International Journal of Academic Multidisciplinary Research (IJAMR)
ISSN: 2643-9670
Vol. 8 Issue 7 July - 2024, Pages: 225-243

Digging Deep Into The Screen Time On The Cognitive And Socio-Emotional Development: Young Learners In Focus

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Abstract: *This study investigates the impact of screen time on the cognitive and socio-emotional development of young learners, with a focus on educational management insights. Conducted as part of a Master of Arts in Educational Management program at Rizal Memorial Colleges, the research aims to understand the complex relationship between screen time and child development. Utilizing a qualitative research approach, data were collected through semi-structured interviews with both students and teachers in Davao City. The thematic analysis of the responses revealed key themes: adaptation to technology, impact on well-being, physical health concerns, and mental health effects. Additionally, the study compared non-screen activities with screen-based activities, highlighting the benefits of physical engagement and social interaction. Educational management insights drawn from the study emphasize the importance of effective screen time management and the promotion of physical activities both at school and home. The findings underscore the necessity for balanced approaches that integrate technology use with offline activities to support holistic development in young learners. This research contributes to the broader understanding of screen time's effects and provides practical recommendations for educators and parents to enhance children's cognitive and socio-emotional well-being.*

Keywords—emotional development; screentime; cognitive developmentl; socio-emotional development

1. INTRODUCTION

We live in a world where everything is digital. The standard of things have become whether or not something is technologically advanced or not. This is the same in the realm of education. The way young learners learn is very different from the past. Devices and screens are everywhere. These technological tools are not only for school but also for entertainment. The interactive preface, the fun videos and animations and all other things tech, have become a huge part of everyone's life, including that of children. This tender age is crucial for cognitive development. This is the phase when they learn basic skills that they will later use in life. They slowly develop their emotion, their characteristics, their individualities, and their minds. All this shape who they will become in the future. The question is, how does the digitalization of the world change how young children develop?

The term "screen time" has become so common among parents and children nowadays. Globally, parents have become more and more conscious and concerned about the excessive screen time that some children experience on the daily. This is because smartphones, tablets and computers have become so accessible. Children are becoming exposed to these devices at an increasingly early age. The World Health Organization (2019) has addressed this and recommended that babies under 2 should get zero exposure to screens. Children between 2 and 4 can be exposed to a maximum of 1 hour a day but are still recommended not to. The guidelines released by WHO also recommended that children under 5 years are exposed to active play and get enough sleep rather than sitting still watching screens. This is to ensure that they grow up under healthy environments. Children who follow a sedentary lifestyle with excessive exposure to screens are prone to obesity and may even be prone to diseases in their adulthood.

This is the same case for Filipino children. Kids around the Philippines have become increasingly exposed to digital devices with little to no supervision from adults. The widespread availability and affordability of digital devices, such as smartphones and tablets, made it easier for Filipino families to access screens. Additionally, when the COVID-19 pandemic accelerated the adoption of online learning in the Philippines, many students were required to use screens for virtual classes and educational purposes. And considering that the Philippines is among the last few countries to revert from lockdown, Filipino children are known to suffer from excessive screen time which have potential negative effects on children's physical health, mental health, and overall development.

In the local scenario particularly in Baliok, Davao City, excessive screen time remains to be a problem despite reverting to face-to-face classes. Moreover, teachers of young learners are beginning to see the negative effects of screen time to the cognitive and socio-emotional development of young learners. As a researcher, I want to dig deeper and to investigate the potential influence of screen time on socio-emotional development and the cognitive development of young learners.

1.1 Purpose of the Study

Through this comprehensive study, the researcher aims to contribute to a better understanding of the complex relationship between screen time and child development, ultimately informing strategies to optimize children's screen time experiences for their overall well-being and development.

1.2 Research Questions

1. What are the students' perceptions on long screen times and its effect on the young learners' learning process?
2. How do young learners' experiences with non-screen activities compare to those involving screen time?
3. What educational management insights can be drawn from the experiences of young learners?

2. Review of Significant Literature

Screen time in education

Throughout society, from the classroom to the workplace and even the home, technology has been steadily expanding. Everything changed when the pandemic hit. Computers, LCD projectors, PowerPoint presentations, and similar technology advancements were available in the past. Word processing programs like Microsoft Word are installed on all school computers. Therefore, it's expected that most teachers know their way around them. Teachers increasingly permitted their kids to use the internet for research and other schoolwork when internet connections became ubiquitous around the world. Honey (2005) cited data from the National Center for Education Statistics (NCES), showing that public schools have steadily increased the amount of time students can spend online in the classroom.

According to Bassett (2005), the focus of the digital era should not be on technology per se but rather on how educators and students are utilizing it to broaden their horizons. It's not the availability of technology that should be of main concern but rather the effectiveness of technological tools to improve education.

Most studies have looked at how technology affects students, but Wilder (2010) argued that researchers should pay greater attention to how technology changes educators' practices in the classroom. Students graduate, but educators stay on to shape the minds of future generations, according to Wilder. This statement is now ten years old, but it is just as relevant now as it was then.

The majority of teachers use technology for personal productivity and lesson planning, according to research by Alexander et al. (2014), even though many of them think it should be utilized for learning with young children during instructional activities. Furthermore, studies have shown that current educators are optimistic about technology's ability to improve students' education. Still, they need to gain knowledge, experience, or self-assurance to implement its promise in the classroom fully. According to the literature, children can benefit from educational technology. However, for technology to be effective, it needs to be age- and stage-appropriate, come with resources to help teachers use it, and be seamlessly integrated into lessons (McManis & Gunnewig, 2012). One way to close the achievement gap in early childhood literacy development is to examine how teachers view instructional technology and how they use it to help students acquire and retain information.

Beginning in the 1970s, when teachers began to believe that computers could supplement students' formal education, researchers began to examine the impact of technology on the classroom (Drigas & Kokkalia, 2014). In order to better understand how technology might support early learning abilities starting in kindergarten, Driggas and Kokkalia performed a comprehensive literature review. Social and emotional development, language, problem-solving, reasoning, creative development, and operational and motor skill development are the three primary domains of learning that technology can support, according to these academics.

Steffens et al. (2015) stated that the significance of continuing one's education throughout one's life is growing. As digital technologies permeate more and more areas of our lives, including the classroom, their significance is growing (Steffens et al., 2015). The rapid development of these tools, however, necessitates ongoing studies into the ways in which interactive technology might contribute to boosting student motivation and performance. Interactive technology was outlined by Lee and Wei (2015) as a method to keep students' attention in class. Instead of focusing on social connections, these technologies can let kids focus on what they really enjoy. With the help of computers, children can take the lead in discovering and learning about a wide range of topics through child-centered, learner-centered activities. According to Lee and Wei, early childhood education students are more engaged and motivated when they have access to multimedia tools that include animation, digital photography, and films.

In addition to a quiet area to study, students enrolled in online programs can accomplish their coursework from the comfort of their own homes using personal computers. Aiming to assist education decision-makers in developing and implementing effective education responses to the COVID-19 Pandemic, Reimers F. et al. (2020) identified some of the challenges that different education systems face when relying on online education as an alternative modality.

Factors affecting socio-emotional development

According to Theobald et al. (2020), from their earliest memories all the way into adulthood and in a wide range of cultural contexts, many children see play as a universally consistent activity. The typical educational context for play encourages the growth of students' cognitive and social capacities. Early childhood education guidelines emphasize the importance of play. All three domains of maturation—social, emotional, physical, and cognitive—are impacted by play. Students develop social and emotional competence through free play, which in turn helps them share what they know about the world and learn from others' experiences. Encouraging and unstructured play is a powerful combination.

School closures should have been considered as a last resort to control the spread of SARS-CoV-2, according to

Moro et al. (2020). This is because of the poor socio-economic impact they are connected with. Reopening schools can only be beneficial if proactive, multi-layered mitigation procedures are put in place to ensure that students are in the best possible learning environment. At the same time, the danger of transmission is minimized. Reopening schools during COVID-19 pandemic closures requires a variety of mitigation strategies, as shown by experiences in India and around the world.

According to Derman et al. (2020), children can enhance their language development through the introduction of new concepts learned through play, which also gives them the chance to learn a number of basic concepts engagingly and organically. They went on to say that preschool teachers should incorporate more plays into their arithmetic lessons. Preschool educators can benefit from in-service seminars that introduce and emphasize the significance of the play-based learning approach. Educators of young children should choose learning activities, such as arithmetic games, that have a purpose and are meaningful to the children. Furthermore, in order to investigate the impact of arithmetic activities on the social development of younger children, it is possible to conduct planning activities related to social and emotional area studies.

Engaged learners are socially involved learners, as Vacca (2020) pointed out. Students learn better when they can communicate with each other and participate actively, according to Routman (2023). Learning, in a nutshell, relies heavily on social contact. This applies not only to students of higher levels who are able to form relationships with their peers and the people around them as they grow into adulthood, but also to young learners who dip their toes for the first time in the unfamiliar waters of formal education and its massive community. Social and emotional development is just as important for a successful school experience as cognitive development.

The favorable effects of parental involvement on their children's academic and social-emotional development have been widely recognized for a long time on a global scale. From an ecological perspective, a child's social, emotional, and cognitive development is aided by the mutually beneficial interactions between the home and the classroom. Pérez Sánchez et al. (2013) and Tárraga et al. (2017), among others, found that when parents are involved in their children's education, their children do better in school.

Factors affecting cognitive development

Because children's cognitive capacity is enhanced by a clear-cut and significant change in activity, Burdette and Whitaker (2005) warned that cutting children's free time and school activities to make more room for academics could have implications on children's ability to store new information.

Children learn best when their program is tailored to their developmental stage and takes into account their cognitive, linguistic, literacy, and social needs (Reynolds, Stagnitti, & Kidd, 2011). Those who advocate for a play-based approach to early childhood education have come to the conclusion that play has a favorable effect on emergent reading skills.

As per Bolshunov et. al. (2019), the challenges inherent in online learning are closely linked to a decline in students' cognitive abilities and the inadequate circumstances that hinder the development of their communicative skills. Limited face to face interaction limits the engagement of children with their peers. Remote learning has negative effects on the cognitive growth of students because it limits social interactions.

Another factor that affects cognitive development among young students is absenteeism. Gottfried and Ansari (2021) found that children who have

In a study conducted by Gottfried and Ansari (2021), it was discovered that children who exhibit a higher frequency of absences during their initial year of kindergarten tend to demonstrate lower performance in essential cognitive domains, particularly working memory and cognitive flexibility, during early childhood. Furthermore, this pattern of absenteeism was linked to reduced literacy skills and lower grade point averages by the time these individuals reached the age of 15. This research underscores the lasting consequences of early school attendance on cognitive development and academic achievement, emphasizing the significance of regular school attendance as a foundational element in a child's educational journey and long-term success.

While cognitive behavior therapy has shown promise in treating children's anxiety, the data was inconclusive on the optimal treatment approach, according to a 2015 Cochrane review by James et al. Research on parent training, dialectical behavioral therapy, emotional-focused cognitive behavior therapy, and school refusal anxiety have all shown promising results, according to his assessment.

Screen-time effect on socio-emotional and cognitive development

Screen media consumption has detrimental impacts on various cognitive domains, including sensorimotor development, academic performance, and executive functioning, as shown by Liu (2022). Teens' executive functioning, including their ability to switch tasks, inhibition, and working memory, was found to be negatively affected by media multitasking.

Orri et al. (2021) drew on data from the Quebec Longitudinal Study of Child Development cohort study to find a persistent correlation between cognitive abilities and early screen media exposure. The study found that for every one-hour increase in TV exposure at two years of age, there was a 7% unit decrease in-class participation and a 6% unit decrease in math proficiency in fourth grade.

In a study conducted by Peiró-Velert (2014) in Spain, the researchers found that the more time students spent in front of screens, the worse their academic performance was. Similarly, an American study indicated that students' performance in mathematics and English was negatively correlated with their levels of media multitasking.

Screen time effect on socio-emotional development

The increasing popularity of various electronic gadgets on a global scale has led Oswald (2020) to argue that the idea of screen time has grown more complex in recent years. A decline in youth involvement with nature and a rise in screen-based technology usage has occurred in tandem with technological advancements in the last several years, negatively affecting youth mental health and general well-being. Studies have demonstrated that the more time people spend in front of screens, especially television, the less likely they are to develop their physical and mental capacities. Obesity, insomnia, sadness, and anxiety have all been associated with screen use.

As pointed out by Skalická (2019), screen usage in young children is a risk factor in and of itself for poor mental health. Anger, impulsivity, and outward displays of emotion were linked to prolonged exposure to television between the ages of six and eighteen months, according to one research. A small number of studies have found that children who spend more time in front of screens beginning at the age of four have less developed emotional intelligence by the time they are six years old. Having a television in a child's bedroom at six years of age is associated with lesser levels of emotional understanding at eight years of age, it also states. While girls did not show any correlation between gaming and emotional intelligence, guys did. This provides more evidence that children's emotional development may be impacted differently by various screen activities depending on their gender.

2.1 Theoretical Lens

This study is anchored on two prominent theoretical frameworks to comprehensively examine the complex interplay between screen time and child development: Ecological Systems Theory and Cognitive Developmental Theory.

The Ecological Systems Theory posits that human development is influenced by a system of nested environments, each impacting the individual differently. It consists of microsystems (immediate environments), mesosystems (connections between microsystems), ecosystems (settings indirectly influencing the individual), and macrosystems (broader cultural and societal contexts). In this context, screen time represents an ecosystem-level factor, as it operates indirectly on a child's development. The theory allows for the exploration of how screen time, mediated through family dynamics, school environments, and societal norms, influences cognitive and socio-emotional development. It considers the role of parents, caregivers, teachers, and peers as proximal influences in the microsystem, while societal attitudes and media content serve as distal factors in the ecosystem. This approach helps to uncover the multifaceted nature of screen time's impact on young learners.

On the other hand, Cognitive Developmental Theory, encompassing Piaget's stages of cognitive development and Vygotsky's sociocultural theory, offers insights into how screen time may influence cognitive growth. Piaget's theory emphasizes that children actively construct knowledge through their experiences, interactions, and exploration of their environment. Screen time can serve as a virtual environment for cognitive exploration. Vygotsky's theory, on the other hand, underscores the role of social interactions and cultural tools in cognitive development. Here, screen time can be seen as a mediator of socio-cultural experiences and learning, providing opportunities for both solitary and collaborative cognitive development. This framework aids in understanding how screen time might impact the cognitive skills, problem-solving abilities, and language development of young learners, considering both individual and social aspects.

By integrating these theoretical perspectives, the study aims to provide a holistic understanding of the effects of screen time on young learners' cognitive and socio-emotional development. It recognizes that screen time is not a singular influence but is embedded within a dynamic web of environmental and developmental factors. This comprehensive approach enables the exploration of both the direct and indirect effects of screen time, considering the contexts in which young learners interact with screens and the potential consequences for their cognitive and socio-emotional growth

Methodology

In this research endeavor, a qualitative research approach was employed as a methodological framework to delve into the rich and nuanced experiences and perceptions of individuals who have recently been involved in the phenomenon under examination. The primary objective of this study was to acquire a profound and comprehensive understanding of the role of teachers, with a particular emphasis on the use of mother tongue instruction in educational contexts. Qualitative research is a particularly suitable methodology for such an investigation because it allows for in-depth exploration, capturing the intricate details, personal insights, and diverse viewpoints of the participants. By embracing this approach, the research aimed to uncover not just what teachers do but also why they do it, the challenges they face, and the impact of mother tongue instruction on both teachers and students. This endeavor represents a valuable contribution to the field of education, as it sheds light on the intricate dynamics of language in teaching and learning, which, in turn, can inform educational policies and practices to enhance the quality of education for diverse learners.

Philosophical Assumptions

The philosophical assumption is a framework used to collect, analyze and interpret the data collected in a specific field of study. Ontology is the study of the nature of reality. Epistemology is the study of the nature of knowledge. Axiology is the study of values. These three philosophical assumptions underlie all research, but they are particularly important in qualitative research.

When doing research, ontology is crucial because it shapes researchers' worldviews and their understanding of the phenomena they investigate. Researchers can adopt a variety of ontological stances, each of which affects how they do their work and the questions they might pose. The findings of this study are based on the instructors' actual experiences with evaluating their students' competence. Extensive quotations, themes reflecting the participants' comments, and evidence of diverse viewpoints allowed this study to rely on the voices and interpretations of its participants. Coding and analysis of the study participants' answers allowed researchers to create and develop the commonality and discreteness of responses.

Epistemological assumptions shaped the research process through the use of methods such as interviews, focus groups, and observation. These methods allow the researcher to explore the perspectives and experiences of the participants, and to understand how they interpret and make meaning of the world around them. I assured to establish a close interaction with the participants to gain direct information that will shed light to the knowledge behind the inquiry particularly on the experiences and coping mechanisms of the teachers on measuring competencies from a distance.

Axiology refers to role of values in research. Creswell (2013) avers that the role of values in a study is significant. Axiology suggests that the researcher openly discusses values that shape the narrative and includes own interpretation in conjunction with interpretation of participants.

I uphold the dignity and value of every detail of information obtained from the participants. The researcher understands the personal and the value–laden nature of information gathered from the study. I therefore preserve the merit of the participant's answers and carefully interpreted the answers in the light of the participant's personal interpretation.

Rhetorics. It is the philosophical assumption that focuses on the art of persuasion and is an important part of qualitative research. Qualitative researchers use rhetoric to persuade their readers to accept their interpretations of the data. They do this by using language in a way that is clear, concise, and engaging. They also use rhetorical devices, such as metaphors, similes, and personification, to create vivid images and make their arguments more persuasive. In the context of the study, the researcher used the first person in explaining the experiences of the teachers in assessment and measuring competencies during distance learning.

Qualitative Assumptions

Qualitative assumption in qualitative research is the belief that the researcher's own perspectives, values, and biases are an integral part of the research process. This assumption acknowledges that research is not conducted from an objective, neutral standpoint, but rather from a particular perspective that shapes the research questions, methods, and findings.

By acknowledging these qualitative assumptions, the researcher conducted the research in a way that is more reflective, nuanced, and sensitive to the complexities of the lived experiences of the teacherws. These assumptions help to highlight the importance of context, perspective, and subjectivity in shaping research, and can help to ensure that research is conducted in a rigorous and thoughtful manner.

Design and Procedure

For this study, I conducted semi-structured interviews with both teachers and students to explore their experiences, perspectives, and insights regarding screen time and its effects. Teachers were asked about their insights and strategies related to screen time management, while students will be encouraged to share their perceptions and experiences with screen activities and their impact on cognitive and socio-emotional development. I then used a thematic analysis approach to analyze the data. The interview(s) attempts to answer two broad questions (Moustakas, 1994). The data was then read and reread and culled for like phrases and themes that are then grouped to form clusters of meaning (Creswell, 2013). Through this process the researcher constructed the universal meaning of the event, situation or experiences and arrived at a more profound understanding of the phenomenon.

In this study phenomenology attempts to extract the most pure, untainted data and in some interpretations of the approach, bracketing is used by the researcher to document personal experiences with the subject to help remove him or herself from the process. One method of bracketing is memoing (Maxwell, 2013).

Ethical Considerations

The ethical considerations of this study included protecting the confidentiality and privacy of my participants. I obtained informed consent from all participants, and I used pseudonyms to protect their identities.

The relationship and intimacy that is established between the researchers and participants in qualitative studies can raise a range of different ethical concerns, and qualitative researchers face dilemmas such as respect for privacy, establishment of honest and open interactions, and avoiding misrepresentations.

Richards and Schwartz (2002) emphasizes that a fundamental ethical requirement of all research should be scientifically sound. The research must be properly designed and carried out by researchers with adequate levels of expertise and supervision. It should be worth doing in a sense that the result generates tangible benefits.

In addition, Sanjari (2014) informed that consent has been recognized as an integral part of ethics in research carried out in different fields. For qualitative researchers, it is of the utmost importance to specify in advance which data will be collected and how they are to be used. He also stated that informed consent is a prerequisite for all research involving identifiable subjects, except in cases where an ethics committee judges that such consent is not possible and where it is felt that the benefits of the research outweigh the potential harm. A minimum requirement for an interview study should be that written consent be obtained from the participant after they have been informed, verbally and in writing, about the following issues: the purpose and scope of the study, the types of questions which are likely to be asked, the use to which the results will be put, the method of anonymization and the extent to which participants' utterances will be used in reports. Participants should also be given time to both consider their participation and to ask questions of the researcher.

In this study, the researcher would follow the ethical considerations as part of the process in qualitative research. It was the responsibility of the researcher to completely inform the participants about the different aspects of the research in comprehensible language. The needed clarifications include the following issues: nature of the study, the participants' potential role, the identity of the researcher, the objective of the research, and how the results will be published and used.

In same manner, this study will be submitted to the ethics committee of the Rizal Memorial College, graduate school for verification and approval.

Research Participants

The study involved ten (10) informants who were students from Davao City. These students served as informants for questions related to screen time. The teacher participants, all of whom taught classes during the 2023-2024 school year, provided educational management insights based on the experiences shared by the student informants. Participants were required to have a minimum of three years' teaching experience and were selected irrespective of age, gender, or marital status.

Qualitative analyses typically require a smaller sample size the quantitative analyses. Qualitative sample sizes should be large enough to obtain feedback for most or all perceptions. Obtaining most or all of the perceptions will lead to the attainment of saturation. Saturation occurs when adding more participants to the study does not result in additional perspectives or information. Glaser and Strauss (1967) recommend the concept of saturation for achieving an appropriate sample size in qualitative studies. For phenomenological studies, Creswell (1998) recommends five (5) to 25 and Morse (1994) suggests at least six (6). There are no specific rules when determining an appropriate sample size in qualitative research. Qualitative sample size may best be determined by the time allotted, resources available, and study objectives (Patton, 1990).

Role of the Researcher

The role of the researcher in this study was to work closely with participants to gather data and to interpret and analyze findings. It involved asking informants to talk about things that may be very personal to them. Sometimes the experiences being explored are fresh in the participant's mind, whereas on other occasions reliving past experiences may be difficult. However the data are being collected, a primary responsibility of the researcher is to safeguard participants and their data. Mechanisms for such safeguarding must be clearly articulated to participants and must be approved by a relevant research ethics review board before the research begins.

Data Collection

The researcher is responsible for collecting data through methods such as interviews, focus groups, and observation. This may involve building rapport with participants, establishing trust, and creating a safe and supportive environment for participants to share their experiences and perspectives. According to Creswell (2013), an important step in the process is to find people or places to study and to gain access to and establish rapport with participants so that they will provide good data. A closely interrelated step in the process involves determining a strategy for the purposeful sampling of individuals or sites. Once the inquirer selects the sites or people, decisions need to be made about the most appropriate data collection approaches. To collect this information, the researcher develops protocols or written

forms for recording the data such as interview or observational protocols. Also, the researcher needs to anticipate issues of data collection, called "field issues," which may be a problem, such as having inadequate data, needing to prematurely leave the field or site, or contributing to lost information. Finally, a qualitative researcher must decide how he or she will store data so that they can easily be found and protected from damage or loss.

In this study, there are seven steps in the process of data collection.

First is the site or individual; the participants were students from Talomo District, Davao City.

Second is the access and rapport; letter from the Dean of the Graduate School is given to the graduate student for the approval of the division superintendent; letter of permission for the Schools Division Superintendent, the school Principal and the concerned teachers were prepared for easy collection of data.

The third is the purposeful sampling strategy; all participants have experienced the phenomenon being studied. There were ten (10) informants selected in this study. The qualified students and teachers were considered group of individuals who can best inform the researcher about the research problem. They were also considered as individuals who have experienced the phenomenon and can facilitate the collection of data.

The fourth is the forms of data; the process of collecting information involved primarily in the Virtual In-Depth Interview (IDI) with the ten (10) informants.

The fifth is the recording procedures; the use of a protocol was used in the observation and interviewing procedures. A predesigned form used to record information collected during an observation or interview.

The sixth was the field issues; limited data collection was engaged in this study.

The last or the seventh step was the storing of data; Davidson's (1996) suggested the use of database in backing up information collected and noting changes for all types of research studies.

Data Analysis

Thematic analysis was the primary method used to analyze data gathered in this study. Thematic analysis is a commonly used method for analyzing qualitative data in which the researcher identifies and interprets patterns, themes, and meanings within the data. My analysis began by familiarizing the data. This involved reading and re-reading the data (e.g. transcripts of interviews, field notes, etc.) to become familiar with the content that needs to be textual and then I organized meanings found in the data into patterns and, finally, themes. While conducting the analysis, I strived to understand meanings embedded in experiences and describe these meanings textually. Wellington (2010) emphasized that through the analysis, details and aspects of meaning were explored, requiring reading and reflective writing. Parts of the text need to be understood in terms of the whole and the whole in terms of its parts. However, the researcher also needed to move between being close to and distant from the data. Overall, the process of analysis was complex and therefore I needed to be flexible.

Analytical Framework

According to Braun and Clark (2006) methods of qualitative data analysis fall in two groups. The first group consists of methods driven by an epistemological or theoretical position, which have limited variability in how they are applied within their frameworks, such as conversation analysis (CA) and interpretative phenomenological analysis (IPA) and methods which are situated within a broad theoretical framework and can therefore be used in a variety of ways within those frameworks , such as grounded theory (GT), discourse analysis (DA) narrative analysis (NA).

The second group includes methods independent of theory and epistemology, which can be applied across a range of different theoretical and epistemological approaches and are therefore very flexible. One such method is thematic analysis, which through the theoretical freedom "provides flexible and useful research tool, which can potentially provide a rich and detailed, yet complex account of data (Braun and Clark, 2006).

I observed several steps in conducting thematic analysis. The first stage in extracting qualitative data for analysis from the tape recordings was transcription. This was done to gain greater familiarity with the data and deeper insight. I relied on my own resources to do the transcription with the use of my personal computer and some reliable headphones. I use several nights to listen to the interviews to deepen my understanding on the nuances of the language and semantics of the participants.

Practice varied considerably in terms of agreeing conventions with transcribers. Some negotiated themselves to lay-out and conventions required, including researchers who wanted the kind of detailed transcriptions appropriate for conversations or narrative analysis. Others were sometimes less directly involved, and accepted the conventions generally used by the one transcribing the information.

The next step as data extraction and analysis. I used manual techniques based on note taking and summary while listening to the recordings. My manual technique usually included some process of verbatim recordings of selected spoken words. I selected quotations about central issues, or when what was said seemed important or interesting.

I used a number of different techniques as taught to me by my thesis adviser. I marked up transcripts with colored pens or sorted data by cutting and pasting. I used forms of thematic grids and charts, the framework technique as develop by the National Centre for Social Research (Ritchie et al, 2003). This

technique was useful tome in the process of coding, sorting and collecting data for interrogation. This technique was very useful in understanding links and relationships between issues. All these efforts and procedure included saving verbatim spoken words from the transcripts, which could be cross referenced to the thematic displays or the maps.

To summarize, the thematic analysis method outlined by Braun and Clarke (2006) which consisted of six (6) phases used in analyzing the data.

Phase 1. I familiarized myself with the data by reading the whole data set and noting down initial ideas;

Phase 2. I generated initial codes, with coded being the most basic segments of the raw data that can identify a feature of the data that appears interesting;

Phase 3. I searched for themes by sorting different codes into potential themes and collated all data extracts within identified themes;

Phase 4. I reviewed the themes and refined them further (at the level of coded data extracts and the entire data set) and produced a thematic map showing relationships between themes and sub themes;

Phase 5. I defined and named themes, making sure they give the reader immediate sense of what the theme is all about.

Phase 6. I wrote the report to convince the reader of the merit and validity of the analysis (within and across the themes), used data extracts embedded within an analytic narrative to make arguments in relation to the research question..

3. Results and Discussions

This part of the study dealt with the research questions and their answers based on the responses of the participants of the study. The participants revealed their experiences as they look back on their lived experiences on the effects of screen-time to their cognitive and social development. The participants' perceptions, experiences, and insights were also presented in this part of the research. In this chapter, the results of the thematic analysis are presented. It is followed by discussions arranged according to themes and subthemes that were generated.

3.1 The perception of young learners on the effect of long screen times to their learning process

In exploring how young learners perceive the impact of prolonged screen time on their learning journey, I conducted interviews with school students to gather their insights (Participants 1-9). From their responses, two main themes emerged: Adaptation to technology and Impact on their well-being. Additionally, two subthemes surfaced, highlighting the negative impacts faced by participants: Physical Health Concerns and Impact on Mental Health.

Adaptation to Technology. Students articulated how prolonged exposure to screens necessitated a process of adaptation whereby they learned to effectively utilize technological tools for educational purposes. Many expressed a sense of familiarity and comfort with digital devices, describing their ability to seamlessly integrate technology into various aspects of their learning routines. This adaptation was evident in their adeptness at accessing online resources, utilizing educational apps, and engaging with multimedia content to enhance their understanding of academic concepts. They emphasized how long screen times enabled them to critically evaluate online content, and employ digital tools for communication and collaboration. For the participants, adaptation to technology was not merely a passive response to screen exposure but rather an active process of acquiring proficiency in navigating the digital times which can ultimately benefit their learning process.

From the participants, the following responses were noted:

Nakabalo ko unsaon pag operate sa cellphone ug sa internet mao mas dali sakoa karon mangita ug resources nga makatabang sakong pagskwela. (I have learned how to operate cellphones and to navigate the internet which made finding educational resources easier for me) (P1)

Tungod sa wifi ug internet, mas dali sakoa mag research kay daghan man pud gud matun-an sa internet na dili nako makita sa libro. (Research is easier with wifi and internet access. There's a lot of information that you can find on the net that you won't find on books.) (P2)

Nahawod ko mag identify ug fake news or fake sources. Daghan man gud ka makita sa internet nga false information pero kadugayan nako ug browse, nakatuod napud ko unsa mga reliable na websites labaw na pag need nako ug help sakoa school work. (I got better at identifying fake news and sources. There's a ton of false information on the internet but due to my exposure to browsing, I eventually found reliable sites especially those that can help me with school work) (P4)

The responses illustrate the transformative impact of gaining proficiency in using cellphones and the internet, particularly in for educational reasons. The first participant (P1) highlights how newfound skills in navigating these technologies have significantly simplified the process of accessing educational resources. Similarly, the second response (P2) emphasizes the efficiency of internet research enabled by wifi, providing access to information not readily available in traditional sources like books. Moreover, the third participant (P4) noted a crucial skill developed through long screen times: the ability to discern credible sources from fake news or misinformation. Through exposure and experience, the informant has become adept at identifying reliable websites, particularly beneficial for academic tasks. Overall,

these responses collectively highlight the role of screen time in enhancing educational opportunities and critical thinking skills in the modern age.

This related to the findings of Kuo et.al. (2023) that when used appropriately, tablets could enhance engagement, collaboration, and learning outcomes among students. They concluded that the interactive and multimedia capabilities of tablets appeared to captivate students' attention and offer diverse avenues for exploration and comprehension of educational content. Moreover, the collaborative features of certain applications facilitated group work and communication among students, potentially enriching their learning experiences. However, the study also highlighted the importance of effective implementation strategies and cautioned against over-hyping the potential benefits of technology without considering its limitations and challenges. They emphasized that while tablets held promise, they were not a cure-all for all educational challenges and must be approached with a balanced understanding of their proper usage.

Further, Howard (2017) found in their study where they examined the impact of using tablet technologies across content areas in an urban high school setting that the rollout of iPads in classrooms has generally been positive for both teachers and students, with iPads widely available for student use. Commonly used apps include Edmodo and Khan Academy, with mathematics problem-solving being a frequent activity. The integration of iPads has shown benefits in enhancing student motivation and learning through collaboration and creativity. However, challenges include the need for support in effectively using iPads, potential distractions, and limitations such as the inability to protect individual work in multi-user settings. Strategies such as promoting self-directed and collaborative programs and utilizing offline features of apps are suggested to address these concerns. Teacher perspectives on app usage vary, reflecting both flexibility in curriculum design and the challenge of identifying the most effective practices amidst diverse app choices.

Impact on their well-being. The participants consequently voiced concerns about the physical effects of extended screen exposure. Many reported experiencing symptoms such as eye strain, headaches, and fatigue after prolonged periods of screen use. These physical discomforts were seen as significant detractors from their learning process, as they hindered their ability to concentrate and engage effectively with educational content. They also expressed genuine concerns about how excessive screen time was affecting various aspects of their physical and mental health, as well as their emotional state. This suggests that while there are potential benefits of screen time for education, young learners are also acutely aware of its negative effects on their physical health, mental well-being, and overall quality of life. Based on the interview answers shared by the students themselves (P1-P10), I was able to identify two major sub-themes: Physical Health Concerns and Impact on Mental Health.

Physical Health Concerns. Many of the participants reported experiencing physical symptoms such as eye strain, headaches, and fatigue after engaging in extended periods of screen-time. These physical discomforts were often described as hindrances to their ability to concentrate and actively participate in educational tasks. For instance, students expressed difficulties in maintaining focus and productivity due to the physical strain induced by prolonged screen exposure. Many expressed frustration at feeling physically drained or fatigued after extended periods of screen use.

Some responses of the participants were noted:

When I look at my phone for too long, it often leads to physical discomforts like eye strain, headaches, and fatigue, making it difficult to concentrate on my tasks. (P5)

I find that when my screen time in a day is too long, I start to feel too tired to do anything else. I also have a hard time focusing when I get headaches which is quite often. I also noticed that when I get to the point when my eyes or my brain is too tired, nothing I read makes sense to me and it's really hard to absorb information. (P7)

The responses from P5 and P7 highlight the negative impacts of prolonged screen time on physical health. Both individuals describe experiencing discomfort such as eye strain, headaches, and fatigue, which ultimately affects their ability to concentrate on tasks. P7 specifically notes feeling too tired to engage in other activities and having difficulty focusing due to frequent headaches. Additionally, P7 mentions the challenge of absorbing information when their eyes and brain are fatigued, indicating the cognitive consequences of excessive screen exposure. These responses reveal the importance of managing screen time to mitigate adverse effects on both physical health and cognitive function.

Impact on mental health. Several students articulated feelings of stress, anxiety, and emotional exhaustion resulting from prolonged engagement with digital devices. They described experiencing heightened levels of tension and pressure when being on the screen for extended periods, particularly when faced with academic tasks or social interactions facilitated through screens. These sentiments were often accompanied by reflections on the overwhelming nature of digital environments and the constant influx of information, contributing to feelings of being mentally drained and emotionally overwhelmed. Some reported difficulties in disconnecting from digital devices, leading to disrupted sleep routines and increased susceptibility to feelings of restlessness and irritability. This disruption in sleep quality further compounded their experiences of stress and mental strain.

These were emphasized by the participants when they mentioned the following:

I have a hard time getting off my phone, which disrupts my sleep patterns, leaving me feeling restless and irritable. I

become very unproductive the next day whenever this happens. (P3)

Internet can be overwhelming. There's a lot of bad news, hate comments and cancel culture that really tends to overwhelm me sometimes. Even when it's not directed to me, sometimes I feel that the toxic environment whenever I'm on my phone for too long tends to rub off on me. (P4)

Extended screen time really overwhelms me especially when I feel pressure on schoolwork. It's just super hard to concentrate when there's too much information. (P5)

The three responses highlight the negative impacts of excessive screen time and internet usage on individuals' well-being and productivity. For P3, the respondent discusses how excessive phone use disrupts their sleep patterns, leading to feelings of restlessness and irritability, ultimately affecting their productivity the next day. P4 elaborates on the overwhelming nature of the internet, citing exposure to bad news, hate comments, and cancel culture, which can leave them feeling overwhelmed and impacted by the toxic environment even when it's not directed at them. P5 adds to this by emphasizing how extended screen time, particularly during periods of academic pressure, makes it challenging to concentrate due to information overload. The detrimental effects of excessive screen time and online exposure on mental well-being and productivity is highlighted, which shows the need for strategies to manage and limit digital consumption for better overall health and focus.

This is related to the findings of Wu et.al. (2017) where they found that a significant correlation between high screen time (ST) and various negative mental health outcomes such as anxiety, depression, psychopathological symptoms, and poor sleep quality among students. Conversely, low physical activity (PA) is associated with increased prevalence of mental health issues and poor sleep quality. While the relationship between high PA and mental health was found to be insignificant, physical activity was significantly correlated with anxiety and psychopathological symptoms. Increased physical activity was associated with reductions in depression, anxiety, psychological distress, and poor sleep among students. The researchers also suggests that screen-based technologies, which are widely used among youth, have detrimental effects on general health, physical activity, cognitive, and social development. High ST and low physical activity were found to increase the risk of psychological problems independently and synergistically among students. The adverse effects of high ST on mental health may be due to displacement of time that could otherwise be used for physical activity, as well as its association with increased metabolic risk, which is linked to poor mental health.

Sigman (2012) earlier discussed associations between screentime (ST) and attention problems, psychosocial well-being, and the impact of screen time on family dynamics. His study shows significant associations between screen time and attention problems, even after controlling for confounding variables. Concerns also arise regarding children's exposure to inappropriate material online and potential effects of 3D screens on vision development. He indicates that extensive screen affects family relationships, with children increasingly engaged with screens rather than face-to-face interactions. Background media exposure, especially TV, is linked to developmental risks such as shorter sleep duration and reduced cognitive development. Recommendations suggest limiting children's screen time and background media exposure. However, he confounded that advising parents to reduce ST may not be effective for all families, as some parents believe in the importance of educational television. It is crucial to raise awareness among parents and physicians about the health implications of screen time and provide clear guidelines for reducing it. He added that constructive alternatives to ST should also be encouraged.

Garcia-Hermoso (2020) postulated in his review of the relationship between physical activity, screen time, and subjective well-being that children meeting physical activity guidelines tend to have higher life satisfaction and positive affect, even with high screen time. Conversely, excessive screen time was associated with negative affect. Regular physical activity was emphasized as crucial for the physical, psychological, and cognitive health of children and adolescents. He proposed several potential mechanisms for the positive relationship between physical activity, life satisfaction, and physical activity. However, he found screen time to be independently associated with negative effects, with high screen time correlating with negative feelings such as irritability, bitterness, and sadness. The study suggested that screen time could lead to social withdrawal and internalizing problems, impacting SWB negatively. Physically active children generally reported higher life satisfaction and physical activity compared to inactive peers, irrespective of screen time, but not for negative effects. The study contributes to understanding the interactive effects of physical activity and screen time on SWB among children, particularly among Latino children, but acknowledges limitations such as the cross-sectional nature of the data and the need for longitudinal studies to confirm findings. In conclusion, the study suggests the importance of reducing screen time and promoting regular physical activity to enhance subjective well being in children..

3.2 THE EXPERIENCE OF YOUNG LEARNERS ON NON-SCREEN ACTIVITIES AND HOW IT DIFFERS FROM ACTIVITIES THAT INVOLVE SCREEN TIME

One of the research objectives of this study focuses the experience of young learners on non-screen activities and how it differs from activities that involve screen time. Figure four shows the summary of their responses. As seen in Figure 4, the responses of the informants are divided into two major themes. These are Physical Engagement vs Sedentary Behavior and Social Interaction vs. Isolation.

Physical Engagement vs Sedentary Behavior

In analyzing the responses of young learners regarding their experiences with non-screen activities versus those involving screen time, a prominent theme emerges regarding physical engagement versus sedentary behavior. Across various age groups, students consistently highlight the nature of non-screen activities, such as outdoor play, sports participation, or hands-on crafting, which calls for physical movement and interaction. In contrast, screen time activities often entail sedentary behaviors, including prolonged periods of sitting while browsing the internet or engaging in online applications or games. Some students have expressed a preference for activities that allow them to be physically active, noting feelings of enjoyment associated with movement-based endeavors.

The participants insights as to this regard were noted:

P3: Playing outside is very different from being on screen. I find activities like playing basketball with friends or going for a bike ride with my friends much more enjoyable than sitting in front of a screen for hours on end. Although I do enjoy using my phone from time to time, outdoor activities are simply incomparable.
P4: I love playing with my phone but I also love being out with my friends. Of course, doing physical activities like playing on school grounds after classes is fun because I spend a lot of time with them. Playing alone on weekends can get boring especially when I do it alone. .
P8: I like playing with my toys because I can make up stories and be whoever I want. But when I play games on the tablet, I have to follow the rules, and it's not as exciting. With toys, I can be a superhero or a princess
P10: I like playing soccer because I can kick the ball really far! But when I'm playing games on the tablet, I just sit and tap the screen so it gets boring fast. It's fun though, just not for too long.

The responses provide varied perspectives of the participants on their preference for outdoor activities over screen time, the enjoyment of physical activities with friends, and the different experiences between playing with toys and engaging in tablet games. P3 emphasizes the joy of outdoor activities like basketball and biking with friends compared to extended screen time, while P4 appreciates both phone use and outdoor interactions with friends but finds solo screen time dull. P8 and P10 contrast the imaginative freedom of playing with toys with the rule-bound experience of tablet games, highlighting the physical engagement and creativity of outdoor play compared to passive screen interactions. The responses illustrate a range of preferences and experiences regarding screen time versus physical activities.

This result is related to Fountaine's (2011) research where he found that in terms of sedentary behavior, students spent significant amounts of time on screen-based activities and homework. Male students reported higher levels of overall screen time and television viewing, while female students spent more time on homework. These findings provide insights into how students allocate their time between sedentary activities and academic pursuits. He noted that regardless of gender or physical activities participation, students' engagement in television viewing did not significantly differ based on their physical activities stage of change. This challenges the notion that choosing physical activities over sedentary behaviors like television is an either-or choice for students. However, the study did find that inactive and insufficiently active students spent more time on overall screen time, suggesting a potential association between non-television screen activities and lower physical activities levels. This highlights the importance of considering various screen-based activities beyond television when designing interventions to promote physical activities among students.

In terms of parental influence on controlling screen time habits, according to Hesketh (2012), Parents of infants and preschoolers displayed differences in their considerations of strategies to promote or limit physical activity and screen time, indicating a shift in expectations as children age. New parents expressed optimism about positively influencing their child's habits, whereas parents of preschoolers seemed resigned, resorting to less-than-ideal strategies like using television as a babysitter. The study highlighted the significance of parental confidence in shaping desired behaviors and the need for early intervention and support to manage evolving parental demands. The researcher emphasized the importance of supporting parents to promote increased physical activity and reduced screen time in children to prevent adverse outcomes like childhood obesity. The findings revealed a common belief among parents, regardless of their child's age, that children are naturally active, leading to minimal parental engagement in promoting activities like outdoor play, despite its importance in physical activity. This belief persisted even as children grew older, suggesting a misconception considering evidence showing low levels of physical activity in young children. Constraints imposed by parents, such as safety concerns, and environmental factors, like smaller backyards, further limit children's physical activity. Interestingly, parents of infants viewed screen time more positively than negatively, considering television viewing beneficial despite evidence suggesting its harmful consequences on children's health and development. The reveals that beyond educating young learners about screen time, educating parents about the detrimental effects of excessive screen time and providing strategies for effective management, including co-viewing to enhance the benefits is equally important.

Social Interaction vs Isolation

When examining the responses of student informants regarding their experiences with non-screen activities versus those involving screen time, a prominent theme that emerged is the contrast between social interaction and isolation. Many

students expressed a profound appreciation for the social connections fostered by non-screen activities, the joy of face-to-face interactions with friends and family during outdoor adventures, team sports, or group projects. They articulated a sense of belonging and fulfillment derived from shared experiences and meaningful conversations in these settings. In contrast, when discussing screen time activities, students lament the potential for isolation and disconnection inherent in prolonged screen exposure. They describe feeling detached and lonely when engaging with screens for prolonged periods, noting the absence of genuine human connection and the superficial nature of online communication.

The participants explicitly shared:
P6: Big difference. On screen most of the time you are alone. It's fun at first but doing it all day can get boring. And it gives me headache. It's different when I have friends to play with.
P7: There's not so much to do with the TV. Even with cellphones especially when my mama has no load or data. I want to go out to play but sometimes I cant do that especially when there's no one to watch me.
P8: I like to watch youtube it's very fun. But sometimes that's all I do in a day so I run out of things to watch. When I have friends to spend time with, it doesn't matter how long we hang out cause we never run out of things to do.

These responses collectively highlight the experiences and limitations associated with screen time among children. P6 expresses the initial excitement of engaging with screens but also acknowledges the potential for boredom and physical discomfort, emphasizing the importance of social interaction for enjoyment. P7 echoes this sentiment, emphasizing the limitations of screen-based entertainment, particularly when faced with connectivity issues or the desire for outdoor play. P8 enjoys the entertainment value of platforms like YouTube but recognizes the potential for excessive screen time and the preference for socializing with friends, which offers more varied experiences. Overall, these responses show the complex interplay between screen-based activities, social interaction, and outdoor play in shaping children's leisure preferences and experiences.

This idea is supported by Bickham and Rich (2006) that difficulties in peer interactions due to excessive screen time were linked to various negative outcomes such as social isolation, anxiety disorders, and antisocial behaviors extending into adolescence and adulthood. They also highlighted the complexity of the relationship between television and social behaviors, emphasizing that television content could influence children's social integration as much as the time spent watching it. The researchers proposed a reciprocal relationship between television viewing and social isolation, suggesting that while television might isolate children, lonely children might also turn to television for companionship. This bidirectional influence implied that both increased television viewing leading to social isolation and social isolation driving more television consumption could be at play. Additionally, promoting media literacy—teaching children and parents to critically evaluate media content—emerges as a crucial strategy in mitigating potential risks to children's mental health and social development.

Larsen (2022) argues that the Covid-19 pandemic has changed the effects of screen time to young children's social development. This might be due to the nature of activities conducted on screens during the pandemic, where digital interactions served as the primary means of socializing. Positive experiences with home schooling acted as a buffer against negative reactions, emphasizing the importance of tailored educational approaches during crises like COVID-19. But this also leads to the discussion that now that we are back to normal, it's essential to reassess the role of screen time in children's lives. As Larsen (2022) suggests, the pandemic might have altered the effects of screen time, particularly in facilitating digital interactions as a substitute for traditional socializing during lockdowns and restrictions. However, as we transition back to normalcy, it's crucial to consider how screen time influences children's social skills and overall development in more typical circumstances. Moreover, as children resume more typical social activities, including face-to-face interactions with peers and structured classroom settings, educators and parents need to balance the benefits of screen time with the importance of real-world social experiences. This requires careful consideration of screen time guidelines and strategies to promote healthy technology use while fostering meaningful offline connections.

3.3 EDUCATIONAL MANAGEMENT INSIGHTS DRAWN FROM THE EXPERIENCES AND CHALLENGES OF YOUNG LEARNERS

In educational management, insights drawn from the experiences and challenges of young learners regarding their extensive screen time shed light on critical considerations for cognitive and socio-emotional development. The theme of adaptation to technology highlights that schools need to use technology wisely while considering how it affects students' well-being. Young learners' perceptions of long screen times as detrimental to their learning process signal the importance of cultivating a balanced approach to technology usage that prioritizes meaningful engagement over excessive consumption. Subthemes such as physical health concerns and impact on mental health highlight the urgent need for proactive measures to mitigate the negative consequences of prolonged screen exposure, including promoting physical activity and fostering socio-emotional resilience. Furthermore, the comparison between non-screen activities and screen time activities underscores the significance of providing opportunities for physical engagement and social interaction to counteract the sedentary behavior and isolation often associated with excessive screen time. Educational management strategies must thus prioritize approaches to support young learners in navigating the modern age while fostering their overall well-being and developmental needs.

Promotion of physical activities at school and at home

The promotion of physical activities both at school and at home emerges as a critical educational management insight. Recognizing the potential detrimental effects of excessive screen time on cognitive abilities and social skills, educational institutions and families are increasingly prioritizing opportunities for physical activity. Schools play a pivotal role in this regard by integrating physical education classes, sports programs, and extracurricular activities into the curriculum to encourage regular movement and exercise among students. Moreover, educators and parents collaborate to create supportive environments at home that promote outdoor play, sports participation, and family fitness routines, thereby mitigating the sedentary behaviors associated with screen time. By emphasizing physical activities alongside screen time management strategies, educational stakeholders aim to foster holistic development among learners, nurturing not only their cognitive faculties but also their social competence and overall well-being.

They further shared their insights by mentioning the following statements:

As someone who has been teaching for years, I really would like to see more efforts to endorse the importance of promoting physical activities both within the school environment and at home. Through my experience in the classroom, I've observed firsthand the positive impact that regular exercise and movement can have on students' cognitive abilities and social skills. Additionally, I actively engage with parents to reinforce the importance of outdoor play and physical routines at home, recognizing the vital role families play in supporting healthy lifestyle habits. By prioritizing physical activities alongside screen time management strategies, we aim to cultivate well-rounded individuals who are not only academically proficient but also physically active and socially exposed. (P2)

In today's digital age, it's crucial for educators and parents to recognize the detrimental effects of excessive screen time on our students' development. As an educational management insight, the promotion of physical activities emerges as a powerful tool in mitigating these negative impacts. (P3)

By collaborating with families to create supportive environments at home that prioritize outdoor play and active lifestyles, we can counterbalance the sedentary behaviors associated with screen time. (P4)

The participants collectively promote the pressing need to prioritize physical activity promotion in both educational and home settings, particularly in the face of increasing digital engagement among students. The educator in P2 emphasizes the firsthand benefits of physical activity on cognitive and social development, advocating for a holistic approach that involves both school and parental involvement. This sentiment is echoed in P3, which stresses the importance of educators and parents recognizing the adverse effects of excessive screen time and leveraging physical activities as a solution. P4 further emphasizes the collaborative effort needed between educators and families to create environments conducive to active lifestyles.

This result and findings are related to the findings of Tercedor et.al (2017), where they highlight the PREVIENE Project which is aimed to assess the effectiveness of four school-based interventions—active commuting to/from school, active PE lessons, active school recess, and sleep health promotion—both individually and when implemented simultaneously, in primary school children. The research noted that while some interventions promoting physical activities in primary schools had been evaluated previously, none had examined the simultaneous implementation of multiple interventions in school and at home. The researchers note the importance of implementing interventions not only within schools but also in collaboration with families to create a holistic approach to promoting physical activity. Teachers' active participation in the design and implementation of interventions would enable them to acquire the necessary knowledge and skills to train other interested teachers, fostering the development of a network of physical activity-promoting schools. One way to extend these efforts into the home is to involve parents in the intervention process. Just as teachers play a vital role in implementing interventions within schools, parents can serve as active participants in promoting physical activity at home. Providing parents with resources, guidance, and support can empower them to create an environment that encourages their children to engage in physical activities outside of school hours. This collaborative effort between schools and families holds the potential to not only increase physical activity levels but also instill lifelong habits of keeping healthy lifestyles despite being in the digital age.

Effective screen time management. By integrating principles of screen time management into educational frameworks, institutions can empower learners to develop healthy relationships with technology, striking a balance between digital engagement and offline activities. This approach not only cultivates responsible digital citizenship but also mitigates potential adverse effects on cognitive functioning and social interaction associated with excessive screen time. Moreover, by promoting mindful screen time usage and providing guidance on prioritizing activities that enhance learning and social connectivity, educational management practices can effectively harness the potential of technology to enrich educational experiences while safeguarding learners' holistic development.

The participants in the study gave the following responses.

As an educator, I've observed firsthand the impact of excessive screen time on my students' cognitive abilities and social skills. By integrating strategies for screen time management into my classroom routines, such as setting clear boundaries for device usage and promoting offline activities,

I've noticed a positive shift in their attention spans and ability to engage meaningfully with peers during collaborative tasks. (P1)
In my experience, incorporating lessons on digital literacy and responsible screen time management has been instrumental in empowering students to make informed choices about their technology use. The Department of Education should extend this to parents so they could also be given ample information on this aspect. (P5)
One of the most significant insights I've gained as a teacher is the need to prioritize screen time management as part of modern-day education. Not just for my students but for the parents of my students as well. (P8)

The provided responses collectively highlight the critical role educators play in addressing the challenges posed by excessive screen time among students. Response P1 emphasizes the firsthand observations of the impact of screen time on cognitive abilities and social skills, advocating for the integration of screen time management strategies into classroom routines. This approach has led to noticeable improvements in attention spans and peer engagement. Response P5 underscores the importance of teaching digital literacy and responsible screen time management to empower students to make informed choices, while also suggesting extending this education to parents to ensure a collaborative effort. Finally, Response P8 echoes the sentiment that prioritizing screen time management is essential not only for students but also for their parents, emphasizing the need for a holistic approach to address this issue within modern education.

Friedrich (2014) mentioned Schmidt's systematic review, which states that strategies to reduce screen time indicated positive results, with school-based interventions in most studies. With that said, the researcher highlighted the family as an important component, especially parental involvement in promoting healthy habits. Therefore, interventions should involve and encourage family participation as children are influenced by their parents' habits. The inclusion of family components in intervention programs aligns with current scientific evidence, which suggests that such programs yield better results. By involving families, interventions can create a supportive environment that reinforces healthy screen behaviors both at home and in school. Recognizing that children are influenced by the habits and behaviors modeled by their parents, interventions that incorporate family involvement can have a more significant and lasting impact on children's lifestyle choices. Moreover, Friedrich advocates for the need for well-designed randomized controlled trials to assess the effectiveness of interventions targeting sedentary behavior, particularly those focusing on reducing screen time. By employing rigorous research methods, including randomized controlled trials, researchers can obtain robust evidence regarding the efficacy of interventions. This approach ensures that interventions are evidence-based and have been rigorously evaluated, providing valuable educational management insights for policymakers and educators.

Jones et al. (2021) introduce an important consideration regarding the evolving technological landscape and its implications for intervention design, which resonates with Friedrich's emphasis on addressing sedentary behavior, particularly screen time, through comprehensive strategies. While Friedrich highlighted the importance of involving families in interventions and conducting well-designed randomized controlled trials, Jones et al. draw attention to the need for interventions to adapt to changes in how children and adolescents interact with technology. Rather than solely focusing on reducing overall screen time, Jones et al. suggest that future interventions may need to be device-specific to effectively target sedentary behavior. This insight aligns with Friedrich's call for interventions to be tailored to address the specific behaviors and contexts such as screen time activities like watching television, playing video games, and using computers. Moreover, Jones et al. raise questions about the effectiveness of interventions delivered through electronic devices, particularly mobile platforms. This consideration adds another layer to Friedrich's emphasis on conducting rigorous evaluations of intervention effectiveness, as it prompts researchers to explore whether technology-mediated interventions enhance or diminish the desired outcomes in screen time.

4. Implications and Future Directions

In this chapter, the summary of the study is presented, from the summary of the findings, I drew the implications and future directions. The purpose of my study was to find out the perceptions, experiences, challenges encountered and insights of students on the effects of screen-time to cognitive and social development.

To achieve the research objectives, I made use of a qualitative phenomenological method with the use of thematic analysis. In adherence to Cresswell's (2006) guidelines in which open-ended questions for interviews were applied to get an authentic understanding of people's experiences. Furthermore, through this interview approach, I encouraged my participants to fully and openly discuss their own definition or meaning of the phenomenon being explore.

4.1 Findings

Based on the results of the thematic analysis of the responses from the student and teacher participants, the following themes were revealed.

The perception of young learners on the effect of long screen times to their learning process: Adaptation to technology and Impact on their well-being. Further, there were also two (2) subthemes that emerged on the challenges experienced by the informants. These are Physical Health Concerns and Impact on Mental Health. The experience of young learners on non-screen activities and how it differs from activities that involve screen time Physical Engagement vs Sedentary Behavior and Social Interaction vs. Isolation. The

educational management insights drawn from the participants were Effective screen time management and Promotion of physical activities at school and at home.

4.2 Implications

The results of my analysis revealed the following significant findings.

The thematic analysis of responses from both students and teachers yielded significant findings regarding the impact of screen time on young learners' learning processes and well-being, as well as the challenges experienced by both students and teachers. The study identified themes such as the perception of young learners on the effects of long screen times, including adaptation to technology and its impact on well-being, along with challenges related to physical and mental health concerns. Firstly, the notion of adaptation to technology reveal how young individuals navigate and integrate technology into their daily lives. This theme suggests that while children may readily engage with digital devices, their understanding of how prolonged screen time influences their lives is varied. Secondly, the impact on well-being highlights the potential consequences of excessive screen exposure, including but not limited to issues such as eye strain, disrupted sleep patterns, and heightened levels of stress or anxiety. Moreover, the study's recognition of challenges concerning both physical and mental health underscores the nature of the effects of prolonged screen time. Physical health concerns may encompass issues like sedentary behavior problems, while mental health challenges could include increased risk of depression, social withdrawal, and decreased self-esteem.

Additionally, the experience of young learners in non-screen activities versus those involving screen time highlighted differences in physical engagement versus sedentary behavior and social interaction versus isolation. This discusses how children primarily enjoy non-screen activities over prolonged periods on-screen as the joy of physical and social interaction does not top the dull and lone nature of screen activities especially when extended for long periods of time.

Educational management insights included the importance of effective screen time management and the promotion of physical activities both in school and at home. These findings suggest the necessity for interventions aimed at balancing screen time with non-screen activities to mitigate potential negative effects on both learning and well-being, emphasizing the importance of holistic approaches to education that address the diverse needs of young learners in the digital age

4.3 Future Directions

Based on the findings of the study, it is important that the findings are properly relayed and used by the significant people whom this research was intended for.

The DepEd administrators and heads may reconsider the interventions and programs currently in place to promote screen time management and physical activities. They may look more into the addition of school efforts to control screen time to diminish the detrimental effects of screen time to the cognitive and social development of children.

The School heads may extend school activities and screen time management education to the home of the learners, through collaborative programs and by the extended efforts of teachers to connect with families and educate them about the negative effects of screen time.

The future researchers may embark on the same research with different participants, place and school. Other avenues not scrutinized in this research may also be explored.

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