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The Effects of Screen Time on Secondary-Level Students

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The Effects of Screen Time on Secondary-Level Students

Samantha Nolan

Dissertation submitted in partial fulfilment of the award of
Professional Master of Education in Primary/Post-Primary

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Abstract

This dissertation investigates the effects of screen time, particularly through iPad usage, on secondary-level students, focusing on those in Junior Cycle English in a rural DEIS school. The sample included teachers with various years of experience teaching English in secondary schools, ensuring a thorough representation of the school community. Using a mixed-methods approach, the study combines quantitative surveys and qualitative interviews to explore perceptions and experiences related to iPad integration. Quantitative data highlights iPads' positive impact on enhancing students' comprehension of English concepts through interactive learning and access to diverse content. However, qualitative insights reveal concerns about screen dependency, potential declines in certain language skills and challenges in managing screen time effectively. Recommendations emphasise the need for structured integration strategies and ongoing professional development to optimise screen time implementation in enhancing educational practices.

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List of Acronyms and Abbreviations

Delivering Equality of Opportunity in Schools	DEIS
National Council for Curriculum and Assessment	NCCA
Technological Pedagogical and Content Knowledge	TPACK
Information and Communication Technology	ICT
Organisation for Economic Co-operation and Development	OECD
Student Response Systems	SRSs
British Education Research Association	BERA
General Data Protection Regulation	GDPR
Classroom Based Assessments	CBAs

Chapter One

Introduction

1.1 Introduction

The integration of digital technology in education has revolutionised the modern-day learning environment, offering new opportunities to students and educators alike. This dissertation examines the impact of screen time on the academic performance of Junior Cycle English students in a rural, co-educational post-primary school participating in the Delivering Equality of Opportunity in Schools (DEIS) programme. Conducted as part of the Post-Primary Master of Education at Hibernia College, Dublin, this study was inspired by observations made during the researcher's school placements, where the classroom use of iPads prompted an investigation into their educational impact.

1.2 The Origin of the Dissertation

The idea for this dissertation originated while the researcher carried out their first school placement. The researcher garnered an interest in the effects of screen time on secondary-level students after noting how each student had access to their own iPad in each class. The National Council for Curriculum and Assessment states that "Junior Cycle English focuses on improving students' communication skills, creativity, and appreciation of literary, digital, and visual texts through the three inter-connected strands of oral language, reading and writing". (NCCA, 2024) The influence of digital devices and the increasing screen time among students has prompted this research project to delve into the potential impacts that screen time has and in particular, the use of iPads has as the sole digital device used by students in the classroom on their academic performance.

1.3 Background to Study

Qi, Yan and Hui. (2023) state that "screen time refers to the time an individual spends using electronic or digital media devices". This research investigates how screen time affects Junior Cycle English students' academic performance. Pre-pandemic (Central Statistics Office, 2024), 76.1% of students spent 1-4 hours on devices daily, which increased to over 4 hours for 72.5% during the pandemic. This study seeks to understand the implications of increased screen time on learning outcomes in Junior Cycle English classes.

1.4 Rationale

Digital devices could potentially impact students' lives. Gallagher et al. (2015) argue that “touchscreen mobile devices (such as iPads) are responsible for radical changes in the landscape of students’ literacy development.” Excessive use of iPads in classrooms may affect cognitive development and academic performance. The English curriculum is crucial for developing literacy and critical analysis skills. Hutchinson, Beschorner and Schmidt-Crawford (2012) argue that the Technological Pedagogical and Content Knowledge (TPACK) established that using iPads in the English classroom can help teachers to achieve traditional print-based literacy objectives while also giving students the chance to learn modern literacies by engaging with texts in new ways. Similarly, Tarazi and Arafat (2021) argue that by allowing students to use iPad technology in learning, students' motivation to learn and to achieve will increase. This research aims to uncover the impact of excessive screen time on learning outcomes in Junior Cycle English students.

1.5 Dissertation Layout

The dissertation consists of five chapters. Chapter One covers the study’s background, rationale, and methodology. Chapter Two reviews literature on screen time’s impact on Junior Cycle English students, discussing its positive and negative effects. It emphasises the need for purposeful engagement and balanced use of digital devices, with educators and parents playing a crucial role in guiding students toward quality digital content and fostering skills to navigate the digital landscape effectively. Chapter Three details the mixed-methods approach, including online surveys and interviews, and addresses potential limitations and ethical considerations. Chapter Four delves into how iPads influence Junior Cycle English students' academic performance and literacy development. It merges quantitative survey data and qualitative teacher interview insights. Chapter Five analyses the findings, connecting them to the research questions and the secondary sources discussed in the literature review. Chapter Six, the conclusion will compile findings about how iPads affect Junior Cycle English students' learning. It will stress the need for managing iPads effectively in classrooms and might suggest ideas for future research or changes in teaching practices.

1.6 Conclusion

This chapter provides an overview of the dissertation, highlighting its origin, background, rationale, and upcoming chapters. The main goal of this project is to explore the impact of screen time on secondary-level students, with a focus on those in Junior Cycle English. The next chapter will conduct

a thorough literature review, examining existing research on screen time and its effects on student learning, particularly focusing on Junior Cycle English students.

Chapter 2

Literature Review

2.1 Introduction

Over the past decade, Irish secondary schools have witnessed a notable surge in the integration of Information and Communication Technology (ICT) into their educational practices. This trend has seen the emergence of flipped learning as a prominent methodology, as argued by (Huang and Rocha, 2023, p.295) that it helps in “enabling students to independently learn course material before attending class and subsequently engage in interactive discussions with teachers and peers for a more profound comprehension of the subject matter”. The researcher conducted their school placement in a rural, co-educational DEIS school heavily reliant on iPads for research, activities, and assessments. DEIS schools (Schools in the DEIS Programme pamphlet) “encourage students to set high expectations for themselves. Their aim is to support all students to achieve their potential through education”. This literature review will also examine the reliance on iPads as the primary digital device in classrooms and its potential effects on academic performance, concluding in the formulation of research questions that bridge the gaps identified in the literature.

2.2 Literacy and Language skills

The integration of iPads into Junior Cycle English classrooms prompts an exploration into how screen time impacts secondary students' literacy development, writing proficiency, and overall reading comprehension. In research carried out by Gallagher et al. (2015) “compared to printed texts, digital and touch-based texts offer different affordances and communicative possibilities to create new modes of reading and writing”. Gallagher et al. (2015) show that using iPads in English classes can help students read and write in new ways compared to traditional printed materials. iPads offer interactive features like videos and audio, making learning more engaging. iPads let students access a wide range of texts easily, helping them explore different types of writing. This helps students not only with their regular reading and writing skills but also with understanding how to use technology to find and evaluate information.

The onset of the COVID-19 pandemic further accelerated the adoption of technology, with remote learning becoming the norm, significantly altering students' screen time patterns. Toombs et al. (2022) found that “both passive and active time spent using screens outside of online school-based

requirements has increased for children and youth during the COVID-19 pandemic from 0.75 hours to as high as 6.5 hours per day in parent-report studies from the United States and elsewhere globally.” While the use of iPads has demonstrated plans in improving literacy and student productivity, concerns linger regarding the cognitive and psychological impacts of prolonged screen exposure, as well as the effectiveness of digital learning strategies on academic achievement.

Muppala et al. (2023) argue that screen-based devices have the potential to enhance education and learning. They note that studies have indicated that e-books and reading apps can boost reading abilities. Incorporating e-books into English classrooms enhances reading comprehension by leveraging multimedia elements and interactive features. With iPads, students can annotate texts, and highlight key phrases, deepening their engagement with the material. Hutchinson, Beschorner & Schmidt-Crawford (2012) argue that the concept of TPACK has emerged as a valuable “framework for identifying and understanding the complex interplay of teachers technological knowledge.” They go on to state that under this framework it was established that using iPads in the English classroom can help teachers to “meet traditional print-based literacy goals while also providing students with opportunities to learn the new literacies of 21st century technologies by responding to texts in new ways.”

Larson (2015) argues that having access to e-books and audiobooks on a device such as an iPad gives students the opportunity to make notes and bookmark key moments, while also helping students with their pronunciation of more difficult words, helping to build their vocabulary. Additionally, using the iPad to teach literacy skills fosters collaboration, creativity, and critical thinking, enabling students to become engaged learners, gain confidence, and take control of their own educational journey. (Johnston, 2022) Larson (2015) goes on to state that while it is important for students to have adequate oral language, “in traditional text forms, readers typically rely on print texts and two-dimensional pictures to make meaning while digital reading may encompass a range of formats such as interactive or hyperlinked texts, animations and audio.” The app ‘Pages’ helps build literacy skills by enabling students to create newsletters and posters, thereby enhancing their writing and design abilities. ‘Clips’ allows students to produce videos related to literacy activities, promoting engagement and creativity. ‘Chatterpix Kids’ helps develop oral language skills by letting students animate photos to make them talk, encouraging expressive communication and storytelling. (Johnston, 2022) Larson (2015) concludes by recognising that while the goal is not to replace printed texts with digital ones,

educators must expand their understanding of reading as it is no longer practical to ignore the evolving landscape of literacy and technology.

Irish students' performance in digital literacy assessments ranks favourably among Organisation for Economic Co-operation and Development (OECD) countries, "Irish student performances (15-year-olds) ranks as 8th of the 19 participating OECD countries in the digital literacy assessment". (NCCA, 2012) Nevertheless, it is essential to consider this within a broader framework. A summary report (Educational Research Centre, 2010) found that Irish students tend to use digital skills more for everyday tasks than for school-related activities. Therefore, if implementing screen time in the classroom, it is important that the educator ensures that students learn beneficial digital skills, emphasising the need for a more balanced approach to integrating screen time into educational settings.

2.3 Access to Diverse Content

A study (Clark and Luckin, 2013) found that with the integration of iPads into the classroom, students noted several advantages of using iPads that were not as easily achievable before. They mentioned easy internet access, the use of iBooks, access to translation tools, and convenient access to educational games and apps that support learning. Additionally, iPads facilitated routine access to tools for reflection, such as digital mind mapping and text annotation. Utilising screen time within the contemporary English classroom offers students access to a wide range of digital resources, including news articles, websites, interactive games, and apps. The NCCA (2024) Junior Cycle English specification notes that "English aims to develop students' knowledge of language and literature and to deepen their literacy skills. Students engage personally and think critically about a broad range of spoken, written and visual texts and create texts of their own". This underscores the curriculum's objective of fostering students' language and literary knowledge while also developing their literacy skills.

Khalid and Guttesen (2016) argue that iPads can serve as valuable tools in within the classroom setting noting that "students can use blogs to learn how to argue, and wikis to find out how to compose texts. The teacher can monitor their progress as well as differentiate and individualise instruction." Through personal engagement with various forms of texts and the implementation of iPads in the classroom, students are encouraged to create and analyse literature, a positive aspect of screen time in the

classroom environment.

Wang and Tahir (2020) argue that a major advancement in learning technology is game-based learning. Well-designed video games can serve as effective learning tools by engaging players in a way that allows them to learn without realising it. Many student response systems (SRSs) have incorporated game-like features to boost student engagement, such as the 'Space Race' games in 'Socrative' and 'Quizlet'. Their study demonstrated a significant increase in teachers' motivation after they began using 'Kahoot!' Additionally, 'Kahoot!' was found to enhance their teaching, provide entertainment, improve teaching quality, and boost students' attention and concentration. "The hands-on nature of the of the iPad, the immediacy of response, and the intuitive gestures that allow the user to manipulate images, text, graphs, photos, and web content by tapping and pinching, stretching, and rotating" (Ashman, 2014, p.171) are positive attributes that make implementing screen time in a secondary-level English classroom an ideal idea.

Furthermore, Boon, Boon and Bartle, (2020) argue that due to the personal and mobile nature of iPads, many scholars have anticipated benefits from using mobile technology in education. Specifically, iPads are believed to foster collaboration, enhance multimodal literacy, cater to individual learning needs, and motivate students. Additionally, iPads enable students to access educational information anytime and anywhere, which is expected to significantly improve the learning experience.

2.4 Multimodal Literacy

Mills and Unsworth (2017) argue that while "language and literacy practices have always been multimodal as communication requires attending to diverse kinds of meanings, whether of spoken or written words, visual images, gestures posture, movement, sound or silence," incorporating screen time into the lesson can offer students the chance to develop these skills. As Kress (2003) observes, it is important now to pay attention to "the broad move from the now centuries-long domination of writing to the new dominance of image and, on the other hand, the move from the dominance of the medium of the book to the dominance of the medium of the screen". By incorporating an element of screen time into a lesson, educators are teaching students how to interpret and analyse information in various formats.

Lee and Aspiranti (2023) argue that "the innovation of touchscreen technology (i.e., iPad) and its

unique features offer an avenue for researchers and practitioners to purposefully build such explicit vocabulary instruction that mirrors evidence-based instructional principles through the use of apps.” By incorporating elements of screen time into the classroom, educators can introduce students to a variety of communication platforms, providing them with avenues for writing practice, expression of thoughts, and engagement in discussions both within and outside the classroom. Regarding screen time in schools, research by Wang, Teng and Chen (2015) has shown that “in English teaching fields, this kind of computer assisted language learning can support and extend English curriculum goals which make students engage in meaningful English learning activities, to enhance their English communication skills and increase their reading and writing abilities.” Research carried out by Beschorner and Hall (2018) states that in 21st century classrooms, it is imperative that students have daily opportunities to write using both digital and paper-based tools, because while traditional writing methods remain important, integrating screen time acknowledges the increasing prevalence that technology has in this current age.

2.5 Reduced Attention Span and Engagement

Recent research has found that “the growing human brain is constantly building neural connections while pruning away less used ones, and digital media plays an active role in that process,” (Ruder, 2019) suggesting that prolonged exposure to screens, in this case, in a school environment may offer limited brain stimulation compared to real-world experiences where a digital device is not used. Dr. Ann Marcus-Quinn cautioned that reading texts on tablets may compromise crucial skills such as empathy and critical text analysis. She noted that digital reading often leads to ‘skim’ reading, where readers focus on keywords and mistakenly assume full comprehension, replacing the deeper engagement typical of reading hard copy texts. (RTÉ, 2019)

Lodge and Harrison (2019) argue that there is a “possibility that digital environments are inherently more distracting with scrolling and other aspects of the digital experience taking away cues and critical cognitive processing capacity from the task of comprehending the material”. Substitution, Augmentation, Modification, and Redefinition (SAMR) is a framework that helps educators understand how technology can be used in teaching and learning. This strategy was “designed by Dr. Ruben Puentedura for an integrated approach to technology in education. It can be seen as a framework with four levels on a continuum which explains the impact of technology in the classroom”. (Wilson, 2019) It categorises technology integration into four levels: Substitution, Augmentation, Modification, and

Redefinition. The goal is to move beyond just replacing traditional tools with digital ones and to use technology to transform and enhance learning experiences.

Marttunen, Salminen, and Utriainen, (2021) argue that studies have shown that students commonly struggle in evaluating the credibility of online sources and recognising bias. Moreover, as the quality of online content varies widely, students need to be wary of the potential risk of encountering misinformation or biased sources during these sessions of screen time in the classroom. A negative effect of implementing screen time in the English classroom can result in the possibility that students may come across misinformation regarding poems, poets and novels, biased sources, or poorly written content, which can negatively influence language skills and critical thinking as well as resulting in poorly written exercises and essays laden with false information. Therefore, it is crucial for secondary-school students to develop media literacy skills to counteract media influence and critically engage with the vast amount of misinformation present in the media. (Mallon, 2018) Marttunen, Salminen, and Utriainen, (2021) describe a study that “examined English composition students’ research essays to determine the amount of attention students gave to analysing and crediting online sources, particularly their timeliness, authority, and bias. They found that students not only struggled with understanding bias but also ignored it when it hampered their writing.” Ultimately, educators must teach students how to use their screen time wisely and efficiently so that they can critically analyse and not believe everything they see online.

Although student engagement is a vital aspect of effective learning in the English classroom, Muppala et al. (2023) note that a Spanish research study found a negative correlation between screen media use and academic achievement, showing that more screen time was linked to lower academic performance. Similarly, a study in the United States identified a significant connection between higher levels of media multitasking and lower scores on standardised tests in mathematics and English. Diemer, Fernandez and Streepey (2012) argue that “positive learning outcomes are likely to accompany use of iPads within classrooms if the device effectively increases the level of student engagement.” Boon, Boon and Bartle (2020) argue that iPads are valuable classroom tools that enhance collaborative learning, communication, and access to information. However, they also have the potential to become distractions in the classroom. Therefore, educators must adopt strategies to promote active engagement, such as incorporating interactive activities to create a more dynamic and enriching learning environment.

2.6 Focused research questions

Through reviewing relevant literature, several sub-questions emerged:

- Has screen time, particularly through iPad usage, impacted the literacy skills and comprehension levels of secondary-level English students?
- What are the benefits and drawbacks of incorporating iPads and screen time in English classrooms for language development and critical thinking skills?
- How can educators effectively manage screen time to maximize its positive effects on language learning while minimising potential distractions and negative impacts on students' attention span?

2.7 Conclusion

In conclusion, this literature review explored the integration of iPads in Irish secondary education, especially in Junior Cycle English classrooms. While iPads offer interactive learning opportunities and support language development, excessive screen time may lead to reduced attention spans and exposure to misinformation. The review stresses the importance of balanced technology integration and suggests further research to understand its impact on student outcomes.

Alongside these benefits, the review also recognises notable limitations associated with excessive screen time. Prolonged exposure to screens may lead to shortened attention spans, reduced engagement with educational content, and potential risks such as encountering misinformation or biased sources which stresses the importance of a balanced approach to technology integration and screen time in the classroom.

Chapter 3 will introduce the methodology used in this research project. The selected methods will be outlined and justified, while alternative approaches will also be explored and evaluated. Throughout this chapter, relevant literature will be referenced to provide support for the chosen methodology and to explain the rationale behind these selections.

Chapter 3

Methodology

3.1 Introduction

This chapter begins with a detailed discussion on the research paradigm setting the stage for understanding the rationale behind the chosen methods. Each paradigm's suitability is evaluated considering the study's goals. Next, the chapter delves into the specific methodology adopted, whether quantitative, qualitative, or mixed methods, providing a clear theoretical justification for the choice.

The rationale for selecting methods is thoroughly explained, along with the development and design process for these tools. The chosen sampling method is identified, providing details about the sample size and participant characteristics. It ensures the anonymity and confidentiality of participants. The data analysis section outlines the techniques used to analyse both quantitative and qualitative data.

The chapter also addresses the rigor of the research process, discussing the measures taken to ensure the reliability and trustworthiness of the findings. A discussion on the limitations of the study follows, acknowledging factors such as potential biases. Finally, the chapter concludes with a thorough examination of ethical considerations, detailing how the research complies with the British Education Research Association (BERA) guidelines, especially regarding the statement that, “researchers have a responsibility to consider what the most relevant and useful ways are of informing participants about the outcomes of the research in which they were or are involved” (BERA, 2018, p.8) and other relevant ethical standards.

3.2 Research paradigm

Within the framework of the research project, the researcher navigated two paradigms, interpretivism and positivism. As noted Kivunja and Kuyini (2017), Professor in Education Studies P. Lather argued that “a research paradigm inherently reflects the researcher’s beliefs about the world that s/he lives in and wants to live in. It constitutes the abstract beliefs and principles that shape how a researcher sees the world, and how s/he interprets and acts within that world.” The examination of how secondary-level school students engage with screen time drew upon these two distinct perspectives.

Interpretivism involves an in-depth exploration of human experiences, attitudes, and beliefs, with the researcher being part of the process and recognising the subjective nature of the research. Dudovskiy (2024) argues that the interpretivist approach relies on natural methods of gathering data, such as conducting interviews and making observations. In contrast, Parke, Konge and Artino (2019) argue that positivism tests hypotheses using a method called hypothetico-deductive reasoning, which often focuses on quantitative relationships between factors. Positivism focuses on investigating, confirming, and making predictions around patterns of thought and behaviour, with the researcher remaining objective and external to the process. The researcher selected these paradigms deliberately to thoroughly explore how screen time affects secondary-level school students, considering all the detailed aspects of their involvement with digital devices such as the iPad.

The primary goal of this research study was to delve into the effects of screen time on secondary-level school students. To achieve these goals, the researcher carefully planned how to study each part. For instance, when looking at reading and language skills, the researcher aimed to find out how using screens might affect students' engagement in reading and understanding language. By examining how students access diverse types of content, the researcher sought to understand the different materials they may encounter on screens and how this might impact their learning.

3.3 Methodology

The research methodology for this study employed a mixed-methods approach, combining both qualitative and quantitative methodologies, drawing from pragmatism. Pragmatism, as Kelly and Cordeiro (2020) state, is based on the belief that research should avoid philosophical discussions about the essence of truth and reality. Instead, it should concentrate on practical insights into tangible, real-life problems. This approach is particularly well-suited for this project, which examines Junior Cycle English classrooms within a DEIS secondary school where iPads serve as the primary learning tool. By combining qualitative and quantitative data, the study aims to provide a comprehensive understanding of the impact of screen time on students' learning experiences, academic performance, engagement, and overall outcomes.

Tenny, Brannan and Brannan (2022) argue that qualitative research fundamentally involves asking open-ended questions that are not easily quantified, such as 'how' and 'why' questions. One of the key strengths of qualitative research is their ability to explain the processes and patterns of human

behavior that are challenging to measure numerically. This makes qualitative research such as interviews well-suited for this project, to capture teachers' experiences and attitudes towards screen time and the use of iPads, providing insights that quantitative data alone may not reveal. Quantitative methods, such as surveys, allow the researcher to measure the extent of screen time offering valuable insights into screen usage patterns in this setting. Dawadi, Shrestha and Giri (2021) argue that “the use of mixed methods enables researchers to answer research questions with sufficient depth and breadth and helps generalise findings and implications of the researched issues to the whole population”. The decision to employ a mixed-methods approach ensures a thorough analysis, enhancing the research on the effects of screen time on secondary-level students, particularly in English classrooms within a DEIS secondary school.

3.4 Approach

Using a mixed methods approach provides essential structure to the research project. It aids in addressing specific elements such as sampling by integrating both quantitative and qualitative strategies. “Mixed methods may be employed to produce a robust description and interpretation of the data, make quantitative results more understandable, or understand broader applicability of small-sample qualitative findings.” (Harvard Catalyst, 2021) For instance, incorporating a survey approach enables the collection of broad data, while interviews allow for a more in-depth exploration of an individual’s experiences.

3.5 Research methods

For this study, a mixed-methods approach was employed, encompassing two distinct methodologies to collect comprehensive data. First, an online questionnaire was utilised, adopting a quantitative approach. This method was selected for its ability to collect data from a larger sample. The questionnaire was carefully designed to include relevant questions that addressed key areas of investigation, such as literacy and language skills, access to diverse content, multimodal literacy, reduced attention span and engagement with the English classroom. Secondly, interviews were conducted, structured based on the responses from the questionnaire. This qualitative method allowed for deeper exploration of specific themes and individual perspectives, providing a more detailed understanding of the effects of screen time on students' learning experiences. The combination of these methods ensured a thorough analysis, aligning with the study's goals and objectives.

3.6 Sample and participants

For this case study, the setting was a rural, co-educational, DEIS Community College, involving qualified secondary school teachers as participants. The sampling method was selected to ensure that participants who were most relevant to the research questions were included. This method was chosen over others for its ability to target specific groups that could provide the most insightful data regarding the effects of screen time. The sample included teachers with various years of experience teaching English in secondary schools, ensuring a thorough representation of the school community. To preserve anonymity, details such as the exact number of teachers were withheld.

The mixed methods approach, combining both quantitative and qualitative methodologies, was deemed the most suitable for this study. Qualitative data was primarily collected through interviews, providing descriptive insights into personal experiences and observations. Quantitative data was gathered through online surveys, enabling the collection of data on screen time usage and its impacts. This combination allowed for a thorough exploration of the challenges and benefits associated with screen time in Junior Cycle secondary education.

3.7 Pilot Study

The survey was tested with two participants to identify any potential issues with the survey itself or specific questions that might return unintended information. Participants received a link to the survey and were given time to complete it and provide feedback on the questions. After reviewing the feedback, the researcher revised several questions. Additionally, free text boxes were added to some questions, allowing participants to provide further information or comments if desired.

3.8 Data analysis

Data analysis in this study involved a mixed-methods approach, combining quantitative analysis and qualitative analysis to comprehensively explore the effects of screen time on Junior Cycle secondary-level students. Alem (2020) states that “data analysis is changing the collected raw data into meaningful facts and ideas to be understood either qualitatively or quantitatively. It is studying the tabulated material in order to determine inherent facts or meanings”. Surveys were employed to gather quantitative data, providing a broad overview of screen time habits, access to diverse content, multimodal literacy, reduced attention span and engagement in the English classroom among a large sample of participants. Ponto (2015) argues that the primary purpose of this type of research is to

rapidly gather descriptive information about a large group of individuals of interest relatively quickly. Closed-ended questions, such as rating scales, multiple choice questions and long answer questions were offered throughout. Surveys offered anonymity, encouraging honest responses.

In contrast, interviews were employed for qualitative data collection, allowing for a deeper exploration of participants' experience related to screen time in the classroom. This method facilitated a more thorough understanding of the impact of screen time on literacy skills and comprehension levels, access to diverse content and engagement with the English classroom, capturing personal insights and perspectives. Thematic analysis of interview data involved identifying recurring themes and patterns to coincide with the quantitative findings.

3.9 Rigour

In this study, rigour was maintained by employing rigorous methods suited to both quantitative and qualitative aspects. Maher et al. (2018) argue that staying closely engaged with the data, while remaining open and flexible to emerging insights, is critical. For quantitative data, objectivity was ensured through surveys that promoted reliability and validity. While acknowledging the limitations in findings, careful interpretation was conducted within the study.

For qualitative data, trustworthiness was ensured in several ways. Dependability was maintained by allowing participants to review the accuracy of their interview content. Confirmability was addressed by carefully handling audio recordings and transcripts to capture details accurately. While the study acknowledged the limitation of transferability, it provided detailed descriptions of the context and participants. Issues of reflexivity were also discussed, with researchers reflecting on their own biases and their potential impact on data collection and analysis.

3.10 Limitations

This study faced several methodological limitations. One major issue was the potential for bias in the interviews, where participants might have felt the need to give socially acceptable answers. The mixed-methods approach, while thorough, made it challenging to integrate quantitative and qualitative data smoothly, which could affect the consistency of the findings. Tomaszewski, Zarestky and Gonzalez (2020) argue that “in whole, qualitative research values people’s lived experiences and is inherently subjective and sensitive to the biases of both researchers and participants”, which can be a serious

flaw. Relying on self-reported data for screen time and its effects might also lead to inaccuracies. The sample size, although adequate for qualitative insights, may not be large enough to generalize the quantitative findings to all secondary-level students. Finally, while efforts were made to ensure the reliability and validity of the research tools, the fast-changing nature of digital literacy and screen time habits means the findings might not fully reflect future trends.

3.11 Ethical issues

Ethical approval for this research project was obtained in accordance with the guidelines outlined by the BERA (BERA, 2018). The study adheres strictly to BERA's Ethical Guidelines for Educational Research, ensuring ethical considerations throughout. Anonymity and confidentiality were maintained, with all participant data stored securely and access restricted, in compliance with Hibernia College data protection and General Data Protection Regulation (GDPR) guidelines. Participants were informed of their right to withdraw from the study at any stage without consequence. These ethical practices were integral to maintaining the trust of all participants involved in the research process, aligning with the ethical standards set by BERA (2018) and ensuring the integrity of the research dissertation.

3.12 Conclusion

This chapter has described the research methodology used to investigate the effects of screen time on secondary-level students, particularly within Junior Cycle English classrooms. By outlining the research paradigm, methodology, sampling strategies, data collection methods, and data analysis techniques, the chapter provides a comprehensive framework for understanding the study's approach. It emphasised the importance of aligning research methods with the study's objectives, ensuring a thorough and ethical investigation of the topic.

Chapter 4 will delve into the findings of this research, presenting and analysing the data collected to answer the research questions. The chapter will provide deeper insights into the effects of screen time on students in Junior Cycle English classrooms, drawing from both quantitative and qualitative perspectives.

Chapter 4

Findings

4.1 Introduction to Findings:

This chapter presents an in-depth analysis of the findings obtained from an investigation into the relationship between screen time, specifically iPad usage, and its impact on Junior Cycle English students. In this chapter, the researcher presents the findings derived from both qualitative and quantitative data collected through questionnaires and interviews.

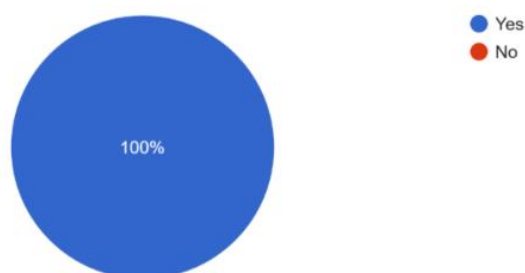
For this study, a mixed methods approach was adopted, combining questionnaires and face-to-face interviews to gather comprehensive insights into the implementation of iPads in a rural DEIS school where all students utilise iPads. Approximately 20 questionnaires, distributed in an online format, were returned from English teachers catering to junior, senior, or both cycles. Additionally, two face-to-face interviews were conducted with English teachers. These interviews were structured with open-ended questions to encourage natural dialogue and deeper responses.

4.2 Quantitative Survey Findings:

Most surveyed teachers (70%) have 9-12 years of teaching experience. All respondents teach either Junior Cycle, Senior Cycle, or both. Teachers vary in their frequency of iPad usage, with 40% indicating frequent use (rating of 4 or 5 on a scale of 1 to 5). Despite challenges, a majority (70%) believe that iPads positively impact students' understanding of English concepts. All respondents have noticed challenges related to student engagement when using iPads in the classroom.

Figure 1: iPad enhancement of diverse content

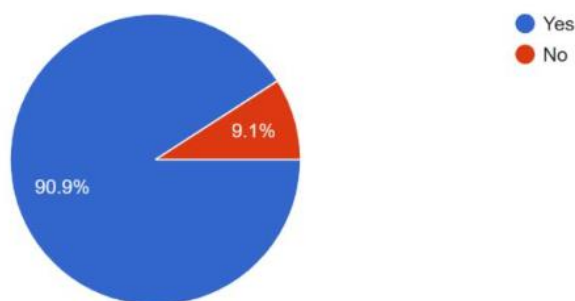
In your opinion, does the use of iPads enhance students' access to diverse content in English class?
(Yes/No)



Strategies for managing screen time include visually scanning the room, setting clear rules, and utilising team teaching for supervision. The unanimous consensus (100%) is that iPads enhance students' access to diverse content in English class. Teachers exhibit moderate confidence in addressing potential technical issues during lessons. A significant portion (60%) has received positive feedback from students or parents regarding the use of iPads in English lessons. Overall, most teachers (90.9%) believe that iPads contribute to a more interactive learning environment.

Figure 2: iPad contribution to a more active learning environment

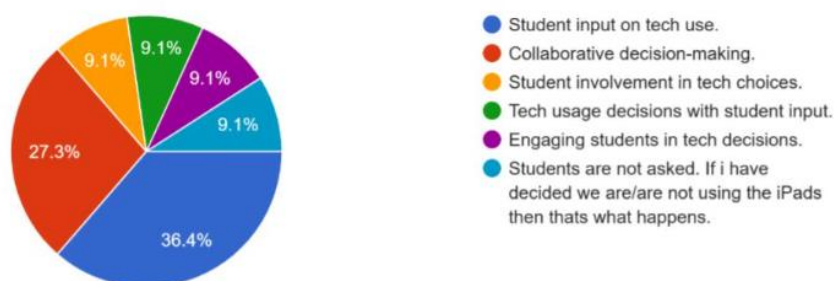
Do you believe that iPads contribute to a more interactive learning environment in your English classroom? (Yes/No)



The survey also finds that teachers employ a mixed approach, balancing the use of iPads with traditional teaching methods based on student needs. Teachers emphasise employing strategies to ensure that screen time enhances rather than detracts from student’s learning experiences.

Figure 3: Involvement of students in decision making regarding ICT in the classroom

How do you involve students in decision-making regarding the use of technology in the classroom?



Assessment of the impact on reading and writing skills is primarily done through engagement, oral questioning, and class tests. 63.6% of teachers involve students in some aspects of decision-making regarding the use of technology in the classroom through collaborative approaches. Ensuring that screen time aligns with curriculum objectives is a priority, with teachers tying screen time to learning goals.

4.2.1 Interactive learning experience:

90.9% of teachers in the study perceive that iPads contribute to a more interactive and engaging learning environment for secondary-level students in English classes. The use of iPads allows for the integration of multimedia content, interactive applications, and online resources, which can help stimulate student interest and participation.

4.2.2 Improved understanding of English concepts:

Despite challenges, such as managing screen time and technical issues, 63.6% of teachers in the study generally believe that iPads have a positive impact on students' understanding of English concepts. Educators have identified several iPad activities and apps that effectively enhance students' understanding of English concepts. Among the responses, 40% highlighted using OneNote for sharing and editing texts, organising yearly plans, and distributing homework, proving valuable for research and creating presentations. Kahoot quizzes and YouTube clips were mentioned by 50% of respondents as effective tools for engaging students with interactive content and visual explanations. Apps like Popplet for word webs, Google for research and vocabulary, and Padlet for collaborative projects were also noted. Overall, these diverse apps support multimodal approaches, making English concepts more accessible and engaging for students.

4.2.3 Increased access to resources:

100% of the teachers who completed the survey believed that iPads provide students with greater access to a wide range of English language resources. This expanded access allows students to explore different perspectives, deepen their understanding of English language topics and engage with authentic English language materials.

4.2.4 Monitoring screen time during English lessons:

85% of teachers visually scan the room and walk around to check screens and ensure students are on task. About 70% make sure students are logged into the correct apps and tasks, while 60% require iPads to be placed flat or face down when not in use. Additionally, 55% of teachers highlight the benefits of team teaching, allowing for more effective monitoring, and 50% enforce structured iPad use with clear instructions. To further reduce screen time, 65% of respondents avoid using iPads in every class, encouraging students to write answers in copies, workbooks, or worksheets instead. These combined strategies aim to maintain student focus and appropriate use of technology in the classroom.

4.3 Qualitative Findings

4.3.1 Interview 1

The researcher found that this interview provided valuable qualitative data regarding the integration of iPads into the English classroom curriculum at this particular educator's school. Participant 1 noted that, "in the English classroom, all the textbooks and workbooks are on their iPads. Regarding revision quizzes and ensuring learning has taken place during the lesson, we would use Kahoot and Blooket." They utilise a wide range of resources including videos, articles, and online content to supplement traditional teaching materials.

They note that there's a perceived decline in literacy, writing, grammar, and handwriting skills among students. Participant 1 stated that, "language skills have disimproved in the sense that conversation does not flow as easy, while the JCT has incorporated classroom-based assessments (CBA) to maybe counteract that for the students benefit but language does not flow as quick".

The incorporation of iPads hasn't necessarily improved these skills with Participant one suggesting that "maybe an oral language element of the new Junior Cycle would be no harm so that students would have to speak to strangers, would have to talk about a topic and would have to form a positive structured conversation with somebody which would help them further down the line."

Regarding students' engagement and participation in English, lessons have declined, partly due to their dependency on iPads. Attention tends to gravitate towards screens rather than the teacher or

traditional teaching materials. To address this, the teacher restricts iPad use to specific times and insists on traditional copies of novels and dramas instead of digital versions, stating that “the lesson needs to be engaging, it needs to keep them pulled into the lesson because if it’s not then they will not participate, or they won’t engage in the English lesson.”

While iPads positively impact access to diverse content, writing styles, and multimedia resources. The educator noted however, it's crucial for the integration to be teacher-led and structured for maximum benefit. While students collaborate during group activities, they noted that in their class some still prefer to work individually on iPads rather than engage in traditional collaborative discussions, noting that “it’s almost as if the screen is a crutch for these students and they’re reliant on them.”

The screen seems to hinder traditional forms of interaction that would occur in the traditional sense of groupwork. To manage distractions, iPads are kept flat on desks during class, and students are only allowed to use them at the teacher's instruction. This helps minimise distractions and off-task behaviours related to screen time.

Overall, this interview highlights both the benefits and challenges of integrating iPads into the English classroom, emphasising the importance of balance with traditional teaching methods.

4.3.2 Interview 2

The second educator interviewed noted that screen time is integrated into the class at the start, where students use OneNote to check learning intentions and complete tasks. They note that the iPad usage doesn't significantly improve literacy or language skills, but it does encourage independent research, which enhances literacy initiatives. Participant 2 stated that “students are probably better at presentations from using the iPads, it does help them to organise their presentations, I would say developing language and literacy skills independently for research is probably the one big positive as it does put a bit more onus on them.”

iPads can engage students visually and offer multimedia approaches in English classes, making lessons more interactive. However, there's a risk of over-reliance and distraction if not managed properly. While over-reliance and distraction are challenges, clear rules, classroom management, and monitoring can mitigate these issues. Participant 2 noted that, “if you are shoehorning IT into a lesson

just for the sake of putting IT into a lesson, it is not a good idea. It should be a natural part of it". Tasks should be appropriately planned and relevant to maintain engagement.

The educator noted that proper planning, setting appropriate tasks, and effective classroom management are crucial for minimising distractions and ensuring students stay on task and while some parent's express concerns about screen distraction, others appreciate the organisational benefits of using apps like OneNote. Participant 2 declared that they are "constantly walking around the room and making sure that students are using the iPads on task. You can tell by a student's demeanour if they are using it properly or not."

Ultimately, there's a mix of opinions regarding iPad usage. Essentially, iPads support a multimodal approach to projects, allowing students to integrate different genres of English. Overall, this interviewee emphasises the importance of proper management and integration of iPads into the classroom to maximise their benefits while minimising distractions.

4.4 Thematic analysis of interviews:

While conducting both interviews, the researcher noted a series of key themes regarding the effect of iPads in the into the English classroom, both positives and negatives.

4.4.1 Access to diverse content:

iPads provide students with access to a wide range of digital resources, including eBooks, articles, videos, and multimedia content. Participant 2 noted that iPads help with "various writing styles because you can easily engage with informative language, persuasive language, aesthetic language in in a whole range of forms online and share it with them very easily and share it with them very quickly. They can annotate very easily and in terms of diverse content, you have the whole world wide web in front of you, so it is as diverse as you can get." This enhances their exposure to different writing styles, genres, and perspectives.

4.4.2 Multimodal learning:

iPads support a multimodal approach to learning, allowing students to engage with text, audio, video, and interactive elements. Participant 1 stated that "you can use videos if you want to create a drama excerpt and it can be recorded, be it with a voice note or actually being recorded, it's almost like a mini

film, so lots can be done and in the in the English lessons and that is a positive". iPads can cater to diverse learning styles and preferences.

4.4.3 Dependency and distraction:

Students may become overly dependent on iPads, leading to distractions and reduced attention during lessons. Both participants stated that their first port of call when minimising iPad distraction was to have students put the iPad closed and flat on the desk. Constant access to digital content can also contribute to shorter attention spans.

4.4.4 Decline in language and writing skills:

There are concerns about the decline in certain language skills, such as conversation fluency, handwriting, and grammar, possibly due to increased reliance on digital resources and reduced practice with traditional methods. Participant 2 affirmed that to remedy this concern they "do not really get students to write tasks on iPads, students always write in my classes they would use the iPad for other things so it would not affect their handwriting."

4.5 Conclusion

This chapter presented a detailed examination of the findings derived from a study investigating the effect of iPads on Junior Cycle English students. The chapter employs a mixed-methods approach, combining quantitative analysis from surveys and qualitative insights obtained through interviews with educators. Quantitative survey findings indicate that many teachers perceive iPads as positively impacting students' comprehension of English concepts, despite encountering challenges such as managing screen time and technical issues.

Qualitative data gathered from interviews provided a second understanding of the benefits and challenges associated with the effect of iPads in the English classroom. While iPads offer advantages like access to diverse content and facilitating collaborative learning experiences, concerns emerge regarding student dependency on screens and potential declines in certain language skills.

Chapter 5 will discuss and critically analyse these findings in relation to the research questions and existing literature.

Chapter 5

Discussion

5.1 Introduction

This chapter will discuss the outcomes of the findings from the previous chapter which were based on the quantitative and qualitative data collected from online surveys and semi-structured interviews. Analysis highlighted several themes relating to the original research questions of this single case study:

- Has screen time, particularly through iPad usage, impacted the literacy skills and comprehension levels of secondary-level English students?
- What are the benefits and drawbacks of incorporating iPads and screen time in English classrooms for language development and critical thinking skills?
- How can educators effectively manage screen time to maximise its positive effects on language learning while minimising potential distractions and negative impacts on students' attention span?

Through a meticulous analysis of both quantitative data and qualitative insights, the researcher aspired to paint a comprehensive picture of the relationship between screen time and student outcomes. The online surveys provided valuable quantitative data, revealing different educators' perspectives on the efficiency of iPads in enhancing English language learning. Despite encountering challenges such as managing screen time and technical issues, many teachers expressed optimism about the positive impact of iPads on students' comprehension of English concepts.

However, it was the qualitative insights garnered from interviews with English educators that truly enriched the researchers understanding. Engaging in semi-structured interviews with teachers allowed the researcher to delve deeper into the nuances of iPad integration in the classroom. While educators applauded iPads for their ability to facilitate access to diverse content and foster collaborative learning experiences, they also voiced concerns about the potential drawbacks, including students' dependency on screens and declines in certain language proficiencies.

This chapter will establish links between this study and research carried out in this field, discussing both the advantages and disadvantages of the effects of screen time on secondary school students, particularly those in Junior Cycle English, emphasising the critical role of effective management to achieve positive learning outcomes for students.

5.2 Impact of screen time on literacy skills and comprehension levels

The findings from both the quantitative survey and qualitative interviews provide valuable insights into the impact of screen time, particularly through iPad usage, on the literacy skills and comprehension levels of secondary-level Junior Cycle English students. Quantitative data indicated that a significant majority of teachers perceive iPads as positively influencing students' understanding of English concepts, comparable with Róisín Johnston's research where she stated that "using the iPad to teach literacy skills also supports collaboration, creativity and critical thinking, empowering students to become active learners and grow in confidence and take ownership over their own learning". (Johnston, 2022) However, the qualitative interviews reveal a more subjective perspective, highlighting concerns about potential declines in certain language skills, such as conversation fluency, handwriting, and grammar. It was evident from the research that iPads offer unique opportunities for enhancing language learning through access to diverse resources and facilitating collaborative learning experiences, corresponding with research carried out by Gallagher et. al (2015) which notes that "learning with technology is viewed as flexible and affords learners to easily share their perspectives, question each other and collaborate." Yet the study found that educators all agreed that they must remain vigilant in monitoring the potential drawbacks of including iPads in the classroom, including over-dependency on screens and reduced practice with traditional literacy skills.

One of the central questions addressed in this study is how educators can effectively manage screen time to maximise its positive effects on language learning while minimising potential distractions and negative impacts on students' attention span. Both quantitative and qualitative data correlate the importance of setting clear rules, maintaining classroom management strategies, as well as aligning tasks with curriculum objectives to optimise the educational benefits of iPads. Educators should consider implementing targeted interventions to address specific literacy and comprehension skills that may be affected by screen time and iPad usage such as oral language, reading and handwriting, the three strands highlighted in the Junior Cycle English learning outcomes.

While screen time, particularly through iPad usage, presents both opportunities and challenges for language learning in English classrooms, a balanced and informed approach is essential to harnessing its full potential. By addressing concerns, implementing effective management strategies, and remaining vigilant in monitoring its impact, educators can ensure that screen time enhances, rather than detracts from, students' language development and critical thinking skills.

5.3 Access to diverse content

The findings from both quantitative surveys and qualitative interviews found that iPads play a significant role in enhancing students' access to diverse content in the English classroom. The integration of technology, particularly iPads in the classroom, allows students to engage with a wide range of digital materials, including news articles, interactive games, websites, and educational applications. This exposure aligns with the National Council for Curriculum and Assessment (NCCA) Junior Cycle English specification, which emphasises the importance of engaging “critically with texts in a wide range of forms, to understand and respond to their content, and to enrich their own spoken and written output” and “exploring the potential of technology to create texts that are rich in variety of content and presentation”. (NCCA, 2024)

The research found that the incorporation of iPads into English lessons provides students with opportunities to explore different writing styles, genres, and multimedia resources, thereby enriching their language skills and vocabulary. Teachers highlighted in the surveys the positive impact of interactive learning experiences facilitated by iPads on comprehension and building vocabulary corresponding with research by Clark and Luckin (2013) who also reported on the benefits of using iPads that were not easily achievable before. By leveraging educational apps such as Blooket, Quizlet, Kahoot, and Storybird, teachers can create engaging activities on the iPad that promote active learning and foster students' interest in English language topics. This supports the view of Ashman (2014) who noted the positive attributes of apps such as Kahoot, Socrative and Quizlet when implementing screen time in the classroom.

The interactive and multimedia nature of iPads contributes to a more engaging and interactive learning environment for secondary-level students in Junior Cycle English classes. Students are motivated to participate in class activities, complete assignments, and explore English language topics when using iPads, leading to increased enthusiasm and interest in learning. The findings suggested that while the use of iPads enhances access to diverse content and enriches language learning experiences, educators must also address challenges related to managing screen time and minimising distractions in the classroom. Strategies for managing screen time include setting clear rules, visually scanning the room, and utilising team teaching for supervision. Educators adopt a mixed approach, balancing the use of iPads with traditional teaching methods based on student needs and learning objectives. This supports Diemer, Fernandez and Streepey (2012) who argued that “positive learning outcomes are

likely to accompany use of iPads within classrooms if the device effectively increases the level of student engagement”. While iPads offer immediate access to digital resources and tools, traditional teaching methods such as pre-teaching vocabulary and collaborative discussions remain integral to language learning. Noted by NSW Government (2012) Pre-teaching vocabulary aids in reading new texts by providing students with the meanings of words beforehand. This practice decreases the number of unfamiliar words they encounter, thereby enhancing their comprehension. Teachers emphasise the importance of clear boundaries, regular practice of handwriting, and monitoring of iPad use to maximise its benefits while minimising potential distractions.

To effectively manage screen time and maximise its positive effects on language learning, educators should consider the following recommendations:

- Establish clear rules and expectations for iPad use in the classroom, including designated times for screen activities and guidelines for responsible use.
- Align screen time activities with curriculum objectives and learning goals to ensure that technology integration enhances rather than detracts from students' learning experiences.
- Adopt a balanced approach that integrates iPads with traditional teaching methods to cater to diverse learning styles and preferences.

Toombs et al. (2022) promote a similar set of guidelines regarding screen time usage including setting and monitoring consistent time limits for device use by creating a schedule and adhering to it and establishing a time for turning off devices. Take frequent breaks from screens by following the 20-20-20 rule: every 20 minutes, look at an object about 20 feet away for 20 seconds to reduce eyestrain and relax the eyes. Studies show that students who followed this rule and used artificial tears had better ocular health.

By implementing these recommendations, educators can implement the usage of iPads in their lessons to enhance language development and critical thinking skills among secondary-level English students while effectively managing screen time and minimising potential distractions.

5.4 Engagement in the English classroom

The findings from this study highlight the relationship between screen time, particularly iPad usage, and its influence on student engagement within the English classroom. Prensky (2011) argues that

today's students differ from past generations as they speak the language of technology. Therefore, it is inappropriate to envision an English language classroom today without iPads and other digital tools. Furthermore, the use of iPads actively engages students and greatly enhances their motivation to learn the target language. (Prensky, 2011) The literature review underscores the potential for screen time to both enhance and hinder student engagement. While iPads can offer interactive learning experiences and access to diverse resources, excessive screen time can lead to distractions and reduced attention spans. Quantitative survey data revealed a mixed perception among educators regarding the impact of iPads on student engagement. While some teachers perceived iPads as enhancing student motivation and participation, others express concerns about students' dependency on screens. The qualitative findings echo these sentiments, with educators noting a decline in student engagement and attention during English lessons, potentially due to excessive screen time and digital distractions. The findings coincide with Tarazi and Arafat (2021) who argued that "when using the same teaching and learning styles by iPad in classes for a long time, students may lose their interest in this technology, and it may lose its novelty impact", which could be a major reason for the lack of engagement in the English classroom.

Despite these challenges, educators stated that they employ various strategies to promote student engagement within the English classroom. These include promoting interactive applications, multimedia content, and collaborative learning experiences facilitated by iPads. Additionally, teachers emphasise the importance of establishing clear boundaries and structuring screen time to maximise its educational value. Collaborative approaches, such as group projects and peer feedback, are highlighted as effective means of fostering student engagement and participation.

A recurring theme in both quantitative and qualitative data was the importance of striking a balance between screen time and traditional teaching methods. While iPads offer opportunities for interactive learning experiences, educators stress the continued relevance of traditional teaching approaches. By integrating iPads strategically within the curriculum and supplementing them with traditional methods, educators can create a dynamic and engaging learning environment that caters to diverse learning styles and preferences. Moreover, digital distractions may detract from students' capacity to focus attention and actively participate in class discussions, thereby compromising their overall learning experience.

5.5 Conclusion

This chapter discussed the main findings regarding the impact and effects of screen time, particularly through iPad usage, on secondary-level Junior Cycle English students. Through a comprehensive analysis of both quantitative surveys and qualitative interviews, several key themes emerged, addressing the original research questions while delving into the broader implications for language learning and classroom engagement.

Firstly, regarding literacy skills and comprehension levels, while quantitative data generally portrayed a positive perception of iPads' influence on English language understanding, qualitative insights highlighted concerns about potential declines in certain language proficiencies. The study emphasised the importance of effective management strategies to minimise these drawbacks while maximizing the educational benefits of iPads.

Secondly, the chapter examined access to diverse content facilitated by iPads, determining their role in enriching language learning experiences through interactive and multimedia resources. While acknowledging the benefits, educators emphasised the need to address challenges such as managing screen time and minimising distractions to ensure optimal learning outcomes.

Furthermore, the discussion explored the relationship between screen time and student engagement within the Junior Cycle English classroom. While iPads can enhance engagement through interactive learning experiences, concerns were raised about excessive screen time leading to distractions and reduced attention spans. Strategies to promote engagement included structuring screen time, promoting collaborative approaches, and integrating traditional teaching methods.

Ultimately, the chapter advocates for a balanced approach to incorporating iPads in English classrooms, to leverage their potential while also addressing the associated challenges. By establishing clear rules, aligning activities with curriculum objectives, and integrating iPads with traditional teaching methods, educators can create dynamic and engaging learning environments conducive to language development and critical thinking skills. Through continuous monitoring educators can navigate the complexities of screen time more easily to establish more positive learning experiences for secondary-level English students.

Chapter 6

Conclusion

6.1 Introduction

This final chapter draws together the main conclusions reached from the presentation and discussion of the findings in the previous chapters. Focused on exploring the effects of screen time on secondary-level students, with a particular emphasis on Junior Cycle English students, this chapter ties the entire project together. While tablets (such as iPads) have made technology integration in classrooms more widely accessible to all students due to their lower cost, portability, and ease of use (Mang and Wardley, 2012), this research project examined how screen time, primarily through iPad usage, influences language learning outcomes in secondary education.

6.2 Summary of Findings

Throughout this study, an exploration of the impact of screen time, primarily through iPads, on Junior Cycle English students revealed nuanced insights. Quantitative analysis highlighted the perceived benefits of iPads in enhancing students' comprehension of English concepts. Notably, iPads facilitated interactive learning experiences, improved access to diverse content, and supported multimodal approaches to learning. On the contrary, qualitative findings underscored concerns regarding students' potential over-dependency on screens, potential declines in specific language skills, and challenges in effectively managing screen time.

Educators' perspectives, as gathered through qualitative interviews, emphasised the importance of balanced integration of iPads with traditional teaching methods. They advocated for clear rules and structured screen time to optimise educational benefits while reducing distractions.

6.3 Limitations

Despite the insights gained, this study acknowledges several methodological limitations. Conducted in a single rural DEIS school, the findings may not fully generalise to broader educational contexts. The mixed-methods approach, while thorough, made it challenging to seamlessly integrate quantitative and qualitative data, potentially affecting the consistency of the findings. Tomaszewski, Zarestky, and Gonzalez (2020) argue that qualitative research, which values people's lived experiences, can be subjective and sensitive to biases from both researchers and participants, posing a significant

challenge. Additionally, relying on self-reported data from surveys and interviews introduces potential biases and the risk of inaccuracies in understanding screen time effects. The sample size, though sufficient for qualitative insights, may not be large enough to apply the quantitative findings to all secondary-level students. A larger sample size increases the accuracy of average values. It also helps researchers detect outliers and results in smaller margins of error. (Charlesworth Author Services, 2022) Moreover, while efforts were made to ensure the reliability and validity of the research tools, the rapid evolution of digital literacy and screen time habits means the findings may not fully capture future trends. Future research could benefit from larger, more diverse samples to fully explore the effects of iPads and screen time on secondary-level students across various educational settings because as noted by Andrade (2020), having a larger sample size could potentially better represent the population, hence providing more accurate results.

6.4 Recommendations

Based on the findings, several concrete recommendations emerge for educators:

- Develop clear guidelines and policies at school to regulate screen time and promote responsible iPad usage. This includes providing professional development training for teachers on the effective integration strategies of iPads and technology in the English classroom.
- Implement structured approaches to iPad use aligned with curriculum objectives and learning goals. Encourage educators to blend iPads with traditional teaching methods to accommodate diverse learning styles and foster active student participation.
- Facilitate ongoing professional development for educators to enhance their own digital literacy skills and proficiency in implementing educational apps and tools effectively. Foster collaboration among teachers to share best practices and innovative strategies for integrating technology in English classrooms.

6.5 Conclusion

In conclusion, this dissertation has critically examined the effects of screen time, particularly through iPads, on Junior Cycle English students. While iPads offer significant opportunities for enhancing engagement and facilitating diverse learning experiences, careful management is essential to reduce potential drawbacks such as distraction and decline in essential literacy skills.

Moving forward, educators must continue adapting their approaches to technology integration, ensuring iPads complement rather than replace traditional teaching methods as argued by Keane (2024, para. 6) who notes that “using technology for technology’s sake will not deliver real measurable improvements in educational attainment but using technology to enhance learning and crucially improve student engagement will deliver time and time again.” By addressing these challenges and understanding the positive potential digital tools can have in the English classroom, educators can create dynamic learning environments that empower students in their language learning journey.

This study provides a foundation for future research aimed at optimising screen time and iPad usage in English classrooms. Through practical recommendations and critical reflection on limitations, educators can enhance their practices and enrich the educational experiences of secondary-level students.

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Appendices

Appendix A: Interview Schedule

Interview Schedule:

1. How do you integrate screen time, particularly the use of iPads, into your English classroom curriculum?
2. Can you share any observed changes in students' literacy and language skills since the incorporation of iPads?
3. In your perspective, how has screen time influenced students' engagement and participation in English lessons?
4. Have you encountered any challenges related to screen time in the classroom, and how do you address them?
5. Do you believe that the use of iPads positively impacts students' access to diverse content and various writing styles?
6. How do you assess the effectiveness of screen time in improving students' reading comprehension skills?
7. In your experience, have you observed any differences in student collaboration and interaction during screen-based activities compared to traditional methods?
8. How do you handle potential distractions or off-task behaviours related to screen time in the classroom?
9. Have you received feedback from students or parents regarding the use of iPads in the English classroom, and how do you address any concerns raised?
10. Can you share any specific examples of successful learning outcomes or projects facilitated by the integration of iPads in English lessons?

Appendix B: Research Information Sheet

Research Information Sheet	
Organisation:	Hibernia College Dublin
Title of Study:	The Effects of Screen time on Secondary Level Students
<p>Outline of Research Study:</p> <p>The inspiration for this dissertation stemmed from a keen interest in exploring the impact of screen time on secondary level students, with a specific focus on Junior Cycle English students. This interest was sparked during the researcher's initial school placement. The pervasive use of digital devices and the escalating screen time among students motivated the initiation of this research project to investigate the potential effects of screen time on students in the English classroom. In particular, the study scrutinises the influence of iPads, the primary digital tool employed by students in the classroom, on their academic performance, literacy skills and critical analysis skills.</p> <p>Objectives of the project:</p> <p>The primary aim of this research is to offer insights into the consequences of screen time on the academic performance of Junior Cycle English students. The researcher chose this topic driven by personal experiences in the English classroom (as English is the researcher's primary subject) and a genuine curiosity about the implications of screen time specifically within the context of Junior Cycle English classes. The goal is to understand how screen time, especially with the use of iPads, impacts academic achievement and contributes to optimal learning outcomes.</p> <p>What would I need you to do?</p> <p>Your participation in this research endeavour is greatly appreciated. Ethical approval for this project has been granted by Hibernia College Dublin. If you choose to take part, you will engage in a brief semi-structured interview with the researcher and complete a short survey. Any information shared about your identity or that of the school will be treated with utmost anonymity and confidentiality. While interview quotes may be used and published in the research, rest assured that your name and the school's name will remain undisclosed. The interview will be recorded and transcribed, and a copy of the transcript will be provided upon your request. The findings from this research will contribute to a dissertation for Hibernia College Dublin, and may also be featured in conference proceedings or academic articles. Remember, you have the freedom to withdraw from the study at any point.</p> <p>What is the purpose of this research?</p> <p>The purpose of the research is to complete small-scale study which forms part of the final year of the Professional Master of Education (Post-Primary) with Hibernia College Dublin.</p>	

Appendix C: Online Survey Questions

The Effects of Screentime on Secondary Level Students

As part of my Professional Masters in (Post-Primary) Education with Hibernia College, I am investigating 'The Effects of Screentime on Secondary Level Students.' This research project aims to delve into the impact of screentime on secondary level students with a focus on those in the English classroom who primarily use iPads.

Not shared

What is your teaching experience in terms of years?

0-3

3-6

6-9

9-12

Other: _____

Do you teach Junior Cycle or Senior Cycle English or both?

Junior

Senior

Both

How often do you use iPads for teaching English activities on a scale of 1 (Rarely) to 5 (Frequently)?

1

2

3

4

5

In your experience, do you think using iPads has positively impacted students' understanding of English concepts? (Yes/No)

Yes

No

On a scale of 1 to 5, how comfortable do you feel incorporating technology into your English lessons?

1

2

3

4

5

Have you noticed any challenges related to student engagement when using iPads in the classroom? (Yes/No)

Yes

No

Have you received feedback from students or parents about the positive aspects of using iPads in English lessons? (Yes/No)

Yes

No

How do you manage and monitor students' screen time during English lessons?

Your answer _____

Do you believe that iPads contribute to a more interactive learning environment in your English classroom? (Yes/No)

Yes

No

In your opinion, does the use of iPads enhance students' access to diverse content in English class? (Yes/No)

Yes

No

On a scale of 1 to 5, how confident are you in addressing potential technical issues during lessons?

1

2

3

4

5

How would you rate the overall effectiveness of incorporating iPads in teaching English? (Poor/Fair/Good/Excellent)

Poor

Fair

Good

Excellent

How do you balance the use of iPads with traditional teaching methods in your English lessons?

- Supplement traditional teaching with iPad activities.
- Combine iPad tools with traditional methods.
- Rotate between iPads and traditional teaching.
- Use iPads for group tasks, traditional methods for whole class.
- Mix iPad and traditional methods based on student needs.
- Other: _____

Can you describe any specific activities or applications on iPads that have been particularly effective in enhancing students' understanding of English concepts?

Your answer _____

How do you assess the impact of screen time on students' reading and writing skills?

Your answer _____

What strategies do you employ to ensure that screen time enhances rather than detracts from students' learning experiences?

- Ensure screen time enhances learning.
- Employ strategies for beneficial screen time.
- Make sure screen time adds to learning.
- Strategies to prevent screen time detracting.
- Ensure screen time enhances student experiences.
- Other: _____

How do you involve students in decision-making regarding the use of technology in the classroom?

- Student input on tech use.
- Collaborative decision-making.
- Student involvement in tech choices.
- Tech usage decisions with student input.
- Engaging students in tech decisions.
- Other: _____

What measures do you take to ensure that screen time aligns with curriculum objectives and learning outcomes in English?

- Aligning screen time with curriculum.
- Ensuring tech use matches objectives.
- Screen time tied to learning goals.
- Curriculum-aligned screen time.
- Tech use linked to English outcomes.
- Other: _____

How do you stay informed about the latest research and best practices regarding screen time and technology integration in education?

- Keeping up with research on screen time.
- Staying informed about tech best practices.
- Updating knowledge on screen time research.
- Learning about tech integration best practices.
- Keeping abreast of latest research on tech in education.
- Other: _____

Can you share any insights or lessons learned from integrating iPads into your English teaching practice?

Your answer _____

Is there anything else you would like to share about your experiences in regards to the effects of screentime on secondary level students?

Your answer _____

Appendix D: Consent Form



Consent Form	
Researcher's Name:	Samantha Nolan
Organisation:	Hibernia College Dublin
Title of Study:	The Effects of Screentime on Secondary Level Students
Consent (to be completed by the participant)	
<p>Have you been fully informed/read the information sheet about this study? Yes/No</p> <p>Have you had an opportunity to ask questions and discuss this study? Yes/No</p> <p>Have you received satisfactory answers to all your questions? Yes/No</p> <p>Do you understand that you are free to withdraw from this study at any time without giving a reason for withdrawing and without your withdrawal having an adverse effect for you? Yes/No</p> <p>Do you agree to take part in this study, the results of which are likely to be published or presented at a conference? Yes/No</p> <p>Have you been informed that a copy of this consent form will be kept by the researcher? Yes/No</p> <p>Are you satisfied that any information you give to the researcher will be kept confidential? Your name and the name of the school will not appear in the research report. Yes/No</p>	
Participant's name (printed):	
(signature):	
Date:	
Researcher's signature:	
Date:	



Appendix E: Interview 1 Transcript

1. How do you integrate screen time, particularly the use of iPads, into your English classroom curriculum?

The school is an iPad school which means that our students, first, second and third year have iPads. In last few years iPads have run into 5th and 6th years. They have use of them, they do not use them for their books or such, but they do have the use when needed. Teachers would integrate a lot of screen time into their classes. In the English classroom all of our textbooks and workbooks are on their iPads. With regard to revision quizzes and ensuring learning, we would use Kahoot and Blooket and things like that. With regard to students in the English classroom being open to a wider range of resources and styles of writing: videos, articles, all very up to date or at their hand with regard to screens and so it has definitely come in and plays a big part in our classroom.

2. Can you share any observed changes in students' literacy and language skills since the incorporation of iPads?

I think the biggest change in students' literacy and language skills since the incorporation of iPads would be that their standard of literacy, writing, grammar and handwriting skills have definitely disimproved. Language skills have also disimproved in the sense that conversation doesn't flow, does not flow as easy, obviously the JCT has incorporated CBA's to maybe counteract that for the students benefit but language does not flow as quick and actually only myself and another English teacher were talking this morning about how maybe an oral language element of the new Junior Cycle would be no harm so that students would have to speak to strangers, would have to talk about a topic and would have to form a positive structured conversation with somebody which obviously would help them further down the line.

3. In your perspective, how has screen time influenced students' engagement and participation in English lessons?

As I said our school is an iPad school so students will have an iPad in front of them always. It has absolutely influenced their engagement because in order to get full engagement or nearly full engagement in the classroom iPads have to be flat down because if I as a teacher am in competition with an iPad in front of a student, they're going to look at the iPad and they're not going to look at me, they're children, they're teenagers, they are kind of addicted now at this stage and they're engagement has definitely declined. Participation in English lessons, if we're doing something in the textbook, it needs to be engaging it needs to keep them pulled into the lesson because if it's not then they will not participate, or they won't engage in in the English lesson.

4. Have you encountered any challenges related to screen time in the classroom, and how do you address them?

I suppose the biggest challenge is that the students give their screen more attention I suppose than the teacher in the room. They are only kids, they are going to give something more exciting or interesting more attention than you so the way I address it is, when they come in the iPads are to be down flat until they need them. As an English teacher I suppose we're very book based so that's in us

I suppose I don't think that's really going to change so I address it in that they do not need their iPad until I tell them and with regard to novels and dramas that we're reading I insist that they have hard copies and they're not PDFs on the screen.

5. Do you believe that the use of iPads positively impacts students' access to diverse content and various writing styles?

The iPads do absolutely impact their access to content. They're not just looking at books in a teacher led activity. They can research and they can look online, it is great to get lots of different ideas and various writing styles so if you're doing the topic of even letters, letters of application whatever it is they can see so many different ones, if you're studying poets to get lots of different videos, lots of different letters, lots of different and articles in relation to that poet so there is absolutely a positive and they do impact positively but I think it needs to be teacher led and it needs to be very structured in order for it to positively impact.

6. How do you assess the effectiveness of screen time in improving students' reading comprehension skills?

I don't think the screen time in particular improves their reading comprehension. I think new teaching and learning ideas over the last while have improved with pre-teaching a topic, pre-teaching new vocabulary. In order to understand new vocabulary Google dictionary, Google thesaurus, everything is there at their fingertips so in that sense it probably has improved their comprehension skills they don't understand something they're straight away on to Google but with regard to and the actual skill I think that's taught in the classroom with regard to pre teaching, with regard to skimming and scanning and you know reading the second time.

7. In your experience, have you observed any differences in student collaboration and interaction during screen-based activities compared to traditional methods?

There are differences in relation to student collaboration for example one student in my class when there is group activities she will be part of a group however, and to the point will collaborate in the sense that she will do her job on the iPad but not in a traditional manner, this child probably would not be comfortable and they would not be her kind of friend circle so therefore she wouldn't be comfortable probably sitting, talking and so yes there is a change in that you have groups per se but yet not the traditional methods it's almost as if the screen is a crutch for these students and they're reliant on them.

8. How do you handle potential distractions or off-task behaviours related to screen time in the classroom?

In my room students are not allowed to have their iPads open, their iPads have to be flat on their desk. When they come into class the only time they can use their iPads is at the teacher's instruction.

9. Have you received feedback from students or parents regarding the use of iPads in the English classroom, and how do you address any concerns raised?

I think the student feedback would be that they want more use of the iPads. They ask a lot about can

we use that on the iPad, or can we do this and sometimes they can, sometimes they can't. Parents I think not so much specifically with regards to the English classroom, but I do think parents would agree that there is a huge dependency on screens, and it might not be a good thing but in relation to the English class from students do love using them and they seem to you know enjoy using them in fairness.

10. Can you share any specific examples of successful learning outcomes or projects facilitated by the integration of iPads in English lessons?

I suppose the projects facilitated by the integration of iPads would be research and you know visual ideas and looking at the animations and design of a project really. I know some teachers use certain things in relation to make and animations and little comic strips which are lovely as well, they can be done in the English classroom. You can use videos if you want to create a drama excerpt and it can be recorded, be it with the voice note or actually be recorded and it's almost like a mini film so lots can be done in the English lessons and that is a positive, but it's just the day-to-day that can be tricky in relation to the to keeping tabs on students screen time.

Appendix F: Interview 2 Transcript

1. How do you integrate screen time, particularly the use of iPads, into your English classroom curriculum?

I would integrate screen time at the start of the class, they check their learning intentions and 'Do Now' task and on One Note. They use that as part of their homework as well so they would use screen time for that. I regularly use quizzes to check learning and to assess learning throughout class. I would also use it sometimes for research. Their eBook is on the iPad so they would use it a fair bit there as well I generally like to get students to write answers though, I rather use the iPads for quick assessment or planning.

2. Can you share any observed changes in students' literacy and language skills since the incorporation of iPads?

Students are probably better at presentations using them and it does help them to organise their presentations but overall, it wouldn't say it has this huge effect with improving them greatly and again it's just given them I would say language and literacy skills. Working independently for research is probably the one big positive it does put a bit more onus on them. I do not really get students to write tasks on iPads, students always write in my classes they would use the iPad for other things so it would not affect their handwriting. Side note, I think that would be more of an issue with to do with phones as opposed to iPads in supervised classes.

3. In your perspective, how has screen time influenced students' engagement and participation in English lessons?

The iPad is a resource and it's down to the teachers get the most out of it. It's no different to a sheet of paper it's down to how you use it which comes out to planning, differentiation, there's loads of positives to it it's about how you use it, if you see negatives to it then you'll have to reflect on how you use the thing in the first place. If you are shoehorning IT into a lesson just for the sake of putting IT into a lesson, it is not a good idea it should be a natural part of it. I have found the use of the iPad really engaging especially with literacy in terms of being visual and there's loads more visual media and multimodal approaches in English which lends itself to using the iPad, such as podcasts, images, and short films. They can use things like screenshots, labeling, fragmentation of images and even use the iPad to a film and take pictures themselves to further understand and of media.

4. Have you encountered any challenges related to screen time in the classroom, and how do you address them?

Challenges in terms of the iPad would be that students can become over reliant, not even over reliant but addicted to looking at it and they can be a distraction, but I think with clear rules and proper classroom management that it can be monitored and if you feel that it is adversely affecting a student then we have hard copies of the books which they can use. I am constantly walking around the room and making sure that students are using them on task and I keep an eye. If I am doing a task where they do not need the iPad, I make sure it is faced down. You can tell by a

student's demeanor and things like that if they are using it properly or not. I would also, if they were on task on the iPad, I would make sure that the task is timed appropriately. I use a timer a lot and that the task is not too hard or too easy for them, they will become disengaged if it is either way and then that could lead them to be on the iPad more, which again is like any other resource.

5. Do you believe that the use of iPads positively impacts students' access to diverse content and various writing styles?

It definitely helps with various writing styles because you can easily engage with informative language, persuasive language, aesthetic language in a whole range of forms online and share it with them very easily and share it with them very quickly. They can annotate it very easily and in terms of diverse content, you have the whole world wide web in front of you, so it is as diverse as you can get.

6. How do you assess the effectiveness of screen time in improving students' reading comprehension skills?

I would not say has had much of an effect either way it is just another way of getting students to engage with the comprehension. You can obviously zoom in on things, cut things out, you can annotate things on, that would help I think with comprehension skills but other than that if you are doing a reading comprehension off it is no different than a piece of paper.

7. In your experience, have you observed any differences in student collaboration and interaction during screen-based activities compared to traditional methods?

Yes, you usually see one student responsible for organisation of material and organisation of the information and putting it all together so you are actually using IT skills and visual skills they would not have used before when they were collaborating as well. It is just another form of producing something.

8. How do you handle potential distractions or off-task behaviours related to screen time in the classroom?

In terms of handling distractions and off task behaviors in relation to screen time again, planning is really important, setting the right task is important and that you are managing your classroom effectively.

9. Have you received feedback from students or parents regarding the use of iPads in the English classroom, and how do you address any concerns raised?

Some parents have said that they feel that they feel their child has been distracted by it, so we will just get them to use hard copies then. Students themselves sometimes might ask to use the hard copies, they prefer to use it, so they do that, but many are positive about using the iPads, especially OneNote and for organising their homework and things like that and do like using apps and things in classroom.

10. Can you share any specific examples of successful learning outcomes or projects facilitated by the integration of iPads in English lessons?

I do think as a DEIS school having One Note and a shared calendar is really important it gives kids the basis and grounding for good and stability that they might not have at home and with their own organisations, so the One Note has that. It's also excellent for sharing resources and linking and sending the homework and having links within the homework to help support it and in terms of projects it's helped them in a multimodal approach, putting together projects across different genres I think there's so maybe doing like you know an audio recording related to a task or creating something visual related to reading comprehension so it has helped that multimodal approach that's English that they pushed in CPD.