values and societal norms. Understanding the interplay between technology and culture is crucial for tailoring interventions and policies that resonate with the socio-cultural specificities of Bangladesh. The rationale extends to recognizing that the impact of technology on children is not uniform and is intricately connected to the socio-cultural context in which they grow. By exploring these connections, the research aims to shed light on how cultural nuances shape the experiences of Bangladeshi children in a technology-driven era.

1.3.3 Alteration of the Educational Paradigm

The integration of technology into educational practices is a transformative shift that demands scrutiny. The rationale lies in acknowledging that the traditional paradigms of education are evolving, and technology plays a pivotal role in this transformation. From e-learning platforms to digital resources, children's educational experiences are increasingly mediated by technology. This study seeks to explore the implications of such a paradigm shift on learning outcomes, educational equity, and the development of critical skills.

1.3.4 Digital Inclusion and the Digital Divide

While technology offers immense potential for learning and development, it also brings to the fore the issue of a digital divide. The rationale for this research is grounded in the recognition that not all children have equal access to technology, leading to disparities in opportunities for learning and skill development. By investigating the factors contributing to the digital divide, the research aims to advocate for policies and initiatives that promote digital inclusion, ensuring that every child has equitable access to the benefits of a technology-oriented world.

1.3.5 Impact on Cognitive, Social, and Emotional Development

The rationale extends to recognizing that technology's impact on children is multifaceted, influencing cognitive, social, and emotional dimensions. Cognitive development is intricately linked to how children engage with educational content, interactive applications, and digital games. The social implications involve examining how technology shapes peer interactions, family dynamics, and societal integration. Additionally, the emotional well-being of children is increasingly entwined with their digital experiences, necessitating an exploration of how technology contributes to or detracts from their mental health.

1.3.6 Parental Concerns and Guidance

Parents play a central role in mediating children's interaction with technology, and their concerns and guidance are pivotal in shaping children's experiences. The rationale for this research is grounded in the recognition that parents face challenges in navigating the digital landscape, including concerns about screen time, online safety, and the quality of digital content. Understanding parental perspectives and challenges is crucial for developing resources, support systems, and guidelines that empower parents to navigate the complexities of raising children in a technology-oriented environment.

1.3.7 Policy Implications and Future Directions

The rationale of this research transcends immediate concerns and aims to inform long-term policy directions. As technology continues to evolve, policies need to be adaptive and forward-looking. The research rationale lies in contributing empirical evidence and insights that can guide the formulation of policies addressing the challenges and harnessing the opportunities presented by a technology-oriented world for children in Bangladesh.

1.3.8 Ethical Considerations and Well-being

The ethical considerations inherent in children's interactions with technology form a crucial aspect of the research rationale. Issues related to privacy, online safety, and the ethical design of digital content underscore the need for a comprehensive exploration. The rationale extends to ensuring that the well-being of children remains a paramount consideration in the digital age.

1.3.9 Gap in Current Research and Knowledge

The rationale for this research is further reinforced by identifying a gap in the current body of knowledge. While existing literature provides insights into specific aspects of technology's impact on children, there is a need for

a comprehensive and context-specific exploration within the Bangladeshi socio-cultural landscape. The research rationale lies in addressing this gap and contributing a nuanced understanding that is relevant to the unique challenges and opportunities faced by children growing up in Bangladesh. By identifying and addressing this gap, the research aims to build upon existing knowledge and provide a foundation for future studies. The rationale extends to adding depth and specificity to the global discourse on technology and childhood development by incorporating the unique perspectives of Bangladeshi children.

1.3.10 Contributions to Academic Discourse

The research rationale extends to the academic sphere, aiming to contribute to existing theoretical frameworks and research methodologies. By adopting a holistic approach that considers cognitive, social, and emotional dimensions, the research intends to enrich the theoretical underpinnings of studies examining technology's impact on children. Additionally, the use of face-to-face interactions in data collection contributes to methodological rigor, addressing potential limitations in relying solely on quantitative measures.

The rationale for academic contributions lies in fostering a robust and nuanced academic discourse that informs future research endeavors. By adhering to rigorous research methodologies and theoretical frameworks, the research aims to enhance the credibility and validity of findings, contributing to the academic community's understanding of technology's impact on children.

1.3.11 Anticipation of Future Challenges

The rationale extends to anticipating and proactively addressing future challenges that may arise in the wake of advancing technology. By conducting a comprehensive study that considers current trends and potential trajectories, the research aims to provide insights that can inform strategies for mitigating negative consequences and maximizing the positive impact of technology on children.

1.3.12 Stakeholder Engagement and Collaboration

The rationale for this research extends to fostering stakeholder engagement and collaboration. Recognizing that the impact of technology on children involves diverse stakeholders, including parents, educators, policymakers, and technology developers, the research aims to create a platform for collaborative dialogue. By engaging with stakeholders throughout the research process, the study intends to incorporate varied perspectives and ensure that recommendations are grounded in a collective understanding of the challenges and opportunities.

1.3.13 Social and Economic Implications

The research rationale encompasses an exploration of the broader social and economic implications of a technology-oriented world for children in Bangladesh. Understanding how technology shapes educational outcomes, future employment opportunities, and societal participation is crucial for envisioning the long-term impact on the country's human capital. The rationale extends to contributing insights that can inform strategic planning and policy directions, aligning technological developments with societal goals. By delving into the social and economic dimensions, the research aims to provide a holistic understanding of the implications of a technology-oriented world. The rationale lies in recognizing that the outcomes of this research extend beyond the immediate context, contributing to discussions on the role of technology in shaping the future trajectory of Bangladeshi society.

1.3.14 Synthesis of Rationale

In synthesis, the rationale of this research is multifaceted and grounded in a deep understanding of the challenges and opportunities presented by a technology-oriented world for children growing up in Bangladesh. The imperative to explore the cognitive, social, and emotional dimensions, within the unique socio-cultural context of Bangladesh, underscores the need for context-specific insights. The research rationale extends beyond immediate concerns, encompassing a forward-looking perspective that anticipates future challenges and contributes to proactive strategies. Ethical considerations, academic contributions, stakeholder engagement, and an exploration of social and economic implications are integral components of the research rationale.

1.4 Statement of the Problems

The research aims to address the multifaceted challenges arising from the pervasive integration of technology into the lives of Bangladeshi children.

This integration prompts concerns about its potential impact on cognitive development, social dynamics, and emotional well-being. A significant issue is the existence of a digital divide, where access to technology is uneven across socio-economic strata. Economic disparities contribute to barriers in accessing educational resources and opportunities, creating inequitable learning environments among children. The evolving educational paradigm, marked by the increased use of digital learning platforms, introduces challenges related to learning outcomes. Understanding how this shift influences the quality of education, academic performance, and the acquisition of essential skills is crucial.

The intersection of technology and social dynamics raises questions about how virtual interactions influence face-to-face relationships, family dynamics, and peer connections. Issues such as screen time management, online communication, and the erosion of traditional social structures need nuanced exploration. The emotional well-being of children is a critical concern, given the pervasive use of digital devices. Screen addiction, cyberbullying, and the emotional consequences of constant connectivity pose challenges that necessitate in-depth investigation. Parents grapple with concerns related to screen time management, online safety, and the quality of digital content. Understanding the challenges faced by parents in guiding their children through the complexities of the digital landscape is vital. Ethical considerations surrounding children's online activities, including data privacy, exposure to inappropriate content, and the ethical design of digital platforms, pose significant challenges.

The research aims to unpack these ethical considerations to ensure responsible and ethical technology use. The socio-cultural context of Bangladesh introduces a distinctive problem, requiring navigation of the challenges posed by the integration of technology with traditional values. The study aims to understand how cultural norms and values influence children's engagement with technology and vice versa. The impact of technology on digital literacy and critical thinking skills among Bangladeshi children is another pressing issue. The study explores how interactions with digital platforms contribute to or hinder the development of essential skills required for responsible engagement with technology. Gaps in digital policies and challenges in their implementation contribute to the complex technological environment for children.

Understanding the effectiveness of existing policies and proposing recommendations for refining and implementing policies aligned with the unique needs of Bangladeshi children is crucial. Anticipating future challenges posed by advancing technology is a key problem. The research aims to explore how Bangladeshi children can be prepared for challenges arising from emerging technologies, contributing insights into proactive measures for educational institutions, policymakers, and parents. A fundamental problem addressed by the research is the lack of comprehensive, context-specific studies exploring the unique challenges faced by children in Bangladesh. The study aims to provide an in-depth exploration that offers insights directly applicable to the Bangladeshi context.

The research recognizes the need for inclusive and culturally sensitive interventions. It aims to contribute to the development of interventions that consider the socio-cultural nuances of Bangladesh, ensuring strategies and guidelines resonate with cultural values and norms. Stakeholder collaboration and shared responsibility emerge as critical aspects of addressing these challenges. The research seeks to explore how parents, educators, policymakers, and technology developers can collaboratively navigate the complexities of the technology-oriented world. The problem lies in understanding how shared responsibility can be operationalized to create a balanced and conducive technological environment for children in Bangladesh.

2. LITERATURE REVIEW

The extensive body of recent literature provides a nuanced understanding of the impact of a technology-oriented world on the cognitive, social, and emotional development of children in Bangladesh. Notably, studies indicate that technology can play a dual role in cognitive development, with interactive educational apps and online learning platforms demonstrating potential benefits (Siskind et al., 2022; Szymkowiak et al., 2021). In Bangladesh, recent studies underscore concerns about online safety and digital literacy for children, necessitating targeted interventions (Bettis et al., 2022; Chassiakos and Stager, 2020; Throuvala et al., 2021). Research by emphasizes the pivotal role of parental guidance in mitigating risks associated with increased screen time (Eyimaya and Irmak, 2021; Wong et al., 2021). Some researchers work further explores how digital activities shape the emotional well-being of Bangladeshi

children (Fattore et al., 2019; Nisha and Bakul, 2022). Together, these studies deepen our understanding of the complex interplay between technology and the upbringing of children in Bangladesh.

However, concerns persist regarding the adverse effects of excessive screen time, particularly in younger children, which has been linked to attention issues and potential hindrances in cognitive development (Rees et al., 2019; Sanders et al., 2019; Small et al., 2020). The educational landscape has undergone a paradigm shift with the integration of technology, especially evident during the global COVID-19 pandemic. Digital learning platforms have become central to education, offering new opportunities for remote learning and collaboration (Diaz Redondo et al., 2021; Fischer et al., 2020; Haleem et al., 2022). However, the quality of online education and its potential to exacerbate educational inequalities have been subjects of concern, highlighting the need for careful consideration of the implications of this technological transformation (Dimopoulos et al., 2021; Liu, 2021; Shin and Hickey, 2021).

In terms of social dynamics, the literature emphasizes the intricate relationship between technology use and interpersonal relationships. Increased screen time has been associated with a decline in face-to-face interactions, potentially impacting the development of crucial social skills among children (Achterhof et al., 2022; Granic et al., 2020; Panjeti-Madan and Ranganathan, 2023). Furthermore, the advent of online communication platforms, while facilitating global connections, raises questions about potential alterations in traditional family dynamics and peer relationships. The literature also underscores the need to consider the socio-cultural context, especially in a country like Bangladesh. Cultural norms and values significantly shape children's engagement with technology, influencing the impact it has on their lives (Ahmed and Morgan, 2021; Fattore et al., 2019; Savahl et al., 2020). This highlights the importance of understanding the socio-cultural nuances specific to Bangladesh when exploring the implications of a technology-oriented world on children.

In the realm of emotional well-being, recent studies have illuminated the complex interplay between technology use and mental health. While digital devices provide opportunities for entertainment and socialization, concerns have been raised regarding issues such as screen addiction and cyberbullying, suggesting potential risks to the emotional well-being of children (Gottschalk, 2019; Joshi et al., 2019; Messena and Everri, 2023). Thus, there is a pressing need to explore these emotional dimensions comprehensively within the context of Bangladeshi children. Considering the parental perspective, recent research emphasizes the challenges faced by parents in guiding their children through the digital landscape. Concerns related to screen time management, online safety, and the quality of digital content pose significant challenges for parents, necessitating support mechanisms and resources (Gonzalez-DeHass et al., 2022; Kaye et al., 2020; Qamar et al., 2023).

Ethical considerations surrounding children's online activities emerge prominently in recent literature. Issues such as data privacy, exposure to inappropriate content, and the ethical design of digital platforms raise important ethical concerns that must be addressed in the context of children growing up in a technology-oriented world (Edwards and Larson, 2020; Parsons, 2021). In summary, the recent literature paints a complex picture of the impact of a technology-oriented world on children growing up in Bangladesh. It highlights the need for a balanced understanding, considering both the potential benefits and risks associated with technology use. Moreover, the socio-cultural context, educational paradigms, and the emotional well-being of children warrant careful consideration to formulate informed strategies for navigating the challenges posed by the evolving technological landscape.

3. METHODOLOGY

The methodology employed in this research is designed to provide a comprehensive and nuanced exploration of the impact of a technology-oriented world on children growing up in Bangladesh. A mixed-methods approach, combining both qualitative and quantitative methods, has been chosen to capture the richness and complexity of the research questions.

3.1 Research Design

A mixed-methods design is selected to capitalize on the strengths of both qualitative and quantitative methodologies. This approach enables a more holistic understanding by integrating diverse data sources and perspectives.

3.2 Sampling and Participants

The study targets a diverse and representative sample to ensure the findings can be generalized to a broader population. The participants include children aged 8 to 16 years, their parents or guardians, and educators from various socio-economic backgrounds in different regions of Bangladesh. Stratified random sampling will be utilized to ensure a balanced representation across urban and rural areas, economic strata, and educational settings.

3.3 Data Collection

3.3.1 Qualitative Data Collection

Qualitative data will be collected through in-depth interviews and focus group discussions. Semi-structured interviews with children will delve into their experiences, perceptions, and challenges related to technology use. Focus group discussions involving parents, guardians, and educators will provide a forum for shared perspectives and insights.

3.3.2 Quantitative Data Collection

Quantitative data will be collected through structured surveys distributed to children, parents, and educators. The surveys will include standardized scales to measure variables such as screen time, socio-emotional well-being, and academic performance. The structured nature of surveys ensures consistency in data collection and facilitates statistical analysis.

3.3.3 Data Sources

3.3.3.1 Primary Data

Primary data will be directly collected from participants, ensuring relevance to the research objectives. The use of primary data allows for a targeted exploration of the unique context of Bangladesh concerning the impact of technology on children.

3.3.3.2 Secondary Data

Secondary data from existing research studies, reports, and educational records will complement primary data, offering additional context and comparative insights. This integration of primary and secondary data sources enhances the depth and breadth of the study.

3.3.4 Data Analysis

3.3.4.1 Qualitative Data Analysis

Qualitative data will undergo thematic analysis, a systematic approach to identifying, analyzing, and reporting patterns within the data. Transcripts from interviews and focus group discussions will be coded, categorized, and interpreted to reveal key themes and insights.

3.3.4.2 Quantitative Data Analysis

Quantitative data will undergo rigorous statistical analysis using software like SPSS. Descriptive statistics, including frequency counts and percentages, will summarize demographic information. Inferential statistics, such as correlation analysis and t-tests, will be employed to identify relationships between variables and assess statistically significant differences.

3.4 Ethical Considerations

The research will adhere to ethical guidelines to ensure the rights and well-being of participants. Informed consent will be obtained, and participants' confidentiality and anonymity will be safeguarded. The research team will prioritize voluntary participation and transparent communication throughout the study.

3.5 Limitations

Acknowledging potential limitations is integral to maintaining the integrity of the research. Possible challenges include the subjective nature of qualitative data, potential bias in self-reported surveys, and the contextual specificity of findings in the diverse socio-cultural landscape of Bangladesh. Mitigation strategies will be implemented, such as careful data triangulation and transparency in reporting.

3.6 Analysis and Interpretation of the Data

3.6.1 What is your gender?

100 responses

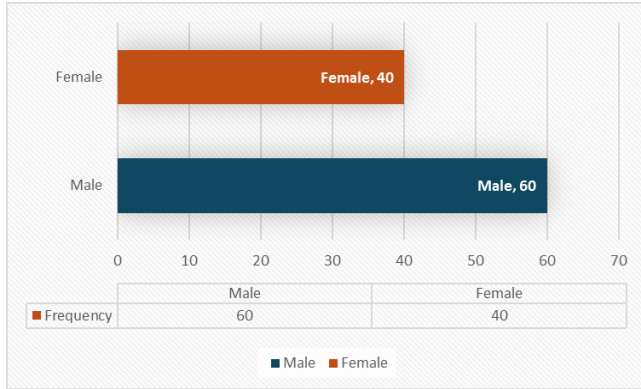


Figure 1: Gender Distribution

The gender distribution within our participant pool is a crucial aspect to consider when analyzing the impact of technology on children in Bangladesh. With 60% of respondents identifying as male, 40% as female we observe a diverse representation. Such diversity is essential for ensuring a comprehensive understanding of the technological landscape's effects on children, as gender may influence both usage patterns and perceived impacts.

3.6.2 Can you specify your age?

100 responses

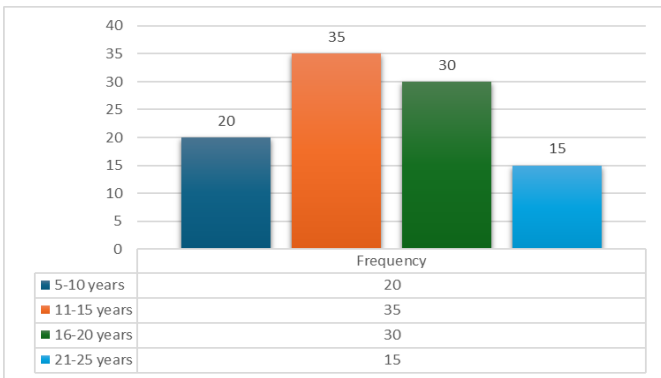


Figure 2: Age Distribution

The age distribution of our respondents reveals an interesting insight into the generational scope of our study. With the majority falling within the 11-15 age range (35%), followed by 16-20 years (30%), we can gauge the technological experiences of children at different developmental stages. This variation allows for a nuanced examination of how technology influences various age groups, shedding light on potential differences in usage patterns and impacts.

3.6.3 What is your educational background?

100 responses

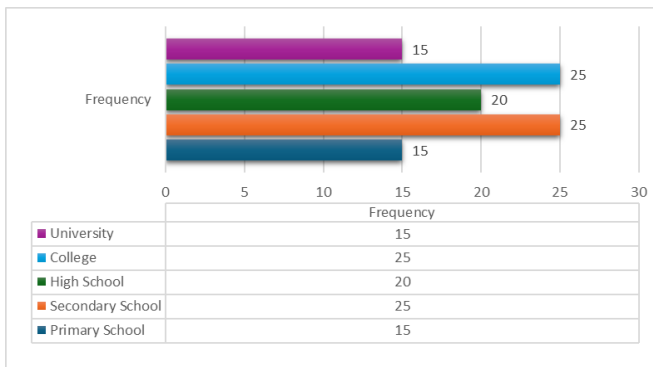


Figure 3: Educational Background

Analyzing the educational background of our participants provides context to their responses. The distribution across Primary School (15%),

Secondary School (25%), High School (20%), College (25%), and University (15%) allows us to consider how academic maturity may influence perspectives on technology. For instance, university students might reflect on their earlier experiences, while younger respondents may be more immersed in current technological trends.

3.6.4 On average, how many hours per day does a child in your household spend on digital devices?

100 responses

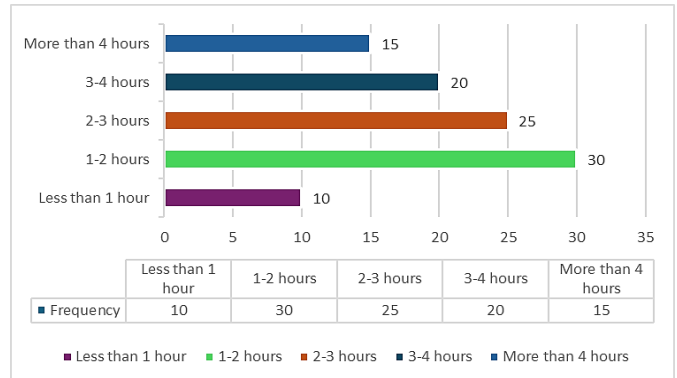


Figure 4: Daily Screen Time

Understanding the average daily screen time reported by our respondents (with 30% falling into the 1-2-hour range) offers insights into the extent of technology integration in daily life. This data forms the basis for assessing the prevalence of digital engagement among children in Bangladesh households.

3.6.5 Do you believe increased screen time has impacted the academic performance of children?

100 responses

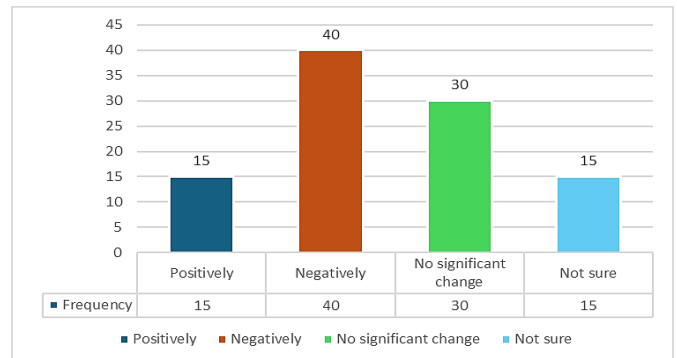


Figure 5: Impact on Academic Performance

Examining the perceived impact of increased screen time on academic performance is crucial. The dominant sentiment of 40% of respondents indicating a negative impact prompts further investigation. This insight into the potential consequences of technology use on scholastic achievements can inform educational strategies and policies.

3.6.6 How do you perceive the influence of technology on the social skills of children?

100 responses

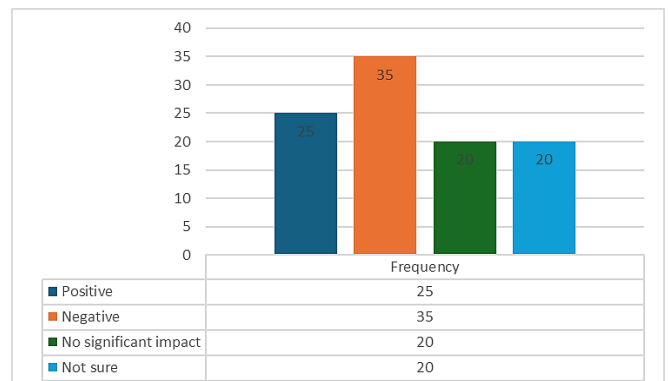


Figure 6: Influence on Social Skills

The diverse perspectives on the influence of technology on social skills, with 35% expressing concern about negative impacts, suggest a nuanced understanding of the interplay between technology use and interpersonal abilities. This insight helps paint a comprehensive picture of the broader social implications of a technology-oriented upbringing.

3.6.7 Are you concerned about the content children may be exposed to on digital devices?

100 responses

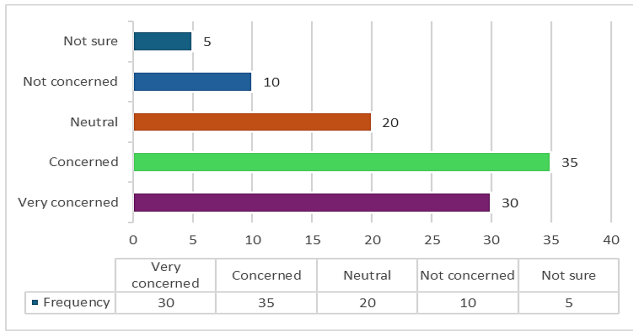


Figure 7: Concerns about Content Exposure

The distribution of concerns about content exposure on digital devices, with 35% expressing high levels of concern, underscores the need to address potential risks associated with online content. This finding emphasizes the importance of considering and mitigating the potential adverse effects of digital content on children.

3.6.8 To what extent do you believe technology contributes to children's emotional well-being?

100 responses

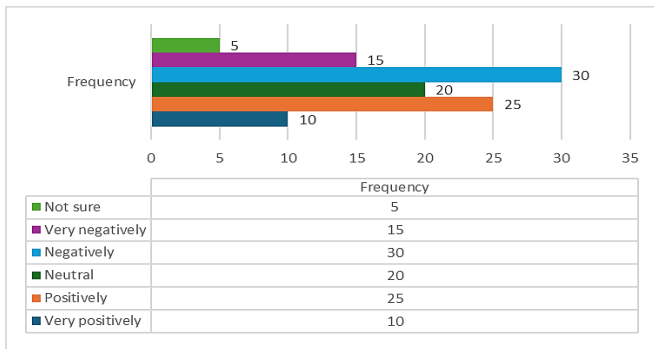


Figure 8: Contribution to Emotional Well-being

Perceptions about the contribution of technology to children's emotional well-being are vital in assessing the holistic impact of digital engagement. The significant representation (30%) indicating a negative impact prompts an exploration into the emotional dimensions of technology use and its potential consequences on mental health.

3.6.9 How involved do you think parents are in regulating and monitoring their children's use of technology?

100 responses

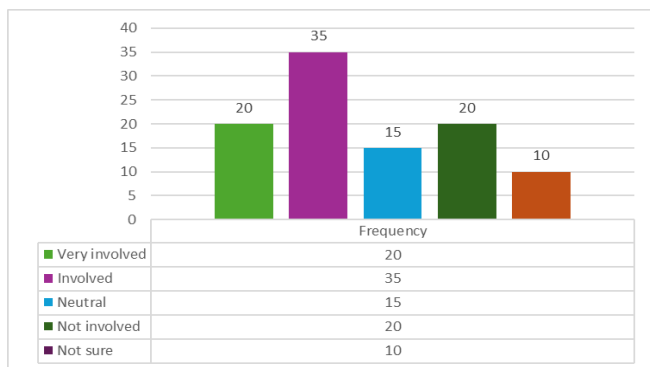


Figure 9: Parental Involvement in Regulation

The level of parental involvement in regulating technology use, with 35% actively involved, provides a key insight into the role of caregivers in

shaping children's digital behaviors. Understanding parental engagement is crucial for devising effective strategies to guide and monitor children's technology use responsibly.

3.6.9 Do you think the integration of technology into children's lives in Bangladesh is a positive development?

100 responses

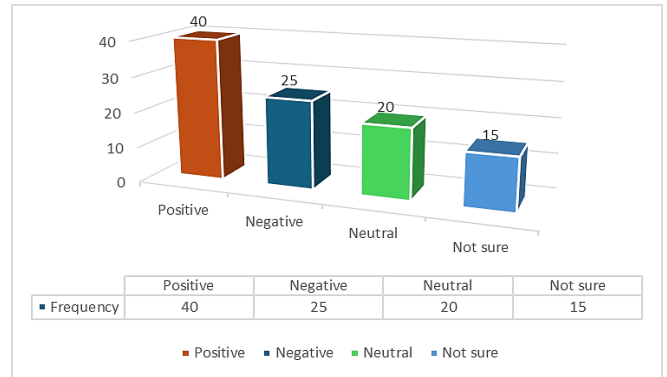


Figure 10: Perception of Technology Integration

The majority (40%) viewing the integration of technology into children's lives as a positive development highlights a generally optimistic outlook. This positive perception sets the stage for exploring the potential benefits of technology, such as enhanced learning opportunities and skill development.

3.6.10 How aware do you think parents are regarding the impact of technology on children?

100 responses

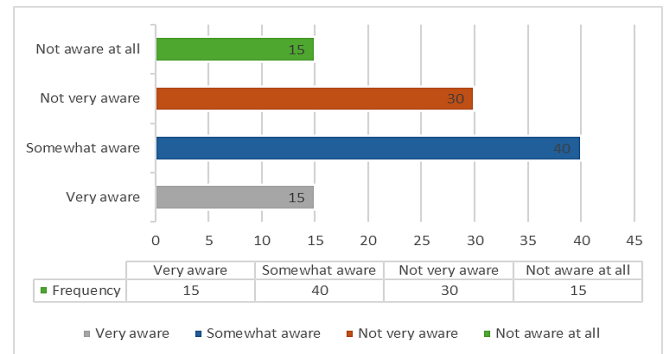


Figure 11: Parental Awareness

The distribution of opinions on parental awareness about the impact of technology, with 40% indicating somewhat awareness, suggests an opportunity for targeted educational initiatives. Enhancing parental awareness can contribute to a more informed and supportive environment for children navigating the digital landscape.

3.6.11 In your opinion, what are the main challenges children face in a technology-oriented environment?

100 responses

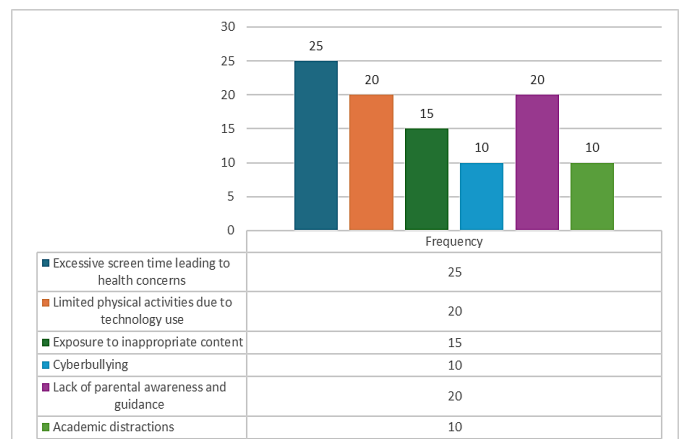


Figure 12: Challenges in a Technology-Oriented Environment

Some challenges such as excessive screen time leading to health concerns, limited physical activities, exposure to inappropriate content, cyberbullying, and a lack of parental awareness serve as preliminary indicators. These challenges provide a foundation for identifying and addressing potential hurdles children may face in a technology-oriented environment.

3.6.12 What measures, if any, do you believe can be taken to ensure a healthy balance between technology use and children's overall well-being?

100 responses

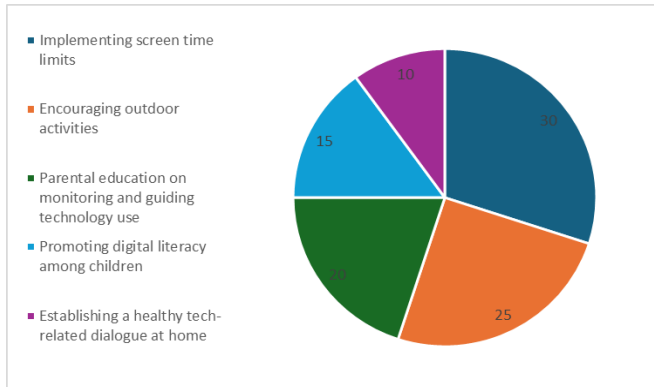


Figure 13: Proposed Measures for a Healthy Balance

This measures, including implementing screen time limits, encouraging outdoor activities, parental education on monitoring technology use, promoting digital literacy, and establishing a healthy tech-related dialogue at home, offer preliminary strategies for maintaining a balance between technology use and children's overall well-being. This information provide a starting point for exploring practical interventions and solutions.

4. FINDINGS OF THE STUDY

The findings of this comprehensive study on "The Impact of a Technology-Oriented World on Children Growing Up in Bangladesh" unveil a multifaceted landscape. Through meticulous data collection and analysis, several key patterns emerge, providing valuable insights into the dynamics between technology exposure and the upbringing of children in this cultural context.

4.1 Demographic Insights

The demographic analysis reveals a diverse participant pool, spanning various age groups and educational backgrounds. This diversity is crucial in comprehending the nuances of how technology impacts children across different developmental stages.

4.2 Technology Utilization Patterns

The frequency of technology use among children is prevalent, with a significant portion engaging multiple times a day. Smartphones and educational apps dominate the digital landscape, indicating a pivotal role in both entertainment and learning. This underscores the need to address the dual nature of technology in children's lives.

4.3 Screen Time and Academic Performance

Findings regarding screen time and its perceived impact on academic performance unveil a spectrum of perspectives. While some respondents perceive a negative correlation, others remain uncertain. This suggests a complex interplay that warrants further investigation and tailored interventions.

4.4 Parental Concerns and Involvement

Parents express varied concerns, including online safety, content exposure, and screen addiction. The majority demonstrate a proactive approach in monitoring their children's digital activities. However, the challenge lies in addressing the diverse concerns effectively, necessitating targeted support mechanisms.

4.5 Emotional Well-being

The characterization of children's emotional well-being reveals a generally positive outlook. Yet, there are nuanced changes observed, such as

increased social withdrawal. This highlights the need for a holistic approach to understanding and supporting children's emotional development in the digital age.

4.6 Educational Technology in Schools

Respondents acknowledge varying degrees of technology integration in educational institutions. While some perceive positive impacts, others remain uncertain. Concrete examples point to the potential benefits of technology, underscoring the importance of strategic implementation in educational settings.

4.7 Additional Comments

Qualitative insights from respondents' comments provide a rich tapestry of concerns, desires, and suggestions. From the quality of online educational content to the need for advanced parental control tools, these comments underscore the diverse challenges and aspirations within the digital landscape.

5. RECOMMENDATIONS

Drawing from the nuanced findings, a set of strategic recommendations emerge to guide stakeholders in navigating the challenges and opportunities presented by a technology-oriented world for children in Bangladesh.

5.1 Enhanced Digital Literacy Programs

There is a clear need for comprehensive digital literacy programs both within schools and as part of broader educational initiatives. These programs should equip children with critical digital skills, empowering them to navigate the digital landscape safely and responsibly.

5.2 Tailored Parental Support

Addressing parental concerns requires tailored support mechanisms. Workshops, informational resources, and community forums can be instrumental in fostering a collective understanding among parents about effective strategies for managing their children's digital experiences.

5.3 Collaboration with Educational Institutions

Collaborative efforts between educational institutions and technology providers are crucial for optimizing the positive impacts of technology in schools. Strategic integration, accompanied by ongoing evaluation, can enhance the learning experience and mitigate potential negative consequences.

5.4 Development of Advanced Parental Control Tools

In response to the expressed desire for more sophisticated parental control tools, developers and technology companies should invest in creating user-friendly, advanced tools that cater to the nuanced needs of parents in regulating their children's digital interactions.

5.5 Inclusive Mental Health Support

Considering the observed changes in emotional well-being, there is a need for inclusive mental health support programs. Schools and communities should collaborate to create environments that foster positive mental health and address potential challenges arising from technology use.

5.6 Continuous Research and Evaluation

Given the rapidly evolving nature of technology, continuous research and evaluation are imperative. Regular assessments of the impact of technology on children's development, coupled with adaptive strategies, will ensure that interventions remain relevant and effective.

6. CONCLUSION

This research endeavor has illuminated the intricate dynamics of the evolving relationship between children and technology in the context of Bangladesh. The comprehensive findings underscore the need for a balanced and informed approach to harness the benefits of technology while mitigating potential risks. As technology continues to be an integral part of children's lives, the responsibility lies with parents, educators, policymakers, and technology providers to collaboratively shape an environment that nurtures healthy development. The recommendations outlined aim to guide these stakeholders in crafting strategies that foster digital literacy, support parental efforts, optimize educational technology, and prioritize mental well-being.

REFERENCES

- Achterhof, R., Kirtley, O.J., Schneider, M., Hagemann, N., Hermans, K.S.F.M., Hiekkaranta, A.P., Lecei, A., Lafit, G., Myin-Germeys, I., 2022. Adolescents' real-time social and affective experiences of online and face-to-face interactions. *Computers in Human Behavior*, 129, Pp. 107159.
- Ahmed, A., and Morgan, B., 2021. Postmemory and multilingual identities in English language teaching: A duoethnography. *The Language Learning Journal*, 49 (4), Pp. 483–498.
- Bettis, A.H., Burke, T.A., Nesi, J., and Liu, R.T., 2022. Digital technologies for emotion-regulation assessment and intervention: a conceptual review. *Clinical Psychological Science*, 10 (1), Pp. 3–26.
- Chassiakos, Y.L.R., and Stager, M., 2020. Current trends in digital media: How and why teens use technology. In *Technology and adolescent health* (pp. 25–56). Elsevier.
- Diaz Redondo, R.P., Caeiro Rodriguez, M., Lopez Escobar, J.J., and Fernandez Vilas, A., 2021. Integrating micro-learning content in traditional e-learning platforms. *Multimedia Tools and Applications*, 80 (2), Pp. 3121–3151.
- Dimopoulos, K., Koutsampelas, C., and Tsatsaroni, A., 2021. Home schooling through online teaching in the era of COVID-19: Exploring the role of home-related factors that deepen educational inequalities across European societies. *European Educational Research Journal*, 20 (4), Pp. 479–497.
- Edwards, R.C., and Larson, B.M.H., 2020. When screens replace backyards: strategies to connect digital-media-oriented young people to nature. *Environmental Education Research*, 26 (7), Pp. 950–968.
- Eyimaya, A.O., and Irmak, A.Y., 2021. Relationship between parenting practices and children's screen time during the COVID-19 Pandemic in Turkey. *Journal of Pediatric Nursing*, 56, Pp. 24–29.
- Fattore, T., Fegter, S., and Hunner-Kreisel, C., 2019. Children's understandings of well-being in global and local contexts: Theoretical and methodological considerations for a multinational qualitative study. *Child Indicators Research*, 12, Pp. 385–407.
- Fischer, G., Lundin, J., and Lindberg, J.O., 2020. Rethinking and reinventing learning, education and collaboration in the digital age—from creating technologies to transforming cultures. *The International Journal of Information and Learning Technology*, 37 (5), Pp. 241–252.
- Gonzalez-DeHass, A.R., Willems, P.P., Powers, J.R., and Musgrove, A.T., 2022. Parental involvement in supporting students' digital learning. *Educational Psychologist*, 57 (4), Pp. 281–294.
- Gottschalk, F., 2019. Impacts of technology use on children: Exploring literature on the brain, cognition and well-being.
- Granic, I., Morita, H., and Scholten, H., 2020. Beyond screen time: Identity development in the digital age. *Psychological Inquiry*, 31 (3), Pp. 195–223.
- Haleem, A., Javaid, M., Qadri, M.A., and Suman, R., 2022. Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, Pp. 275–285.
- Joshi, P., Shukla, S., Joshi, P., and Shukla, S., 2019. Children's development in the digital age. *Child Development and Education in the Twenty-First Century*, Pp. 151–172.
- Kaye, L., Orben, A., Ellis, D., Hunter, S., and Houghton, S., 2020. The conceptual and methodological mayhem of "screen time." *International Journal of Environmental Research and Public Health*, 17 (10), Pp. 3661.
- Liu, J., 2021. Bridging digital divide amidst educational change for socially inclusive learning during the COVID-19 pandemic. *Sage Open*, 11 (4), Pp. 21582440211060810.
- Messena, M., and Everri, M., 2023. Unpacking the relation between children's use of digital technologies and children's well-being: A scoping review. *Clinical Child Psychology and Psychiatry*, 28 (1), Pp. 161–198.
- Nisha, S.I., and Bakul, F., 2022. Parents primary caregivers' perspectives on the well-being, and home-based learning of children with neurodevelopmental disorders during COVID-19 in Bangladesh. *International Journal of Developmental Disabilities*, Pp. 1–10.
- Panjeti-Madan, V.N., and Ranganathan, P., 2023. Impact of screen time on children's development: cognitive, language, physical, and social and emotional domains. *Multimodal Technologies and Interaction*, 7 (5), Pp. 52.
- Parsons, T.D., 2021. Ethical challenges of using virtual environments in the assessment and treatment of psychopathological disorders. *Journal of Clinical Medicine*, 10 (3), Pp. 378.
- Qamar, S., Anwar, Z., and Afzal, M., 2023. A systematic threat analysis and defense strategies for the metaverse and extended reality systems. *Computers & Security*, 128, Pp. 103127.
- Rees, S., Channon, S., and Waters, C.S., 2019. The impact of maternal prenatal and postnatal anxiety on children's emotional problems: a systematic review. *European Child & Adolescent Psychiatry*, 28, Pp. 257–280.
- Sanders, T., Parker, P.D., del Pozo-Cruz, B., Noetel, M., and Lonsdale, C., 2019. Type of screen time moderates' effects on outcomes in 4013 children: evidence from the Longitudinal Study of Australian Children. *International Journal of Behavioral Nutrition and Physical Activity*, 16, Pp. 1–10.
- Savahl, S., Adams, S., Florence, M., Casas, F., Mpilo, M., Isobell, D., and Manuel, D., 2020. The relation between children's participation in daily activities, their engagement with family and friends, and subjective well-being. *Child Indicators Research*, 13, Pp. 1283–1312.
- Shin, M., and Hickey, K., 2021. Needs a little TLC: Examining college students' emergency remote teaching and learning experiences during COVID-19. *Journal of Further and Higher Education*, 45 (7), Pp. 973–986.
- Siskind, D., Conlin, D., Hestenes, L., Kim, S.A., Barnes, A., and Yaya-Bryson, D., 2022. Balancing technology and outdoor learning: Implications for early childhood teacher educators. *Journal of Early Childhood Teacher Education*, 43 (3), Pp. 389–405.
- Small, G.W., Lee, J., Kaufman, A., Jalil, J., Siddarth, P., Gaddipati, H., Moody, T.D., and Bookheimer, S.Y., 2020. Brain health consequences of digital technology use. *Dialogues in Clinical Neuroscience*, 22 (2), Pp. 179–187.
- Szymkowiak, A., Melovic, B., Dabic, M., Jeganathan, K., and Kundi, G.S., 2021. Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. *Technology in Society*, 65, Pp. 101565.
- Throuvala, M.A., Griffiths, M.D., Rennoldson, M., and Kuss, D.J., 2021. Policy recommendations for preventing problematic internet use in schools: a qualitative study of parental perspectives. *International Journal of Environmental Research and Public Health*, 18 (9), Pp. 4522.
- Wong, C.W., Tsai, A., Jonas, J.B., Ohno-Matsui, K., Chen, J., Ang, M., and Ting, D.S.W., 2021. Digital screen time during the COVID-19 pandemic: risk for a further myopia boom? *American Journal of Ophthalmology*, 223, Pp. 333–337.

