Impact of eBooks: Exploring Student Health, Learning and Implications for Policy and Practice

---

Final Report

December 2022

Kate Thompson[1,2,3], Jennifer Clifton[1,3], Ben Williams[4,5], Natasha Arthars[1,3], Bec Johnson, Kathy Jordan and Linda Marsden

1 Faculty of Creative Industries, Education and Social Justice, Queensland University of Technology

2 Visualisation and Interaction Solutions for Engagement and Research (VISER), Queensland University of Technology

3 Digital Learning for Change Research Group, Queensland University of Technology

4 School of Education and Professional Studies, Griffith University

5 Griffith Institute for Educational Research, Griffith University

Acknowledgements

This research was commissioned by the Department of Education, the report was prepared jointly by Griffith University and Queensland University of Technology. The views and findings expressed in this report are those of the authors and do not necessarily reflect those of the Department of Education. Any recommendations and errors are the responsibility of the author(s).

The report was prepared and written by Associate Professor Kate Thompson, Associate Professor Jennifer Clifton, and Dr Ben Williams. The following senior research assistants and research assistants (in alphabetic order) are acknowledged as co-authors in this report: Dr Natasha Arthars, Bec Johnson, Associate Professor Kathy Jordan and Linda Marsden. The research informing this report was conducted from 2018 to 2022. The research team gratefully acknowledge the collaboration and practical assistance provided by Mark Munien. They also express their sincere thanks to all six participating schools and the many teachers, parents/carers and students who participated in the research.

Author contact details:

Associate Professor Kate Thompson
Faculty of Creative Industries, Education and Social Justice
Queensland University of Technology
Victoria Park Road
Kelvin Grove 4059 QLD
E: kate.j.thompson@qut.edu.au
T: 07 3138 3283

Table of Contents

List of Figures

List of Tables

Executive Summary

It is our pleasure to present the final report for the project, *Impact of eBooks: Exploring Student Health, Learning and Implications for Policy and Practice*. The research aimed to provide stakeholders with reliable information for making decisions about eBook use. The guiding research question for this project was: *What are the educational and health issues and benefits of eBook use in school settings?* This work is important because eBooks provide the Queensland Department of Education with the potential to provide equitable access to reading for pleasure to all students. Data were collected in six schools across four stages. The six schools were an outer-regional Prep-12 school of distance education, an inner-regional secondary school, an outer-regional Prep-10 school, a metropolitan secondary school, a metropolitan primary school, and a metropolitan Prep-12 school. In the first stage of the research, 184 parents/carers completed questionnaires across the six schools. During the second, third and fourth stages, teachers participated in 39 semi-structured interviews and focus groups and ten lesson observations.

This research found that eBooks use within the participating schools occurred in complex digital and physical learning environments. Within these environments, reliable access to devices, networks and eBook platforms was essential but not common. There was clear evidence of a digital divide among participating schools along socio-economic lines. This divide impacted the sufficiency of school resourcing, the reliability and consistency of access to devices to read eBooks, and the availability of reading alternatives. The participating schools that are currently implementing BYOD initiatives were better prepared to support the expansion of eBook use. Concerns raised by parents/carers about eBooks' impact on young people's health and wellbeing were related to eye strain, restricted physical activity and screen time. There was limited evidence that teachers explicitly managed these health and wellbeing issues within the classroom beyond their usual approach to incorporating technology into student learning. Professional development for teachers was variable across the participating schools and was dependent on 'eBook champions,' such as the school librarian, literacy coordinator or relevant school/curriculum leaders. The teachers who participated in this research typically used eBooks for silent reading or to teach literacy and language conventions. Many teachers expressed concerns about managing and monitoring students' use of eBooks. Teachers' decisions about eBook use within the classroom were strongly connected to their personal reading preferences. Teachers also made assumptions about students' reading habits and levels of reading engagement. There were limited resources available in the participating schools to expand teachers' use of eBooks in ways that were aligned with the Australian Curriculum and connected with teaching and learning.

Young people were shown to access reading material using various devices for different purposes, depending on whether they were in the home or school environments. Parents/carers, teachers, siblings, friends and social media were all key stakeholders in, and shapers of, young people's reading. Furthermore, the research showed that the functionality of eBooks can support reading for pleasure, increase motivation to read among reluctant readers, and support students who read at a lower level of proficiency. eBooks are entangled in a web of politics (reading wars, new technology, cost and access) and within the ecosystem of technology that influences views of use and appropriateness. Based on the findings of this research, the following have been recommended:

(1) Equitable access to devices, infrastructure and platforms for all students, teachers and members of the school community.
(2) Clear guidelines for the use of eBook functionality to support all students.
(3) Infrastructure and procedures to support physical and mental health and wellbeing.
(4) Support and professional learning for teachers to expand current practices related to eBooks in a variety of teaching and learning contexts.
(5) Support and recognition for eBook champions within the school.
(6) Recognition of the important role that reading communities play in students' adoption and use of eBooks.

Introduction

An eBook is a digitally published book that can be read using an eBook reader, desktop computer, laptop computer, tablet computer, or smartphone. eBooks are a convenient tool for providing a large readership with fast access to an extensive and easily updatable literary collection. Among young readers, there has been an increase in eBook use in classrooms, school libraries and homes. eBooks are a convenient tool for students to access the most up-to-date knowledge, which can be rolled out to users at scale and updated accordingly. Nelson (2008) defined an eBook as 'an electronic book that can be read on a computer screen, a special eBook reader, personal digital assistant (PDA), or even mobile phone' (p. 42). Many researchers have found benefits to learning, such as customisation of the curriculum, improved engagement (for a discussion, see Min, 2017), and the development of young people's literacy and language skills (Karemaker et al., 2017).

There are, however, general concerns about the use of eBooks, particularly regarding its impact on sleep, eye health and human movement. And a small number of studies have indicated that eBook use may limit literacy acquisition and development due to the increased cognitive load required to use many of an eBook's features (Bus et al., 2015).

The research findings about the limitations of eBooks are inconsistent. Furthermore, no studies have focused on eBook use and tracking their affordances in different classroom contexts and/or connecting these to learning outcomes related to literacy, numeracy and other general capabilities, nor the impact on student health and wellbeing. Understanding the context in which eBooks are used, such as the relevant learning tasks, year levels, subject areas and social and technological arrangements, is crucial because their use in these different contexts has implications for students, teachers, and policymakers.

This research investigates eBook use from educational and health perspectives in six state schools across Queensland, Australia. The research aimed to provide stakeholders (e.g., teachers, parents/carers, principals, students and the Department of Education) with reliable information to make evidence-based decisions about eBook use. The guiding research question for this project was: *What are the educational and health issues and benefits of eBook use in school settings?*

A literature review was conducted in 2018/2019 that informed the development of the research question. Using the Activity Centred Analysis and Design (ACAD) framework (Goodyear & Carvalho, 2014) to structure the research design, in 2019-2022, questionnaires, interviews, focus groups and classroom observations were conducted to collect data about the use of eBooks in home and school settings. Six schools from regional and metropolitan areas of Queensland are included in this report, including primary and secondary students. Different school sectors participated, including prep-Year 12 schools, a school of distance education, primary schools and large secondary schools. In this report, we present (1) parents'/carers' reporting of eBook use within the home environment generated through questionnaires and (2) case studies of the use of eBooks in classrooms generated through interviews, focus groups and classroom observations in each school. Student perspectives are captured by parents/carers reporting on their child's eBook use, by teachers discussing their students, and through classroom observations. At the end of each section, a summary of the key findings is provided.

In the discussion, we synthesise the results of parents/carers and teachers using the ACAD framework. Accordingly, this discussion is organised around the topics of technology, learning and teaching, and the key roles, responsibilities and relationships within young people's reading communities. Finally, we conclude by providing recommendations for the Queensland Department of Education about supporting the effective and equitable use of eBooks for learning and wellbeing in primary and secondary classrooms. Our findings and recommendations will help education policymakers make informed decisions about how best to enable or constrain access to, and use of, eBooks in schools.

Literature Review

This review scopes the literature on eBook use in educational settings, focusing on students' health, wellbeing and learning. The purpose of this review is twofold: to map a research agenda by identifying the gaps in the field; and to develop an account of what is currently known about eBook use that could inform contemporary educational policy and practice. The literature review centres on four key themes that connect eBook use to 1) student health and wellbeing, 2) educational outcomes, 3) stakeholders in the educational setting and 4) the affordances and accessibilities of eBooks for students. It then identifies emerging themes and trends related to eBooks for school students to answer the research question: what are the implications for teachers and students of using eBooks in educational settings? The review concludes by highlighting gaps in the literature and advocating the importance of continued research to learn more about the complexity of eBook use, particularly how it impacts students' physical health and wellbeing, how students currently use eBooks and how this may influence ongoing literacy and learning.

The purpose of the literature review was to define and identify gaps in the literature and any trends in research reporting on the use of eBooks generally and specifically in educational contexts. Five health and education databases were searched (CINAHL Plus, MEDLINE, Library, Information Science Technology, ERIC, and Education Research Complete) using variations of 'eBooks' and 'eReading.' These base phrases were searched in conjunction with terms related to the themes of health and wellbeing, education, and specific stakeholders such as students, libraries, teachers, and parents. Key terms were identified using the article abstract or article keyword list. After this initial search, further sources were identified through manual searching of sources cited in the initial collection of articles. Research not conducted in or related to an educational setting (e.g., pre-schools, primary or secondary schools or tertiary) was excluded unless the research was with participants of an age likely to be of school age. For instance, research conducted in adult and ageing populations and corporate or medical settings was excluded. Similarly, literature was excluded if the stakeholders did not specifically relate to the education setting. For example, articles related to parents/carers of school-aged children were included, whereas articles focused on the perspective of parents/carers of infants were excluded. Screening by date was not considered necessary, and the earliest paper included in the dataset was published in 2002. The initial search identified 174 papers, and after screening, 91 remained, which were organised according to three categories of health and wellbeing, education and stakeholder engagement. Of the 91 papers, 19 were categorised as related to health and wellbeing, 32 as education, and 41 as stakeholder engagement. Some papers were aligned with more than one category, the most frequent being both education and stakeholder engagement. These categories were used to structure the literature reviewed in what follows. An outline of the key terms used to produce this initial review and the categorisation of papers is documented in Appendix A: Literature Review Themes, Terms and Categorisation.

Research has justified the use of eBooks in education settings, citing positive learning outcomes. However, there remains a lack of research on the use of eBooks and students' physical and mental health. One of the most significant challenges to developing a cohesive knowledge base around eBooks in education has been the impact of rapidly changing technology. Within less than 20 years, the devices on which eBooks can be read have shifted from (most typically) a desktop computer to a variety of dedicated eReaders (for example, Sony Reader, Amazon Kindle and Barnes & Noble Nook). With the release of the first Apple iPad in 2010 and the subsequent release of Android-based tablets in 2011, the use of dedicated eReaders rapidly declined in favour of the more versatile tablet through which multiple book reading apps could be installed (White, 2014). This maturing of technology, and the growth of the eBook market, has alleviated many of the earlier challenges to the wide adoption of eBooks. Given the evolution of eBooks, it remains difficult to compare outcomes between studies due to the differences in screen technology such as size, type (LCD or e-ink), resolution and luminance.

When attempting to draw conclusions, it is also important to note the differences between reading for pleasure or interest and reading for the specific purposes of finding and extracting relevant

information. It is also important to note that increasingly eBooks are no longer simply electronic reproductions of a print book. Enhanced eBooks offer additional content and affordances that a print book cannot, for example, the enhanced eBook *Inanimate Alice* (Hovious, 2014). Widely used for educational purposes, *Inanimate Alice* is a transmedia storytelling project that integrates text, sound, movie and gaming elements to engage readers. Other enhanced eBooks use interactive elements such as animations or hyperlinks either internally (e.g., to the table of contents, glossary, or index) or externally to additional content to enhance the reading experience.

In 2013, the Queensland Department of Education, Training and Employment piloted a Bring Your Own 'x' (BYOx) program (O'Neil, 2013) with five schools in South-East Queensland. Since then, the adoption of BYOx policies ('x' representing a privately-owned device, software and applications) has become more common. Many state schools implement one-to-one ICT device programs, where each student has a dedicated electronic device to use for learning purposes. The decision to implement a one-to-one program is made in consultation with the school community based on improving learning outcomes, meeting the school community's needs and ensuring a safe digital experience (Department of Education, 2019). In a recent survey in 2021, 64% of government schools responded that they did not have eBooks or audiobooks in the library, while 15% of schools had used them for more than three years. When asked why eBooks were not offered, budget (58%), no interest from students (28%), no interest from senior leaders (23%) and a lack of clarity about how eBooks work were cited as reasons (23%) (Softlink, 2021).

Health and Wellbeing and eBooks

Studies specifically focused on health, wellbeing and eBooks are few, and those conducted within educational settings are an even smaller subset of these. Within this body of work, the most significant focus has been on vision, while those examining posture and biomechanics, sleep and rest, and mental health have been rarer. A noticeable exception is research by Seomun and colleagues, who measured the impact of digital textbook use on a range of health-related factors on students in South Korea (Seomun et al., 2018; Seomun et al., 2014; Seomun et al., 2013; Seomun et al., 2016). This program of research included assessments of general physical and psychological effects (Seomun et al., 2013), electromagnetic wave distribution (Seomun et al., 2014), carpal tunnel syndrome (Seomun et al., 2016) and dry eye syndrome (Seomun et al., 2018). A key study by Seomun et al. (2013) will be described first, followed by a description of other work related to eye health, movement, posture and biomechanics, and sleep and recovery.

In response to the South Korean government's adoption of digital textbooks in 2007, Seomun and colleagues (2013) conducted research with 40 grade 6 (12-year-old) students in four schools in South Korea who had been part of a digital textbook pilot. Students had been using digital textbooks for at least one year and accessed the digital textbooks via a tablet personal computer (TCP). At the time of the study, digital textbooks were used for six subjects, equating to approximately 12 hours of class time per week. Using questionnaires, researchers quantified hours of computer time per day and whole body, musculoskeletal, visual, and psychological symptoms to assess the student's risk of visual display terminal (VDT) syndrome. Semi-structured interviews were then conducted to identify strategies students used to cope with symptoms they experienced.

Despite the Ministry of Education's expectation of up to 12 hours per week of digital textbook use in class time, most students (80%) reported they used a computer for less than two hours per day. Five students were identified as "at-risk" for VDT syndrome after they reported using a computer at least 6 days a week and for more than three hours per day. From the qualitative interviews, health-related symptoms were classified as physical or psychological. In addition, causal, contextual and intervening conditions were identified, as well as coping strategies and consequences. The physical health impacts on students included visual, musculoskeletal and dermatological/general. Psychological impacts included increased stress and reduced interaction. All health impacts were considered mild in this group of students. However, it is important to note that most students reported less than two hours of computer time per day. Furthermore, the researchers found that teacher-led coping strategies

effectively mitigated some of the negative health impacts and concluded: 'developing and implementing successful instructor-led interventions will help establish an environment conducive to learning from digital textbooks' (Seomun et al., 2013, p. 1201).

In further research by Seomun and colleagues (2014), the research team sought to understand the impact of environmental exposure to electromagnetic waves in a classroom where 32 students used TPC to access digital textbooks. They found electromagnetic field values at student and teacher desks in the classroom were not harmful to health (per MPR Board-II standards), 'however, the distance between the student seats, the distance between the electronic devices, and the distance of students from the TPCs, as determined by the computer usage posture, affected the measured magnetic field strength' (p. 127). Other researchers stated that children absorb more electromagnetic wave radiation than adults and may be at greater risk when exposed to radiation (Morgan et al., 2014). They also noted that device exposure limits are set based on advice from tests where the device is 20 cm away from the body and that children would have difficulty holding a device at this length due to their shorter limb length (Morgan et al., 2014).

Further expanding the data set on health and digital textbook use, Seomun et al. (2016) compared 22 students using print textbooks with 21 students using digital textbooks for signs of carpal tunnel syndrome. This research found no statistically significant differences between the two groups compared to other computer use studies that investigated adult users. The relatively young age of the participants and the comparatively shorter computer use times per day were suggested as reasons for the differences in the outcomes of this study and other research on carpal tunnel syndrome (Seomun et al., 2016).

Eye Health

Drawing conclusions about the impact on eye health of reading on digital devices is confounded by the variety of devices, rapidly changing screen and device technology and a multitude of other factors, including font size, typeface and line spacing, ambient light and backlighting, device size, angle of inclination and colour vs black and white screens. Some studies (Lin et al., 2013) found that a small font size (12pt) contributed to greater eye fatigue, while others found that the ability to increase font size in an eReader reduced eye fatigue compared to print books (Morrice et al., 2017). The angle of inclination seems important, with a "paper-like" inclination found to eliminate symptoms of eye strain (Köpper et al., 2016). This finding has been substantiated by others who have concluded that increasing the viewing angle to approximately 90 degrees slightly improves head and neck posture (Dennerlein, 2015).

Research has compared subjective visual fatigue and objective reading measures in adults who read for an extended period (4 x 45 minutes) on e-ink displays (typically found in dedicated eReaders) and LCD screens (typically found on TPCs). In this research, ambient lighting and screen luminance were controlled, and participants could adjust the font size and device positioning to their comfort. No perceivable differences were found between the two groups on subjective or objective measures of attention or fatigue (Siegenthaler et al., 2012). Using similar subjective and objective measures but controlling font size, distance and angle of inclination, Benedetto and colleagues (2013) concluded that reading on the LCD triggered higher visual fatigue than e-ink or the print book. Their findings suggested reading on e-ink was very similar to reading print books. Research by Kim et al. (2014) did not specify the type of display for the eBook reader used in their research, which compared objective eye fatigue across three different size fonts in both print books and eBooks. They concluded that on all measures, the eBooks had lower legibility. Confounding the research further, some researchers have found that higher illumination increases search speed regardless of the light source (Shen et al., 2009).

Recently, evidence was published explaining how and why viewing screens at night could damage eyesight. According to Ratnayake and colleagues (2018), when the blue light emitted by LCD screens on devices such as smartphones and laptops interacts with retinal (a molecule within the eye), a set

of chemical reactions occur that are thought to damage photoreceptor cells. When present, alpha tocopherol, a natural antioxidant found in the body stops the damage. However, those who are aging or have suppressed immune systems do not benefit from these antioxidant effects. The researchers suggested wearing sunglasses outside and avoiding browsing on smartphones or tablets in the dark to protect eyes from the impact of blue light.

Seomun and co-authors (2018) compared measures of eye health in digital textbook users to print textbook users. In both groups, four measures of eye health were taken: ocular surface disease index, eye blinking rates, break up time of tear membrane and corneal ulcer status. All participants' measures were judged in the healthy range. Digital textbook users scored higher on all measures, but the differences were not considered statistically significant. The authors suggested that shorter usage times per day and the relative youth of the participants were reasons why the findings did not substantiate other research in the area of eye health and digital reading.

Movement, Posture and Biomechanics

Another area of research on health and wellbeing as it relates to eBooks is the relationship between screen time and sedentary behaviour. Reading, however, is inherently a sedentary activity and, to date, no studies have attempted to determine a difference between eBook reading and print reading in relation to sedentariness.

In a review of field and laboratory studies on the use of mobile computing devices (laptops, smart/mobile phones, TPCs) in adults, researchers concluded that users frequently adopt non-neutral postures when using mobile devices. Their research recommended regular posture changes and appropriate accessories, such as tablet cases and risers, to help mitigate these issues (Dennerlein, 2015). Another study, though not explicitly looking at movement and posture, reported Grade 2 students reading print books or eBooks on mobile devices sitting on the floor, lying on their stomachs or leaning across desks, whereas those using a desktop computer to read expressed physical discomfort (Taylor, 2012).

Researchers have compared pre-school students' multi-sensory behaviours during shared reading on fixed touch screens (laptop/desktop computers) and on mobile touch screens (either iPad or iPod) eReading devices. They found the movement afforded by the mobile device may have supported literacy motivation through haptic perception (Roskos et al., 2014).

Sleep and Recovery

Searches of the literature did not reveal any studies specifically examining relationships between eBook use and sleep, rest or recovery. One group of researchers compared electronic media consumption and print book reading in pre-schoolers and found that e-media consumers had poorer sleep quality (Genuneit et al., 2018). This finding was commensurate with the field of research into device use and sleep (for example, Lemola et al. 2015) and the eye health literature (for example, Klamm & Tarnow, 2015), which warns against the use of digital devices at night due to potential sleep disturbances.

eBooks and Education

Three sub-themes were used to organise the eBook literature related to education. eBooks have been purported to enhance 1) literacy development, 2) motivation to read, and 3) digital and/or transmedia skills. This review presents literature on P–12 schooling as the educational domain. Where relevant, findings from early childhood and tertiary education or the general adult population have been included.

Justification for using eBooks and digital textbooks within classroom settings include: reduced cost to students; flexibility and availability, including seamless learning spaces; affordances such as text-to-speech, dictionaries and hyperlinks to additional content; privacy; reduced load; and digital literacy

skills gained through manipulation of content (Foote, 2014; Guernsey, 2011; McVicker, 2017; Merga & Roni, 2017; Pegrum et al., 2013; Rothman, 2017).

Literacy Development

The literature on literacy development and eBooks has centred around the early years, focusing on learning to read. Hoffman and Paciga (2013) offer a comprehensive review and recommendations for eBook use in 2-5-year-olds. Evans and colleagues (2017) found in pre-schoolers that whilst the eBooks held the students' attention, they demonstrated fewer letter-related behaviours than the print book intervention. Researchers have suggested that eBooks cannot replace adult interaction in the early years. However, the affordances of technology, for example, read-to-me functionality, have been demonstrated to support learning outcomes. Research by Bus and co-authors (2015) and Willoughby et al. (2015) showed that alphabet eBooks engaged pre-schoolers, but this engagement did not translate into improved literacy outcomes.

In primary-aged students, research has demonstrated that eBooks can improve reading and writing ability (Ciampa, 2012a; Marrone, 2014; Schugar et al., 2013). Miller and Warschauer (2013) and Zucker and colleagues (2009) have provided extensive reviews of literacy development research on the effect of eBooks on reading.

In secondary-aged students, research has tended to focus on how eBooks might support young people's continued reading for pleasure rather than on learning to read (Merga, 2015a; Rutherford et al., 2018). However, research has investigated the development of particular literacy skills when reading eBooks, such as comprehension, particularly concerning digital textbooks (Delgado et al., 2018; Lindqvist, 2019). Among particular cohorts of students, such as those who speak English as an additional language (Klimova et al., 2020) or those with different levels of literacy proficiency (Hsieh & Huang, 2020), learning to read has also been the topic of study.

Motivation to Read

An additional area of eBook research has focused on motivation, with findings suggesting that the novelty of technology use can enhance motivation to read (Ciampa, 2012a; Ciampa, 2012b; Felvégi & Matthew, 2012; Maynard, 2010; Roskos et al., 2012; Taylor, 2012). This literature needs to be interpreted cautiously, however, because while the findings show increased motivation, lower comprehension (Parish-Morris et al., 2013) and increased distractibility (Salmon, 2014; Schugar et al., 2013; Zucker et al., 2009) were also observed. Furthermore, this body of research is relatively old. More recent work (Barnyak & McNelly, 2016) suggests that eBooks can be a motivational tool for children who struggle with reading but that those who benefited from teacher scaffolding made the most significant literacy gains.

Transmedia Skills

For the purpose of this review, transmedia skills include the technical aspects of reading an eBook, including finding, downloading and interacting with the book. Jenkins and colleagues (2006) identified 21 new media literacies for the 21st-century learner, one of which was transmedia navigation – 'the ability to follow the flow of stories and information across multiple modalities' (2006, p. 4). The literature suggests that using eBooks can contribute to developing the transmedia skills mentioned by Jenkins et al. (2006) (see Doty, 2015; Hovious, 2014; Lamb & Johnson, 2010; Weedon et al. 2014).

Information and Communication Technology (ICT) is one of the seven general capabilities of the Australian Curriculum. This capability involves applying social and ethical protocols and practices, investigating, creating, and communicating with ICT and managing and operating ICT (https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/information-and-communication-technology-ict-capability/). There is some evidence in the literature that eBook use supports one or more of these elements. Pegrum and colleagues (2013) have argued that using eBooks for pleasure or interest and study purposes contributes towards this general capability. Through eBook use, students can develop digital skills by interacting with the range of devices on which eBooks

can be accessed and by interacting directly with the eBook itself (e.g., looking up unfamiliar words, activating hotspots, and other eBook functions).

Reading for Interest or Pleasure

Kucirkova and co-authors (2017) reviewed the literature on children (2-8-year-olds) reading for pleasure using digital books. They argued that eBooks met six facets of reader engagement: affective, creative, interactive, shared, sustained, and personalized. Merga and Roni's (2017) review of eBooks in Australia reported the educative benefits of reading and found several advantages and disadvantages of eBooks. Their research concluded that even daily readers underused their devices for reading purposes and that reading infrequency was associated with higher access to mobile phones and access to a greater number of other devices. Maynard (2010) conducted a study examining students aged 7-12 in three families. This study compared reading on a kindle, DS and iPod. Maynard (2010) found that reading time increased on an electronic device and increased the motivation to read for one previously reluctant reader. McGeown and colleagues' (2015) study identified factors predicting engagement in 8-11-year-olds who were engaging with digital texts (e.g., communicative or webpage based). They found increasing age was a strong predictor of engagement with digital text.

Stakeholder Engagement with eBooks

Through the review of the literature, several stakeholders were identified in relation to eBooks: librarians, teachers, parents/carers and students. Furthermore, the investment of stakeholders is related to factors such as students with special needs or schools in rural and remote locations.

Libraries

In 1999, Gibbons (2001) conducted a feasibility study in New York academic, school and public libraries. This study concluded that while there was a distinct lack of patron interest in eBooks, the biggest obstacle to the adoption of the eBook by the library was the incompatibility of eBook readers to the needs of libraries. At the time of this early study, only two types of portable eReaders were available, and each used unique file formats and platforms and offered only a limited number of titles (Gibbons, 2001). Since then, a plethora of devices, platforms and file formats for reading eBooks have emerged, and libraries have been challenged with device management, digital rights management (DRM) and the implications for budgets (Ashcroft, 2011). In 2014, school librarians were still overcoming the issues of pricing structures, myriad eBook platforms and file formats, and device management to successfully integrate eBooks into their libraries (Foote, 2014). BYOD initiatives were a key strategy for overcoming some of the device management and incompatible file format issues (Foote, 2014).

Some school libraries moved intentionally and holistically toward eBook adoption in the first decade of the 21st century (for a summary of eBook adoption in US libraries, see Wetschler, 2011). Many of the issues school libraries faced concerned platforms, devices, DRM, judging and meeting the demand for eBooks, and librarians having their roles redefined as library media specialists (Wetschler, 2011). One successful program initiated by a school library for disengaged teenagers involved the purchase of a Kindle eReader and Amazon book voucher for each student in the program. One period per week was allocated for reading self-selected books, followed by a post-reading activity linked to classroom skills (Engel-Unruh, 2010). This program successfully increased reading time and books read in the group of at-risk students, built a classroom community of readers, and enhanced student attitudes towards the library. The reasons suggested for these changes included: the novelty of using the device; the variety of books to select from (once students had learned how to identify their reading preferences and use the catalogue); the immediacy of access; and the features offered by the device, including text-to-speech, font size adjustments, dictionary and annotation functions (Engel-Unruh, 2010). In the years since this research, there has been an increase in the research on libraries and young people (Grey & Howard, 2017; Rutherford et al., 2018) and the changing role of the library with the increase in digital engagement (Bhati, & Kumar, 2020).

Teachers

Several authors have published recommendation papers to guide teacher practice with eBooks based on experience and reviews of the literature (e.g., McNelly, 2018; Schugar et al., 2013; Serafini et al., 2016; Yokota & Teale, 2014). While these have some use and include advice about using eBooks in classrooms, they contain few examples of teachers using eBooks effectively. However, this body of work presents some examples of digital platforms used to develop literacy. For example, one example of teacher practice encouraged at-risk students in a high school journalism class to use their smartphones to produce a print newspaper. This learning experience allowed marginalised students to adopt professional identities and researchers found evidence of social and civic benefits stemming from using mobile devices as learning tools (Cybart-Persenaire & Literat, 2018). Another example describes the use of a digital notebook for primary students in STEM (Miller & Martin, 2016) and others describe the use of specific apps, such as ScribblePress, rED writing, Storykit (Laidlaw & O'Mara, 2015) or Reading Eggs (Lowery, 2017). Several studies (Lai, 2016; Larson, 2012; Olaniran et al., 2017) have focused on the needs and practices of pre-service teachers regarding eBooks and eResources, finding that pre-service teachers need more support and training in how to use eBooks in their own lives and the classroom. Alper (2012) discussed the literacy of distributed cognition (the ability to interact meaningfully with tools that expand mental capacities) in relation to transmedia skills. She noted that the process of documentation, where both digital and non-digital media are used to make learning visible, is helpful to young people, teachers and parents/carers, citing examples such as PowerPoint presentations, books and posters. Alper continued that through transmedia navigation (the ability to follow the flow of stories and information across multiple modalities), young people learn which techniques and channels best communicate their message.

In tertiary education, researchers have examined the faculties, types of students (by years of study) and contexts in which eBooks, digital textbooks and ejournals have been adopted (Cassidy et al., 2012; Croft & Davis, 2010; Gueval et al., 2015; Hoseth & McLure, 2012; Ji et al., 2014; Lewellen et al. 2016; Wang and Bai, 2016; Yalman, 2016). This level of nuance has not penetrated the research in P-12 education, where no studies have compared subject area specifics or compared eBook use between year levels.

Parents/Carers

Parent/Carer involvement is key to literacy development, including via eBook reading. However, some work has suggested parent/carer involvement is impeded because of electronic features such as animations, functionality and technical considerations (Chiong et al., 2012). Often, the child has reduced parent/carer interaction and reduced comprehension compared to print book reading (Chiong et al., 2012; Parish-Morris, 2013; Strouse & Ganea, 2017). Research investigating parent/carer attitudes toward eBooks is limited, with some finding that parents/carers feel that eBook apps are best used occasionally or as a supplement to traditional reading. Their advantage was cited as convenience and entertainment value (e.g., Howard & Wallace, 2016). The few studies that have included parents/carers as stakeholders have reported reduced parent/carer-child interaction and reduced comprehension in the child compared to print book reading (Chiong et al., 2012; Parish-Morris et al., 2013; Strouse & Ganea, 2017).

Young People/Students[1]

Few studies have sought young people's views on eBooks beyond work on motivation to read. More research on students' use of digital textbooks and eBooks has been conducted in the tertiary sector. The benefits of eBooks students in higher education have identified include: easy access to books (not needing to access the library or wait for physical transfers of books); reduced physical load (not

[1] The term young people is used generally throughout the report. To differentiate, the term young people is used to reference their role in out-of-school contexts. Child/children is used in reference to parents/carers and the term student is used in reference to in-school contexts.

needing to carry multiple books around); and the ability to look up unfamiliar words (Bagdasarov et al., 2017; Brown, 2015; Cassidy et al., 2012; Dobler, 2015; Engel-Unruh, 2010, Ji et al., 2014). Interestingly, the social aspects of reading eBooks - sharing functions, and the additional content often associated with eBooks, were not mentioned. This absence may be partly due to the comparative age of the studies. Research comparing eBooks and print books has tended to focus on preferences and habits (Loh & Son, 2019), learning outcomes (Suyatna et al., 2018), and literacy development (Danaei et al., 2020; Reich et al., 2019).

Studies in tertiary education contexts have identified factors related to learners' satisfaction with eBooks and challenges and advantages associated with eBooks. Liaw and Huang (2014), in a study of university students' attitudes towards eBooks, found that learners' self-regulation and self-efficacy were more predictive of learner satisfaction and their perceived usefulness of eBooks. Factors such as ease of use, screen size and interactive environments did not strongly predict positive attitudes towards eBooks. Another study by Ji et al. (2014) found that students cited cost and portability as advantages of e-resources. In contrast, ease of highlighting, annotating, reading and studying were the key advantages of print books. These were echoed by the students in another study, which found that the eBook features desired most by learners included marking up, highlighting text and earmarking/interacting with multiple pages at once (Cassidy et al., 2012). However, Muir and Hawes (2013) found that despite difficulties with access, awkward navigation tools and unpleasant interfaces and reading experiences, students still considered eBooks a potentially valuable educational resource. Illustrating the rapid change in technology, O'Bannon and colleagues (2017) reported that the inclusion of interactive components, such as quizzes, and the ease with which readers could highlight text and take notes were valued features of eBooks and contributed to student achievement.

Research on how students use the affordances of eBooks is limited. However, some studies suggest students are not aware of the possibilities of these affordances. In other studies, the software/platform/device or DRM is considered restrictive and incompatible with student needs (Acedo & Leverkus, 2014; Croft & Davis, 2010; Myrberg, 2017; Wang & Bai, 2016). Comparing two eBook platforms geared to the elementary school market, researchers examined the affordances, architecture, functionality and analytics offered by each platform to students, teachers and parents/carers. An outcome of their research was a set of analytic tools to be used in future research on eBook platforms and by platform developers to increase learner engagement and outcomes (Roskos et al., 2017).

Research that compared the impact on learning of reading text on screens or in print has also been conducted (Myrberg, 2017; Myrberg & Wiberg, 2015). This research has noted that while several studies have found no discernible difference between screen and print in relation to objective measures of eye strain and comprehension, many students still preferred print books. Commonly reported complaints about eBooks relate to the following factors: eyestrain, fatigue, itchiness (CVS) (Seomun et al., 2013); postural issues (Seomun et al., 2013); technical difficulties with browsing, downloading, returning, marking/highlighting (McVicker, 2017); lethargy, tiredness, and frustration at technology (Seomun et al., 2013); and distractibility due to other apps or communication technology (McVicker, 2017). Richter and Courage (2017) compared engagement and comprehension in eBook and print book conditions. They found that engagement was higher with eBooks and that story recall did not differ across the two conditions. In a study with university students, Shin (2014) found that more than half the undergraduate and graduate students preferred print books but were willing to use eBooks for their course-related readings. The drawbacks of eBook use reported in this research included eyestrain and limited eBook collections. Graduate students were more willing to try eBooks and were more appreciative of the affordances they offered. They also felt their learning was enhanced by using eBooks. Similarly, McVicker (2017) found that a third of the students in her study preferred print books but enjoyed the affordances of highlighting, definitions and bookmarking. The students, however, reported that it could be challenging to revisit the text to find a specific section, adjust the font size, change page numbers, tablet navigation and being more easily distracted with eBooks (McVicker, 2017).

Affordances and Accessibility

Some research provides evidence for the advantages of using eBooks for those with special needs. Research by Morrice and colleagues (2017) found that eBooks can benefit people with vision impairment, especially when accessing them on the Apple iPad. In a study comparing child and parent/carer behaviours in print book and eBook reading with children who are deaf or hard of hearing, researchers found limited differences between the eBook and print book conditions (Wauters & Dirks, 2017). This research found increased motivation in children to use technology and that parents/carers appreciated the flexibility and access afforded by eBooks. There was, however, a slight decrease in interactive reading in eBook use. Still, researchers concluded that in this population (at risk of delayed language and literacy development), this was insufficient reason not to engage with eBooks, considering the benefits of the potentially increased reading time (Wauters & Dirks, 2017).

In a study of high school students with dyslexia, reading on paper was compared with reading on a handheld eReader (iPod touch). These researchers found that, depending on the specific cause of dyslexia, some students improved their reading speed and comprehension (Schneps et al., 2013). The affordances of reformatting and resizing text and using voice recognition and text-to-speech have been found by others to support those with vision impairment or dyslexia (regarding secondary schools, see Pegrum et al., 2013; regarding higher education, see Muir & Hawes, 2013; Henderson et al., 2013). A case study with a Grade 5 student with Attention Deficient Hyperactivity Disorder (ADHD) showed the student gained one year's growth in reading progress across the 6-week intervention using an iPad (McClanahan et al., 2012). While these results cannot be generalised to other struggling readers with ADHD or attributed solely to the device, it does suggest a warrant for further investigation into the technology's influence within the intervention.

In an international (Australia, Canada, UK, USA) investigation into iPad use by students with special needs (including autism spectrum disorders, emotional and behavioural disorders, and learning and intellectual disabilities), 81% of the Australian teachers surveyed indicated the iPad was included in the student's Individualised Education Program and was used to support their student's communication, functional skills, academics and social skills. Further, 100% of Australian respondents indicated student responses to the device were favourable or very favourable, with some teachers integrating the iPad across the curriculum daily and citing the benefits of student engagement/motivation, content availability, accessibility, flexibility and individualisation/ differentiation (Chambers et al., 2018). Whilst this study did not specifically look at eBooks or eReaders, it was noted that the iPad supported the principles of the Universal Design for Learning and that there were several tools in the iPad (including iBooks) that offered multiple means of representation, making this device particularly suitable for those with diverse learning needs.

Rural and Remote Education

In the literature reviewed, no Australian studies focussed specifically on eBooks in distance education or within rural and remote schools. However, Merga (2015a, 2015b) examined children's access to e-reading devices, and the reading frequency in the Western Australian Study of Book Reading and rural students were a subset of the data.

Within higher and adult education, few studies have been conducted on the use of eBooks and distance learning. In one study of graduate students in Texas, Cassidy (2012) found only 55% of distance learners read books online, and the remaining 45% either bought the print book or borrowed from the local or university library. Rogerson-Revell, Nie, and Armellini (2012) researched a postgraduate distance learning program in Leicester and concluded that eBook readers, loaded with course materials, afforded moderate benefits to learners, mainly pertaining to flexibility and access. They also concluded that the benefits afforded were more than virtual worlds but less than voice-based discussion boards. In South Africa, pre-service teachers were surveyed on their use of e-resources (defined as digital materials and collections for learning). This research showed that 76%

used e-resources daily for their personal studies. Of the resources accessed, 29% were eBooks or ejournals (Olaniran, 2017).

Summary

This review scoped the literature on eBook use around four key themes connecting eBook use to 1) student health and wellbeing, 2) educational outcomes, 3) stakeholders in the educational setting, and 4) affordances and accessibilities of eBooks for students in educational settings, with a focus on student's health, wellbeing and learning. It then identified emerging themes and trends related to eBooks for school students to answer the research question: what are the implications for teachers and students of using eBooks in educational settings? The review showed that no studies had followed the use of eBooks, tracking their particular affordances in different contexts (e.g., the task, year levels, other tools also used, subject areas, in collaborative or individual settings), and connecting these to student health and wellbeing or learning outcomes related to literacy, numeracy and other general capabilities. Similarly, no studies have reliably measured the different effects of reading for pleasure versus reading for educative purposes. This understanding is crucial to understanding the implications of eBook use for students, teachers, and policy. The affordances of eBooks over print books, the rapidly changing technologies and the technological ecosystem in which young people operate potentially confound research on the specific challenges and health implications of eBook usage in educational settings. The one comprehensive study of eBook use in secondary school students is over a decade old. Although it reported no significant differences in eBook use, a key limitation of the study was the reliance on students' self-reported use of devices. This reliance was significantly less than expected for secondary school students in contemporary schooling environments. Future research must consider the changing technological ecosystem in which young people operate and the necessity to differentiate between eBook use and other device-based activities.

Educational outcomes resulting from eBook use seem positive across literacy development and motivation to read; however, it is apparent that scaffolding from teacher(s) or parent(s)/carer(s) is an essential aspect of eBook success. Further research could help develop a deeper understanding of this aspect of eBook use in education settings. Other potential avenues for future research include evaluating teacher attitudes towards using eBooks, especially comparing reading for pleasure and study contexts. Revisiting libraries as a stakeholder group is also important, as the research with this group was conducted earlier this century. Similar to updating teachers' attitudes and uses of eBooks, future research with libraries could illuminate initiatives successful in improving educational outcomes. Accessing students' perspectives would also enrich our understanding of their attitudes towards eBooks. Recent studies demonstrate students' positive attitudes towards eBook usage. Further research is needed to clarify whether their preference differs when reading for pleasure as opposed to reading for study and what affordances are most valued. Evidence suggests that the affordances and functionality demonstrate promise, especially in populations with specific learning challenges. Further research could consolidate these findings and offer clarity around their use.

The review has highlighted that the affordances of eBook technology in terms of the ubiquity of use, combined with the contextual nature of researching eBook usage in educational settings, presents barriers to identifying clear research findings to inform the development of eBook best practice guidelines or policy in education settings broadly. This review has illuminated these issues as complex factors around eBook usage in educational settings, particularly in relation to student health and wellbeing, educational outcomes, stakeholders' perspectives and the affordability and accessibility of eBooks for students. Further research is necessary to inform teachers about safe and effective practices for using eBooks in educational settings, given their potential to provide access for students to opportunities for reading for pleasure and learning, who would otherwise be excluded. This research intends to address a number of these identified gaps in the literature to provide stakeholders with reliable information to inform their choices around the opportunities provided by the Department of Education's eBook program.

Methodology

Research Design Overview

This research aimed to investigate the educational and health issues and benefits of eBook use in various school settings. The purpose of this investigation was to provide stakeholders (e.g., teachers, parents/carers, principals, students, the Department) with reliable information upon which decisions about how eBooks are used in Queensland state schools. The research used a variation of a design-based research approach (Anderson & Shattuck, 2012). Design-based research is a methodology intended to increase the impact, transfer and translation of education research into improved practice (Thompson et al., 2016, 2017, 2018). Collaborative partnerships between researchers and practitioners are a fundamental characteristic of design-based research. Accordingly, this research was developed in consultation with the Department's Information and Technologies Branch and with key stakeholders in the participating schools. This consultation helped ensure the research asked and answered questions relevant and significant to the designers and end-users of the Department's eBook services. Multiple design iterations are a second fundamental characteristic of design-based research. The research, therefore, began with a design stage that was followed by four overlapping stages that were further organised into two parts (see Figure 1). Across the stages and parts of the research, multiple data sources were collected from key stakeholders (e.g., teachers). The data collected in each stage informed the data collection processes used in subsequent stages.

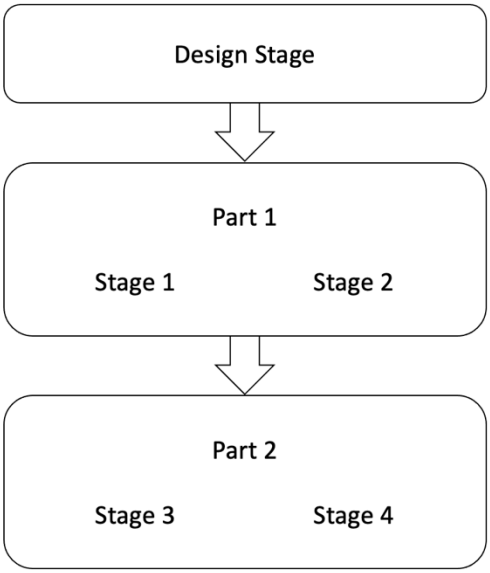


Figure 1: Research design

During the Design Stage, the researchers developed the overarching methodology and initial iterations of the specific data collection tools and processes. The researchers also reviewed the relevant academic literature on the educational and health issues and benefits of eBook use in school settings and prepared applications for ethical clearance from the relevant institutional and gatekeeper agencies. All the components of the Design Stage were interrelated.

Part 1 of the research consisted of Stage 1 and Stage 2 data collection and analysis. The purpose of Stage 1 was to collect data that would form a benchmark for the remainder of the project. Data was generated through questionnaires completed by parents/carers about their child's eBook use patterns, health, wellbeing and learning, as well as a review of school information from the public domain, including academic programs, student demographic backgrounds and performance in national literacy testing. Analysis of these data influenced the design and delivery of all subsequent

project stages by facilitating the refinement of the data collection tools and the processes through which these tools were deployed. The purpose of Stage 2 was to identify existing eBook uses within participating schools and to examine relationships between these uses and the data generated through Stage 1. These insights were developed through semi-structured interviews with teachers, curriculum leaders and relevant support staff at each participating school.

Part 2 of the research consisted of Stage 3 and Stage 4 data collection and analysis. The purpose of Stage 3 was designed to identify the uses of eBooks within classroom teaching practices by observing teachers and students at participating schools using eBooks in everyday learning activities. The purpose of Stage 4 was to explore the barriers to, and enablers of, effective eBook use in the participating schools and to generate teacher-led, multi-level recommendations for promoting such use. Stage 4 data were collected via semi-structured interviews and focus groups with participating teachers, curriculum leaders and relevant support staff. The progress of the project's stages and associated major tasks is illustrated later in Table 1.

Note that measures of eBook use's impact on health beyond self-reported data collected through questionnaires, semi-structured interviews, observations and focus groups were beyond the scope of this research.

Table 1: Final project plan

Year	2018				2019				2020				2021				2022			
Term	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Design Phase																				
Ethics Part 1																				
Ethics Part 2																				
Data Collection (Part 1 and 2)										*	*	*	^	^	^					
Data Analysis																				
Final Report																				

* Denotes terms when schools were closed to researchers because of the COVID-19 pandemic

^ Denotes terms when COVID-19 lockdowns occurred in South-East Queensland

Research Sites

Six schools participated in this study. Participating schools were selected according to a range of criteria. Consistent with the study's methodological approach, the opportunity to learn (Stake, 1995, 2000) about how eBooks are being used in a diverse collection of Queensland state primary and secondary schools was chief among these criteria. All the schools invited to participate were current subscribers to the Sora (or previously OverDrive) platform made available by the Queensland Department of Education. Subscribing schools were then organised according to location (metropolitan, regional, rural, remote), sector (primary, secondary, combined primary and secondary, distance education, special education), and diversity (percentage of enrolled students identifying as Aboriginal or Torres Strait Islander). Invitations to participate were made with these demographic criteria in mind and with the opportunity to learn foregrounded. Many schools were approached to be part of the research (e.g., twenty-six rural and remote schools and all six special schools on the permitted to approach list provided by the Department). However, no special schools were willing to participate in the research. Many rural and remote schools declined the invitation or withdrew mid-way due to changes in school leadership or teacher shortages. Brief descriptions of the six participating schools are presented below. The collection consists of three metropolitan schools and three regional

schools. A range of different sizes characterises these six schools (as reflected in student enrolment and staff employment numbers), and varying levels of diversity among students (as reflected in relative socio-educational advantage data, student results and outcomes, language background and Aboriginal and Torres Strait Islander student numbers).

School A

School A was a large state distance education school located in outer-regional Queensland that offered Prep through Year 12. It employed more than 120 teachers and had a student enrolment of more than 4,000 students. The student population at School A was characterised by relative social and educational disadvantage. Three-quarters of students enrolled in School A were positioned in the bottom two quartiles for socio-educational advantage. One in every seven students at School A identified as Aboriginal or Torres Strait Islander, and one in every 25 students had a language background other than English. School A's NAPLAN data for the period 2019-2021 showed it typically achieved averages close to students with a similar background in reading, writing, spelling and grammar. According to the annual Next Step survey, roughly two-thirds of School A's 2020 Year 12 cohort were either employed or enrolled in some form of tertiary or vocational education program six months post-graduation. Teaching and learning at School A was conducted by teachers online, by telephone, and in person by students' parents/carers. Teaching at the school also strongly focused on personalised learning and fulfilling individual potential.

School B

School B was a medium-sized state secondary school located in inner-regional Queensland. It employed approximately 100 teachers and had a student enrolment of about 1,000. The student population at School B was characterised by relative social and educational disadvantage. Four-fifths of students enrolled in School B were positioned in the bottom two quartiles for socio-educational advantage. Roughly one in every five students at School B identified as Aboriginal or Torres Strait Islander, and one in every 17 students had a language background other than English. School B's NAPLAN data for the period 2019-2021 showed it achieving averages above students with a similar background in reading, writing, spelling and grammar. According to the annual Next Step survey, roughly 90% of School B's 2020 Year 12 cohort were either employed or enrolled in some form of tertiary or vocational education program six months post-graduation. These graduating students were evenly divided between employment, university study and vocational training. School B had several signature programs, including trade training and sports excellence. School B also implemented a BYOD initiative for one of these signature programs.

School C

School C was a small state primary school located in outer-regional Queensland. It had a student enrolment of approximately 150 students and employed around 20 teachers. High levels of relative social and educational disadvantage characterised the student population. More than half the students enrolled in School C were positioned in the bottom quartile for socio-educational advantage, and about one-third were positioned in the lower middle quartile. One in every twelve students currently enrolled at School C identified as Aboriginal or Torres Strait Islander, and one in every thirty students had a language background other than English. School C's NAPLAN data for the period 2019-2021 showed it was largely achieving results close to students with a similar background in reading, writing, spelling and grammar.

School D

School D was a large state secondary school located in metropolitan Queensland. It employed more than 200 teachers and had a student enrolment of more than 3,000. High levels of relative social and educational advantage characterised the student population at School D. Almost half the students enrolled in School D were positioned in the top quartile for socio-educational advantage. Only one in every 100 students at School D identified as Aboriginal or Torres Strait Islander, but more than half of

the students had a language background other than English. School D's NAPLAN data for the period 2019-2021 showed it largely achieving averages above students with a similar background in reading, writing, spelling and grammar. According to the annual Next Step survey, almost all of School D's 2020 Year 12 cohort were either employed or enrolled in some form of tertiary or vocational education program six months post-graduation. The overwhelming majority of these graduating students were enrolled in university study. School D offered a range of excellence programs across the curriculum and operated a one-to-one technology program where all students either brought their own device or purchased one through the school.

School E

School E was a medium-sized state primary school located in metropolitan Queensland. It had a student enrolment of around 700 students and employed approximately 50 teachers. The student population was characterised by very high levels of relative social and educational advantage. More than half the students enrolled in School E were positioned in the top quartile for socio-educational advantage, and about one-third were positioned in the upper-middle quartile. Only one in every 100 students at School E identified as Aboriginal or Torres Strait Islander, but four in every five students had a language background other than English. School E's NAPLAN data for the period 2019-2021 showed it was largely achieving results above or well above students with a similar background in reading, writing, spelling and grammar. School E implemented a BYOD initiative and ran a range of specialist programs in languages, gifted and talented education, music, and STEAM (Science, Technology, Engineering, the Arts and Mathematics).

School F

School F was a large state primary and secondary school located in metropolitan Queensland that offered Prep through Year 12. It employed more than 200 teachers and had a student enrolment of more than 3,000. The student population was characterised by moderate levels of relative social and educational advantage. About a quarter of students enrolled in School F were positioned in the top quartile for socio-educational advantage, and roughly one-third were positioned in the upper-middle quartile. One in every fifty students at School F identified as Aboriginal or Torres Strait Islander, and three in every five students had a language background other than English. School F's NAPLAN data for the period 2019-2021 showed it was largely achieving results close to or above students with a similar background in reading, writing, spelling and grammar. According to the annual Next Step survey, over 90% of School F's 2020 Year 12 cohort were either employed or enrolled in some form of tertiary or vocational education program six months post-graduation. More than half of these graduating students were enrolled in university study, and approximately one-quarter when undertaking vocational training. School F ran various academic, sport and music excellence programs and implemented a BYOD initiative in the upper primary and secondary years.

Data Collection

In line with the research design summarised above, a variety of qualitative and qualitative data relevant to the purpose and aim of this research were collected in each of the six participating schools. Overviews of the participants, instruments, data collection procedures and processes of data analysis are provided in Table 2.

Parents/Carers Questionnaire

Participants

All parents/carers of students in all six schools were invited to complete a questionnaire about their personal reading habits, their child's reading habits, and their child's health and wellbeing. Parents/Carers were encouraged to consult with their children when responding to the questionnaire.

Table 2: Data collection

Part	Instrument	Topics of Interest
1	Questionnaire	Parent's/carer's reading habits Child's reading habit Child's health and wellbeing
1	Teacher Interview	Teacher's reading attitudes and behaviours related to eBooks Reading behaviours and preferences of the teacher's students Teacher's use of eBooks in their classroom practices
2	Observation	Teacher's use of eBooks in the lesson Students' use of eBooks in the lesson Purpose of eBook use in the lesson Interactions between teacher, students, subject matter and eBooks in the lesson
2	Teacher Interview	Observations of teacher's use of eBooks in the classroom Reflections on teacher's use of eBook in the observed lesson
2	Focus Group	Benefits and challenges of using eBooks Influences on teachers' uses or non-use of eBooks Examples of effective eBook use in classrooms Barriers to and facilitators of eBook use Observed impacts of eBook use on student learning Recommendations for promoting effective future eBook practices

Instrument

The questionnaire addressed topics specified in the project brief and derived from the literature review findings conducted during the project's Design Phase. The questionnaire consisted of approximately 35 items (the precise number depended on how participants responded to specific items). These items consisted of a mixture of selected responses and open-ended, short response items, both of which focused on the parent's/carer's personal reading habits, their child's reading habits, and their child's health and wellbeing. Two versions of the questionnaire were created: one relevant to primary-aged students and the other relevant to secondary-aged students. However, the majority of items were the same in both versions. The questionnaire took approximately 15 to 20 minutes to complete, depending on the length of responses provided to the open-ended response items. Both the primary-aged student questionnaire and secondary-aged student questionnaire are provided in Appendix B: Questionnaire (Primary) and Appendix C: Questionnaire (Secondary).

Procedure

All parents/carers at each participating school were invited to participate in the project via communication negotiated with the school's principal. Consenting participants were provided with a digital or hardcopy version of the relevant questionnaire, which they were instructed to complete and submit electronically or by postage-paid post, as appropriate to the format. Despite both options being provided to the participating schools, all six opted for a digital questionnaire to be distributed through the school newsletter. An approved advertisement about the research was promoted through the school newsletter that included an overview of the research, the contact details of the research team, a QR code and a hyperlink to the questionnaire. A flyer about the project and the QR code was also distributed at parent/carer and teacher interview nights at two schools.

Data Analysis

Frequency distributions were calculated for all the selected response items in the questionnaire. The data generated through the questionnaire's open-ended items underwent an iterative, nonlinear, two-phase coding process. First, an initial open-coding stage was performed, followed by a focused, integrative-coding stage. Findings from the questionnaire are reported according to the three main

themes of this project and the sub-themes within the questionnaire. The themes and subthemes are explained in Table 3.

Table 3: Themes and sub-themes

Theme	Sub-Theme
Part 1: Parent/Carer Engagement with eBooks	Parent/Carer reading habits – including reading preferences, days spent reading each week and reading time per day, as well as, eBook reading history Parent/Carer Involvement in eBook decision making Parent/Carer communication re eBooks
Part 2: Health and Wellbeing and eBooks	Child physical activity – including weekday and weekend participation and time engaged in physical activity Parent/Carer view of benefits and challenges of eBook reading to wellbeing and health
Part 3: eBooks and Education	Child reading habits - including types of books read, reading at bedtime and reading for interest and enjoyment (number of days per week and time spent reading) Child eBook reading – including eBook history, use of functionality and impact on literacy development (amount of reading, genre/type of book read, location for reading and motivation to read) Parent/Carer view of benefits and challenges of eBook use in educational contexts

Where appropriate, questionnaire data have also been analysed according to school (School A, School B, etc.), sector (Primary or Secondary) and location (regional or metropolitan). All questionnaire data is presented in the Parents'/Carers' Perspectives about eBooks section.

Teacher Interviews

Participants

All teachers, curriculum leaders and relevant support staff working in the six participating schools were invited to participate in a semi-structured interview. A maximum of ten participants were interviewed at each school. A subset of one to three teachers in each school who participated in the lesson observation component of the study (see below) were also invited to participate in a second interview.

Instruments

The guides used to conduct the semi-structured interviews are shown in Appendix D: First Interview questions for teachers and Appendix E: Second Interview questions for teachers. These guides were created to address topics specified in the project brief, findings from the literature review completed during the project's Design Phase and, in the case of the second interview, the findings of the initial interviews. The guides consisted of open-ended prompts and questions designed to elicit extended responses from participants. The first interview, which was conducted with all participating teachers, curriculum leaders and relevant support staff, addressed three general topics: (1) the participant's reading attitudes and behaviours related to eBooks; (2) the reading behaviours and preferences of the participant's students; and (3) the participant's use of eBooks in their classroom practices. The purpose of the second interview, which was conducted with the subset of teachers whose lesson was observed, was to discuss with the teacher what was observed in the lesson and to better understand the enablers and barriers of eBooks.

Procedure

All teachers, curriculum leaders and relevant support staff at each participating school were invited to participate in the project via communication negotiated with the school's principal. Consenting participants from each school were interviewed in-person or online by a research team member at a

time and place of the former's choosing. All post-observation interviews were conducted as soon as possible after the lesson. A maximum of ten teachers were interviewed at each site, ranging in length from 15 to 45 minutes. Using the interview guides described above, the interviewer sought to elicit as much detail as possible from interviewees, probing for examples and elaboration and seeking clarification as appropriate. Audio from all the interviews was recorded. This audio was used to generate transcripts that were subsequently analysed.

Data Analysis

All interview transcripts were thematically analysed using a dynamic, nonlinear, two-stage coding process. The first stage involved open coding of interview transcripts. The second stage entailed focused, integrative coding of the open codes created in the initial phase. The project's research questions were used as a key reference point during both coding phases. So too, were the design brief and the findings of the literature review.

Classroom Observations

Participants

A subset of one to three teachers in each school identified after the initial interview were invited to participate in an observation of lessons that involved eBooks. All the students in the lessons to be observed were also invited to participate. A maximum of three lessons involving eBooks were observed at each school.

Instrument

The guide used to conduct the lesson observations is shown in Appendix F: Observation. This guide was created to generate data relevant to the project brief and the findings arising from the literature review completed during the project's Design Phase. The guide consisted of directed prompts to focus the observer's field notes and video recordings. These prompts concerned how teachers and students were using eBooks and for what purpose, as well as the forms of interaction between teachers, students, devices and subject matter arising from these uses. The purpose of these observations was to contextualise and corroborate the data generated through the initial interview and to inform the conduct of the focus groups described below.

Procedure

The subset of teachers invited to participate in a lesson observation was selected based on the information generated through the initial interviews. Specifically, teachers were invited to participate if they described eBook use within the classroom. Each consenting teacher nominated a lesson or part of a lesson where they and/or their students would be using eBooks. A member of the research team conducted observations. Using the observation guide, the observer sought to capture relevant field notes, digital videos, or photographs of how eBooks were used during the lesson. Each observation ranged between 15 and 30 minutes. Observations were only conducted in four of the six schools. In three of these schools, in-person interactions between teachers and students were observed. Online interactions were observed in the other school where observations were conducted.

Data Analysis

All field notes and digital images generated through lesson observations were thematically analysed using the same dynamic, nonlinear, two-stage coding process described above. The first stage involved open coding of data, while the second stage entailed focused, integrative coding of the open codes created in the initial phase. Again, the project's research questions, the design brief and the literature review findings were key reference points during both coding phases.

Teacher Focus Groups

Participants

All the teachers, curriculum leaders and relevant support staff that completed the initial interview were also invited to participate in an in-person or online focus group. Each focus group consisted of no more than five participants, and all participants in each focus group were from the same school.

Instrument

The guide used to conduct the focus groups is shown in Appendix G: Focus Group. This guide was created to address topics specified in the project brief and findings from the literature review, semi-structured interviews and lesson observations. The guide consisted of open-ended prompts and questions designed to elicit extended responses from participants about the following topics as they relate to classroom practice at the participating school: the benefits and challenges of using eBooks, influences on participants' uses or non-use of eBooks, examples of effective eBook use; enablers and barriers to and facilitators of eBook use, observed impacts of eBook use on student learning, and recommendations for promoting effective future eBook practices.

Procedure

All the teachers, curriculum leaders and relevant support staff who participated in a semi-structured interview were invited to participate in a focus group via communication established during the interviews. Each focus group consisted exclusively of teachers from a single participating school. The focus groups were conducted in-person or online by a research team member at a time and place of the teachers' choosing. A maximum of five teachers were included in each focus group. Focus groups lasted for 30 to 45 minutes. Using the focus group guide, the focus group facilitator interviewer sought to elicit as much detail as possible by probing for examples and elaboration, seeking clarification as appropriate, and inviting participants to relate their experiences with those shared by other participants in their focus group. Audio from all the focus groups was recorded, which was used to generate transcripts that were subsequently analysed.

Data Analysis

All focus group transcripts were analysed using an identical coding process to the one used to thematically analyse the interview transcripts, field notes and recorded visual images. The integrative phase, in particular, was informed by data and codes arising from these accompanying methods of data collection and analysis.

Participation Rates

Participation rates for each school and each data collection tool are shown in Table 4. Participation rates for the questionnaire varied significantly, from 2 parents/carers of a primary-aged child (School C) to 86 parents/carers of primary-aged and secondary-aged children (School F). Across the six schools, a total of 184 parents/carers responded to the questionnaire. Thirty-nine teachers participated in the research across individual interviews and focus groups, and ten observations were conducted across the six research sites. As explained below, the COVID-19 pandemic and associated responses within schools significantly impacted recruitment and participation.

Ethical Considerations

Institutional and Gatekeeper Approval

Ethical clearance was sought and obtained separately for Part 1 and Part 2 of the research. In both instances, clearance was first sought from the Human Research Ethics Committee (HREC) at Griffith University and then the HREC at the Queensland University of Technology. The Griffith University approved protocol number for Part 1 and Part 2 was 2019/743 and 2021/411, respectively. Gatekeeper approval was then sought from Research Services at the Queensland Department of

Education. The identification numbers for the approved Part 1 and Part 2 applications with Research Services were 550/27/2244 and 550/27/2476, respectively.

Table 4: Parent/Carer participation rates

School	Sector	Location – Zone	Approximate Enrolments 2021	Parent/Carer Responses	Teachers (focus groups and interviews)	Observations
A	Prep – 12 School of Distance Education	Outer-regional	> 4000	6 4 Primary 2 Secondary	2	1
B	7-12 Secondary School	Inner-regional	~1000	28	11	1
C	Prep – 10 School	Outer-regional	~150	2 2 Primary	1	0
D	7-12 Secondary School	Metropolitan	3000+	3	7	4
E	Prep – 6 Primary School	Metropolitan	~700	59	7	2
F	Prep – 12 School	Metropolitan	>3000	86 58 Primary 28 Secondary	11	2
TOTAL				184	39	10

Risk

Part 1 and Part 2 of this research involved negligible risk to participants. Negligible risk is defined in the *National Statement on Ethical Conduct in Human Research* as 'research in which there is no foreseeable risk of harm or discomfort; and any foreseeable risk is no more than inconvenience' (National Health and Medical Research Council, Australian Research Council & Universities Australia, 2018, p. 13).

Recruitment and Informed Consent

All participation in this project was voluntary, and all recruitment involved using institutionally approved mechanisms for obtaining informed consent. Following the receipt of clearance from Griffith University and QUT HRECs and permission to approach from Research Services at the Queensland Department of Education, principals from schools meeting the above criteria were contacted. Recruitment of schools ceased once principals from six schools meeting the sampling criteria consented to participate. The research team negotiated with each consenting principal about the most appropriate means of distributing participant information statements and consent forms to prospective participants (e.g., paper copies distributed to parents/carers with paper copies of school newsletters, electronic versions distributed to staff with electronic copies of staff notices). Principals, parents/carers, teachers, curriculum leaders and relevant support staff were all deemed capable of providing informed consent to participate. Consistent with the Queensland Department of Education requirements, no students, regardless of age, were permitted to provide informed consent to participate. In all lesson observations, written parent/carer consent was sought for all students, and verbal assent at the beginning of the observation from all students whose parent/carer had provided written consent.

Identifiability of Data

The questionnaire data collected in Stage 1 were collected in a de-identified form. Data from the semi-structured interviews, lesson observations and focus groups were collected in an identifiable form, stored in a re-identifiable form (using a unique participant code) and have been reported here in a de-identified form. The unique participant code permitted the association of data with schools and stages (e.g., associated with a teacher's interview and lesson observation data). This code also helps ensure the confidentiality of participants and participating schools. All data is stored separately from the code key. The code key is the mechanism through which submitted data are re-identifiable. The code key will not be shared with third parties and will be stored, communicated and transported separately from the coded data. The use of participant codes and the code key extends to participating schools, all of which are reported here in a de-identified form.

Data Storage, Security and Destruction

All the research data (i.e., transcripts, field notes, questionnaire data, and audio-visual recordings) are currently being stored on the Griffith University Research Space storage platform. This platform is password-protected and is stored and hosted on Griffith University systems compliant with Commonwealth Privacy Legislation. The only people who have had, and will have, access to the data are the research team. Access to the data only lasts as long as an approved researcher's involvement in the project. Interview, focus group and observational data are being stored in a re-identifiable form. The code key for re-identifying these data is being stored separately on the research storage platform. All audio recordings from teacher interviews and focus groups were destroyed once verbatim transcripts were generated and member-checked. All video recordings of lessons were destroyed after the teacher focus groups were conducted, and the transcripts of the focus groups were analysed. At the conclusion of the project, all research data will be archived on the Research Storage platform. The data will then be destroyed five years after the end of the year of publication of the last refereed publication based on the data, following Griffith University's Schedule of Retention Periods for Research Data and Primary Materials.

Imposition on Participants

The imposition of the research on participants was minimised in several ways. Parents/carers were offered a choice of questionnaire format and provided with the maximum number of selected response items (and, therefore, a minimum of open-response items). Furthermore, all data collection methods were developed with reasonable and realistic participant time commitments in mind. Finally, the imposition on school operations was minimised by not interrupting school activities to recruit participants or collect data and by negotiating scheduled visits to conduct interviews, focus groups and observations with each school's principal or delegate (e.g., relevant curriculum leader).

Project Amendments and COVID-19 Impact

During this research project, teachers, students and parents/carers experienced several COVID-19 lockdowns, staffing shortages, teaching and learning in hybrid classrooms, remote schooling and a delayed start to the 2022 school year because of floods in South East Queensland. A number of changes have been made to the project since the Department of Education approved the initial proposal for the research in 2018. In all cases, the Department either instigated the change or was consulted about the change and the circumstances that necessitated it. These changes are summarised below:

- Based on a request from the Department, the number of schools was increased from four to six in 2019.
- At the beginning of 2020, two of the chief investigators (Associate Professor Kate Thompson and Associate Professor Jennifer Clifton) moved from Griffith University to Queensland University of Technology. This move necessitated a variation to the heads of agreement

between Griffith University and the Department and the development of sub-contractual arrangements between Griffith University and Queensland University of Technology.

- Approval from the Griffith University HREC was received for Part 1 of the research in November 2019. In January 2020, gatekeeper approval was received by the Department. Approval from the Griffith University HREC was received for Part 2 of the research in June 2021 (submitted in late April 2021). However, a number of required amendments to the informed consent materials from the Department meant approval for this part of the project was not received until October 2021. The amendments required by the Department necessitated a variation to the approved protocol by the Griffith University HREC before seeking administrative approval for this variation from QUT's HREC. Approval from all three bodies to commence Part 2 of the research was not received until 3 December 2021.
- During 2020, in response to the COVID-19 pandemic, the Department paused all research conducted in Queensland state schools. These restrictions were in place until late Term 4, 2020. Prior to this pause, two schools had been recruited. Part 1 data collection had begun in one of these schools and was about to commence in the other. In 2021, as a consequence of this interruption, the project deadline was extended until May 2022.
- Following the re-opening of schools to researchers, recruitment became increasingly problematic. The four lockdowns in South-East Queensland during 2021 (in January, March, June and July) created an atmosphere of uncertainty among universities, schools and the communities more broadly. This uncertainty and the demands placed on schools to cover staff shortages due to sick leave throughout 2021 and 2022 created an understandable reluctance among principals and teachers across the state to participate in the research. Many schools were approached to be part of the research (e.g., twenty-six rural and remote schools and all six special schools on the permitted to approach list provided by the Department). However, there was some reluctance to be involved, and three schools withdrew mid-way due to changes in school leadership or complicating factors with COVID-19. A similar reluctance to participate in the research was evident among parents/carers in the schools recruited after the beginning of the pandemic. In 2022, due to these experienced (and, at the time, anticipated) interruptions, the project deadline was extended until December 2022.
- Due to the reasons outlined above and because there were so few schools with the necessary school demographic profile, it was not possible to recruit a special school or a school with a high number of Indigenous students in remote Queensland.
- In response to COVID-19 restrictions, the option of online interviews and focus groups was added to the approved protocols for Part 1 and Part 2 of the research. Online interviews were conducted by Griffith University researchers using Microsoft Teams and Queensland University of Technology researchers using Zoom to fulfil their institutional obligations under Commonwealth privacy legislation.

Research Strengths and Limitations

There are unavoidable limits to the universal generalisability of the findings arising from this research. The schools subscribed to the Department's eBooks service are not representative of schools within the state school sector, nor are the six participating schools representative of the schools subscribed to the Department's eBooks service. Similarly, the low (and in some cases very low) response rates among parents/carers mean the questionnaire data for each school cannot be interpreted as representative. Similarly, the participation of no more than ten teachers in each school means the representativeness of the interview, observation and focus group data vis-à-vis non-participating teachers is an open question.

Notwithstanding these limitations, the research has considerable strengths. First, as a form of design-based research, the project has used consultation and iteration to help ensure the research asked and answered questions relevant and significant to key stakeholders in the Department's eBook services. Second, the collection and analysis of multiple, interrelated data sets within each research setting (e.g., semi-structured interviews about teachers' uses of eBooks and observations of those uses)

deepened the insights generated and enhanced the trustworthiness of the data collected. Third, and in a similar vein, presenting each school as a case, and collecting and comparing data across the six cases, further increases the potential usefulness of the findings. This utility does not reside in the universal applicability of the findings or the ability to predict eBook uses and outcomes elsewhere. Instead, the value of such data and analysis is the opportunity they provided to learn (Stake, 1995, 2000). Specifically, the value of the six cases rests in suggesting pertinent questions to ask in other situations and cultivating an attunement to the contextual features and technological affordances that might be relevant elsewhere (Mol, 2008). As is evident in the findings section of this report, many of the themes raised in schools where relatively large volumes of data were collected were also raised in schools where relatively less data was collected. Lastly, despite the impediments to this research created by the COVID-19 pandemic, the coincidence of this research with systemic pandemic responses, such as shifts to remote schooling and online teaching and learning, might have helped to highlight to participants the relative health and educational benefits and issues related to eBooks and print books when used within in-person and digital school learning experiences.

Parents'/Carers' Perspectives about eBooks

After cleaning the data, 184 parents/carers responded to the questionnaire in some way (although not all were complete). Of these, 123 parents/carers had primary-aged children, and 61 parents/carers had secondary-aged children. Only five students were identified as Aboriginal or Torres Strait Islander: one at School A (primary, regional), one at School B (secondary, regional), one at School E (primary, metropolitan) and one each at the primary and secondary parts at School F (metropolitan). Five parents/carers answered that their child had an EAP. One at School B, two at School E and two at the primary school part of School F. Parents/carers were asked whether their child had spent any time at school in a country other than Australia, and 39 (28%) answered yes. At School B, all parents/carers who answered yes (16) reported that their child had attended school in Australia for more than four years. One parent/carer from School D reported that their child had attended school in Australia for 8-9 years. At School E, one parent/carer reported that their child had attended school in Australia for 0-1 year, and two reported 4-5 years. At School F, parents/carers from the primary school reported that their child had attended school in Australia for 0-1 year (one) and 2-3 years (one). At the secondary school, 17 parents/carers reported that their child had attended school in Australia, for 2-3 years (1) and for more than six years (16).

Table 5 documents the total number of responses to the questionnaire and the number of valid responses.

Table 5: Valid questionnaire responses

School	Sector	Location	Total Questionnaire Responses	Valid Responses
A	Primary	Regional	4	4
	Secondary	Regional	2	1
B	Secondary	Regional	28	25
C	Primary	Regional	2	1
D	Secondary	Metropolitan	3	1
E	Primary	Metropolitan	59	31
F	Primary	Metropolitan	58	49
	Secondary	Metropolitan	28	25
Total			184	137

The lowest participation rate was School C, with one valid response. The highest participation rate was at School F, where 84 parents/carers participated (parents/carers of 49 primary-aged children and 25 secondary-aged children). As discussed previously, participation rates were lower than expected because of the impact of COVID-19. To be considered a valid response, participants needed to submit responses beyond Section A (Background)/Question 8 of the questionnaire (see Appendix B: Questionnaire [Primary] and Appendix C: Questionnaire [Secondary]).

In the questionnaire, parents/carers were asked to record their child's age and year level. These are reported for students in primary school (see Figure 2) and secondary school (see Figure 3).

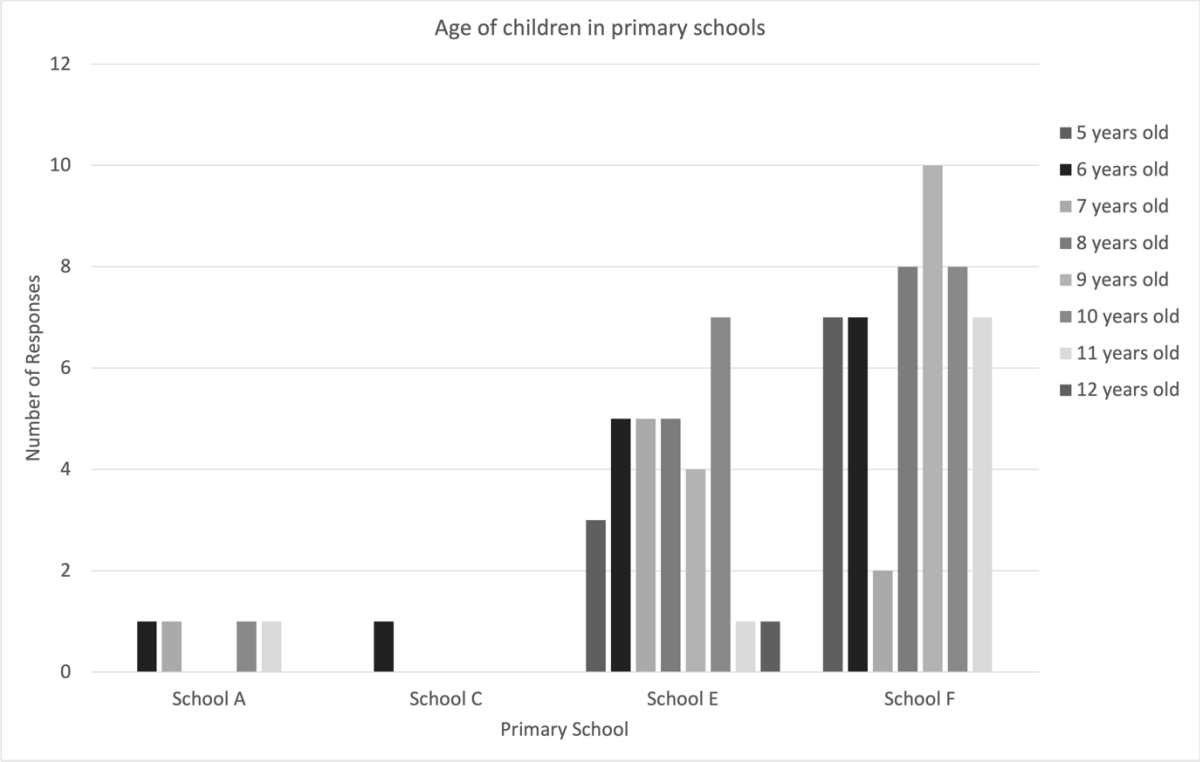


Figure 2: Age of children in primary schools

As seen in Figure 2, in primary schools, parents/carers answered the questionnaire with children aged five to twelve years old. Schools A and C are both regional schools. Parents/carers of children aged six, seven, ten and eleven years old answered the questionnaire from School A. Only one parent/carer submitted the questionnaire from School C; their child was six years old. The ages of children whose parents/carers answered the questionnaire from the metropolitan primary schools (School E and School F) ranged from five to twelve.

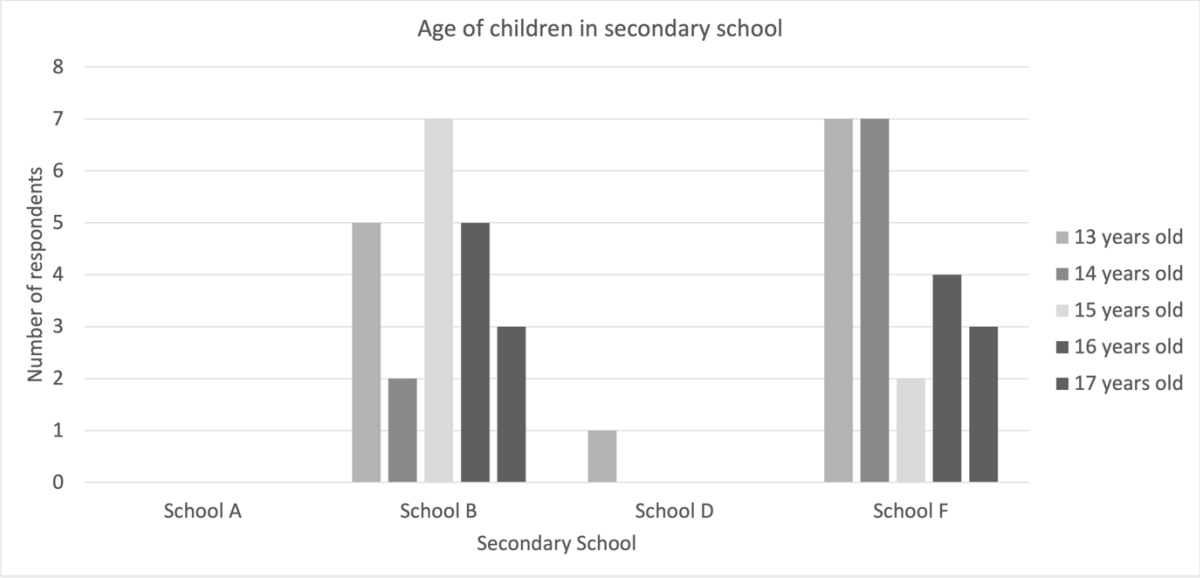


Figure 3: Age of children in secondary schools

Figure 3 shows the ages reported in regional secondary schools (School A and School B) and metropolitan secondary schools (School D and School F). No age was given for the completed questionnaire for the secondary part of School A. The ages of students from School B given by parents/carers included students from 13-17 years old. School D included the parents/carers of a 13-

year-old. The ages of students from School F given by parents/carers included students from 13-17 years old

Parents/carers were asked whether the child they were answering for had any siblings and whether they were younger or older than the child. The results shown in Figure 4 help determine the child's position within the family structure.

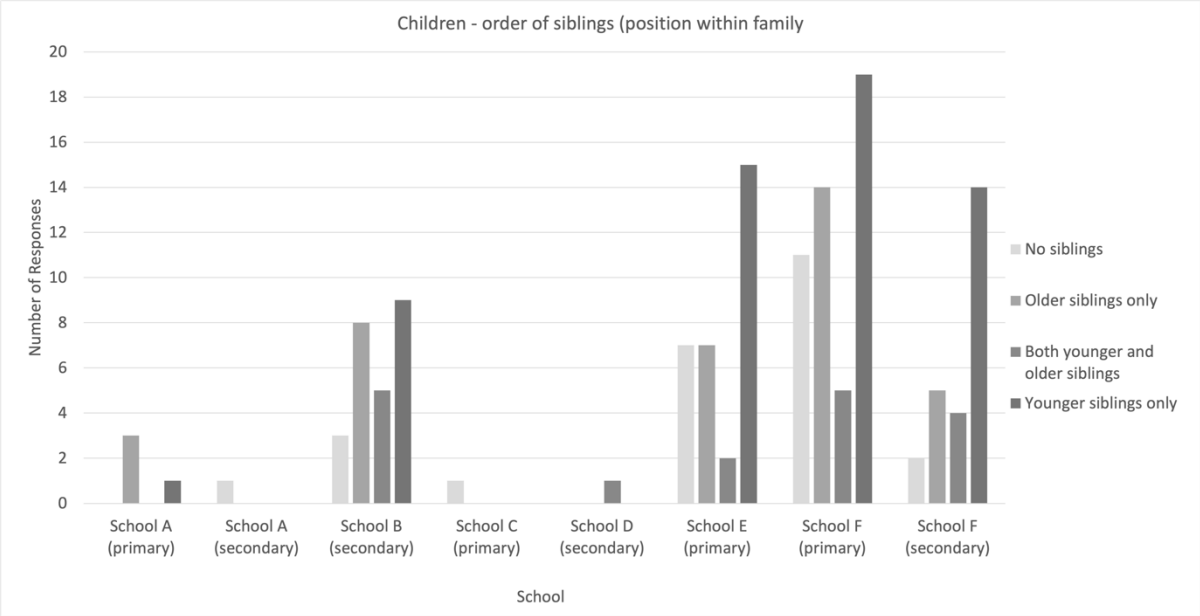


Figure 4: Order of siblings (position within the family)

Figure 4 shows that there were children at all schools (except School D) who were only children. Parents/Carers could choose which of their children they discussed in the questionnaire data. In Schools B, E and F, most parents/carers reported that the child they chose was the eldest of the siblings. It was more common for parents/carers to choose the youngest child than the middle child for this exercise.

Parents/carers were asked to identify which gender their child identified as. As shown in Figure 5, parents/carers only selected male or female in this study.

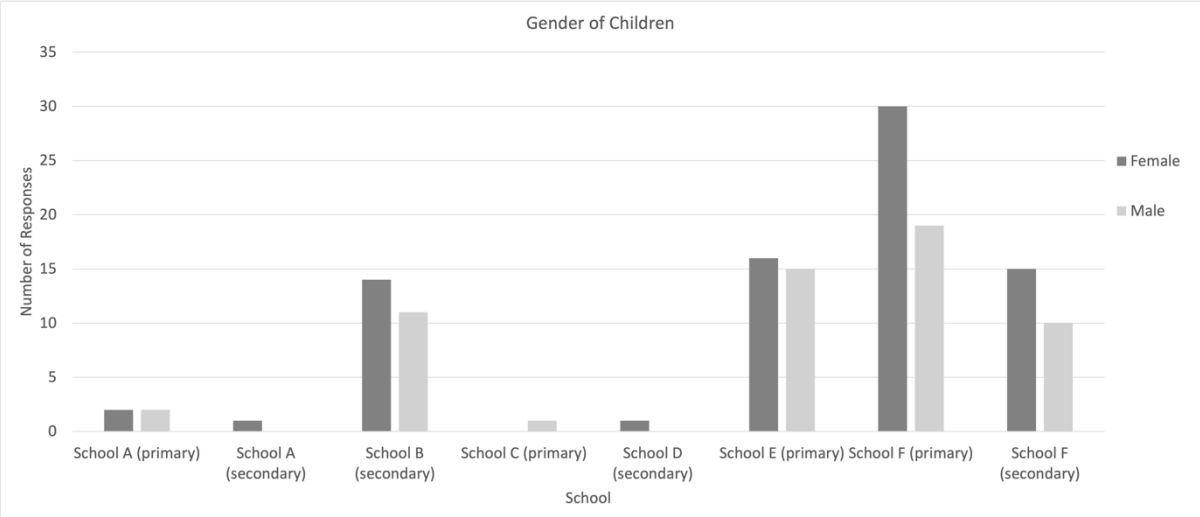


Figure 5: Gender of children

Figure 5 shows that for School A (primary), School B (secondary), and School E (primary), there were similar numbers of male and female children whose parents/carers completed the questionnaire. In

School A (secondary) and School D (secondary), the child was female, and in School C (primary), the child was male. In School F, more parents/carers of female children answered in both the primary and secondary schools.

Part 1: Parent/Carer Engagement with eBooks

The first part of the questionnaire addressed parents'/carers' reading habits, their involvement in their child's eBook decision making and the communication they received from schools and the Department of Education about eBook use. Not all parents/carers answered all questions. Some may have chosen not to answer, and as some questions were explicitly about eBooks, parents/carers who were non-readers or did not use eBooks would not have responded.

Parent/Carer Reading Habits

The questions in Part 1 consisted of closed questionnaire items, with a drop-down menu for each item designed to explore parent/carer reading habits (see Appendix B: Questionnaire [Primary] and Appendix C: Questionnaire [Secondary]). These questions addressed: preference for book type (e.g., eBook, print book, Figure 6), the number of days spent reading each week, the amount of time reading per day (less than or more than 30 minutes, Table 6), and eBook reading history (Figure 7). Parents/Carers were asked to report on the devices they used to access eBooks (Table 7). Parents/Carers also responded to questions asking them to describe any changes to reading practice they had noticed in response to using eBooks in terms of the extent of difference in reading time (Figure 8), genre (Figure 9), places that reading occurred (Figure 10), and motivation to read (Figure 11). Responses to these questions are collated and presented in Figure 6.

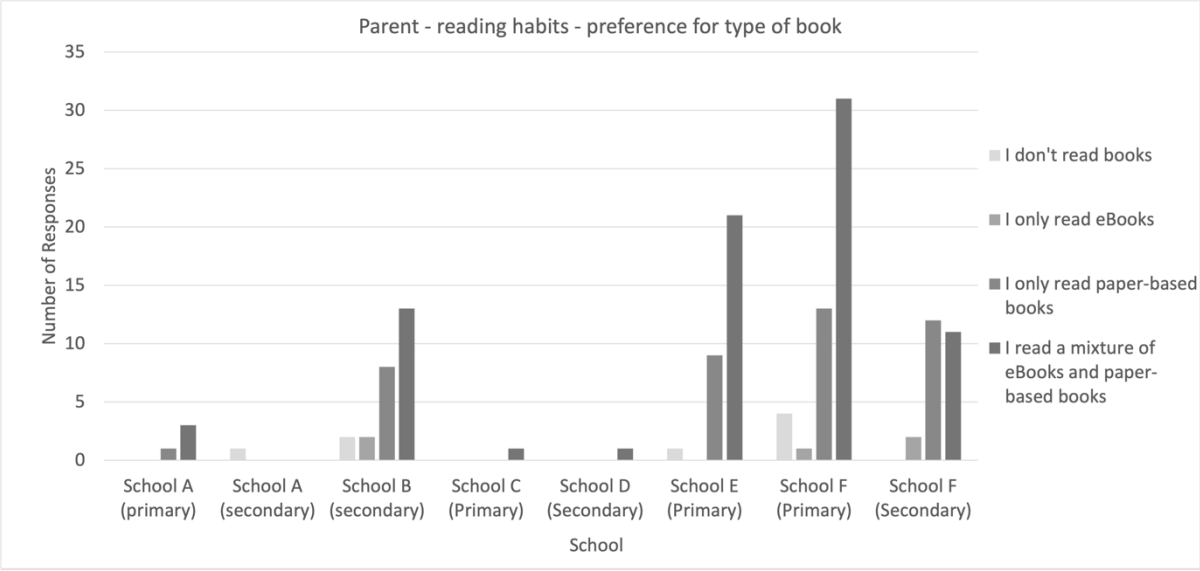


Figure 6: Preference for type of book – parents/carers

Parents/Carers who responded to the question (*n* = 134) in the main read a mix of print books and eBooks (60%), followed by only print books (32%). Most parents/carers read a mixture of eBooks and print books. Some also only read print books. A minority of parents/carers at Schools A, B, E, and F did not read books. Very few only read eBooks (School B, F). Figure 6 shows that 65% of parents/carers of primary-aged children read a mix of print books and eBooks, 27% read print books only, 1% read eBooks only, and 5% were non-readers. Of the 52 parents/carers of secondary-aged young people who responded, 48% read a mix of print and eBooks, 38% read print books only, 7% read eBooks exclusively, and 6% reported being non-readers.

At School A, five parents/carers responded to the questionnaire item about their reading habits. Three parents/carers read a mix of eBooks and print books, and one didn't read books. One parent/carer

only read print books, explaining their reasons thus, 'There's nothing like a real book, the smell, the feel etc., to remember reading as pleasurable' (Questionnaire, Primary).

Table 6: Reading for enjoyment – parents/carers

School	Sector	Location	Days of Reading for Enjoyment								Minutes Reading/Day	
			0	1	2	3	4	5	6	7	<30	>30
A	Primary	Regional	0	0	0	0	0	1	0	2	0	3
	Secondary	Regional	0	0	0	0	0	0	0	0	0	0
B	Secondary	Regional	1	3	2	1	1	4	2	10	6	18
C	Primary	Regional	0	0	0	1	0	0	0	0	0	1
D	Secondary	Metro	0	0	0	0	1	0	0	0	0	1
E	Primary	Metro	2	6	4	4	3	2	1	6	18	9
F	Primary	Metro	1	11	8	9	3	4	2	9	24	24
	Secondary	Metro	0	8	3	3	2	1	0	5	12	12

Table 6 shows the number of days in a week spent reading for enjoyment and the number of minutes spent reading every day. Regarding reading for enjoyment, 32% of parents/carers read over seven days, followed by 20% reading for one day (*n* = 105). Six per cent of the respondents were non-readers and/or didn't read for enjoyment. While they reported reading across the week, it was most common for parents/carers to report reading either one day a week (22%) or seven days a week (32%). There was almost an equal distribution of parents/carers reading for less than or more than 30 minutes per day in School F. In School B, more parents/carers were reading for more than 30 minutes a day, and at School E more parents/carers were reading for less than 30 minutes.

Parents/Carers of primary-aged and secondary-aged children had similar reading habits, reading for either one or seven days a week and reading for either less than 30 minutes or more than 30 minutes at a time. Parents/Carers of children in regional and metropolitan schools had similar reading habits. A greater proportion of parents/carers of children in regional schools reported reading seven days a week, with 42% choosing to do so compared to metropolitan schools at 32%. Similarly, a greater proportion of parents/carers in regional schools reported reading for more than 30 minutes at a time (78%) compared to metropolitan schools (46%).

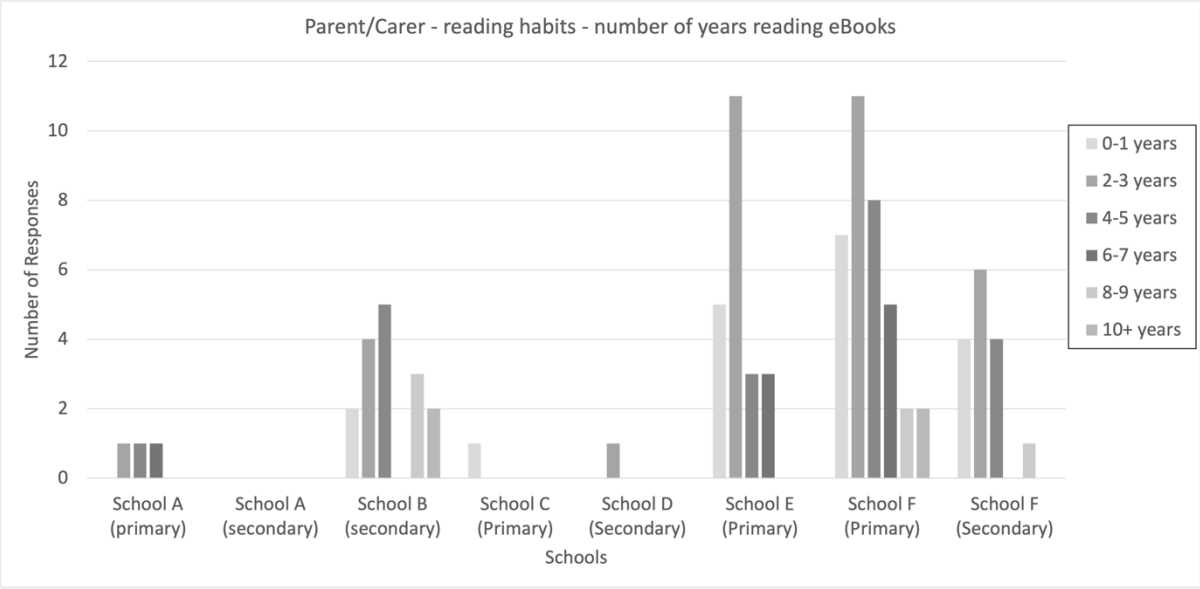


Figure 7: Number of years reading eBooks – parents/carers

Many participants (20%) had been reading eBooks for 2-3 years, and 15% of parents/carers had been reading eBooks for more than ten years (see Figure 7). There were some parents/carers who had only been reading eBooks for 0-1 year in both primary and secondary schools. While around half the parents/carers from both locations have been reading eBooks for five years or less, a greater percentage of parents/carers from regional schools have been reading eBooks for ten years or more.

Table 7: Technology used by parents/carers *to access eBooks*

School	Sector	Location	Device				
			Desktop	Laptop	eReader	Table	Mobile Phone
A	Primary	Regional	0	2	0	1	0
	Secondary	Regional	0	0	0	0	0
B	Secondary	Regional	1	2	5	9	13
C	Primary	Regional	0	0	0	0	0
D	Secondary	Metro	0	0	0	1	0
E	Primary	Metro	4	3	3	19	6
F	Primary	Metro	3	12	5	21	20
	Secondary	Metro	1	6	2	6	11

In Table 7, it can be seen that parents/carers reported using generalist devices such as a tablet or phone rather than desktop or laptop computers. Some of the parents/carers reported using specialist devices (eReaders) at School B (17%), School E (9%) and School F (8% in both primary and secondary).

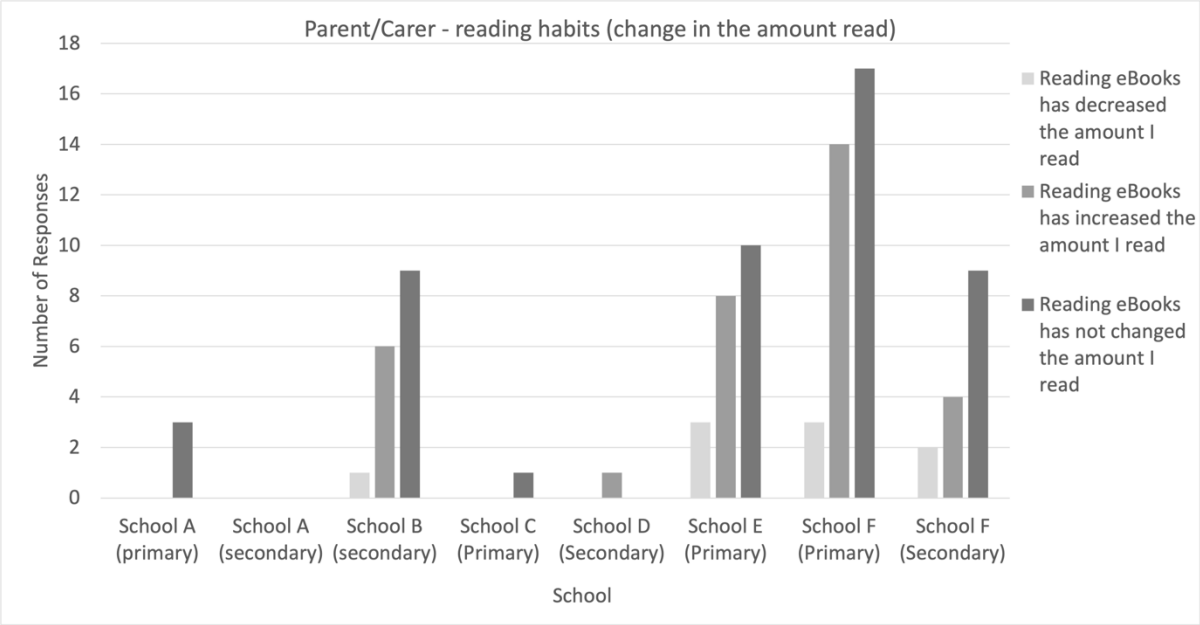


Figure 8: Change in the extent of reading time – parents/carers

Figure 8 shows that at almost every school (except School D), most parents/carers felt that reading eBooks had not changed the amount they read. Some parents/carers at each school felt that eBooks had increased the amount they read. A very small number of parents/carers reported that reading eBooks had decreased the amount they read (at School B, School E and School F).

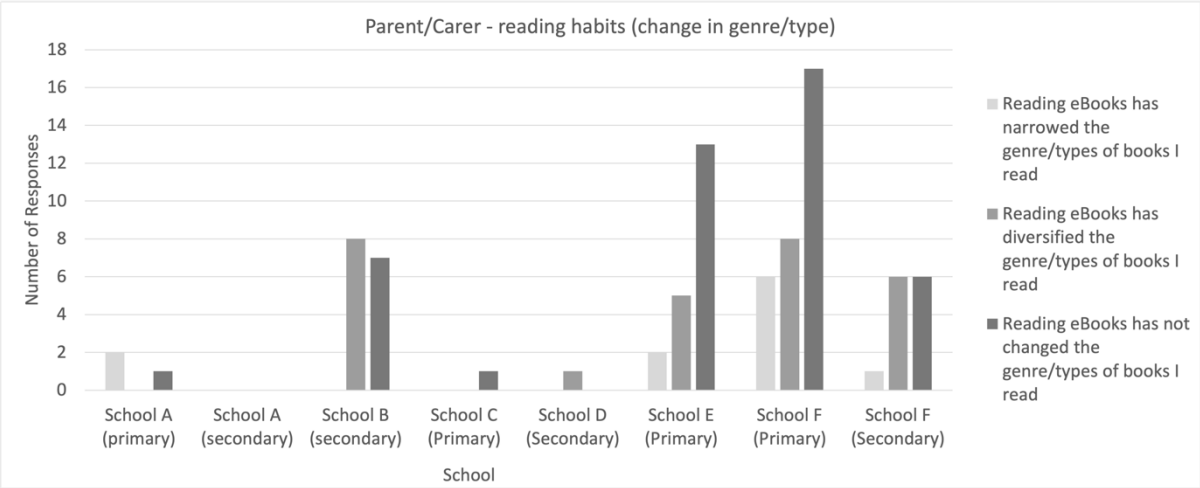


Figure 9: Change in the genre/type of book read – parents/carers

Figure 9 shows that at School C, School E and School F (primary and secondary), most parents/carers felt that reading eBooks had not changed the genre or type of book they read. At School B, School D and School F (secondary), most parents/carers reported that eBooks had diversified the genre/type of books they read. A very small number of parents/carers reported that reading eBooks had narrowed the genre/type of books they read (at School A (primary), School E and School F).

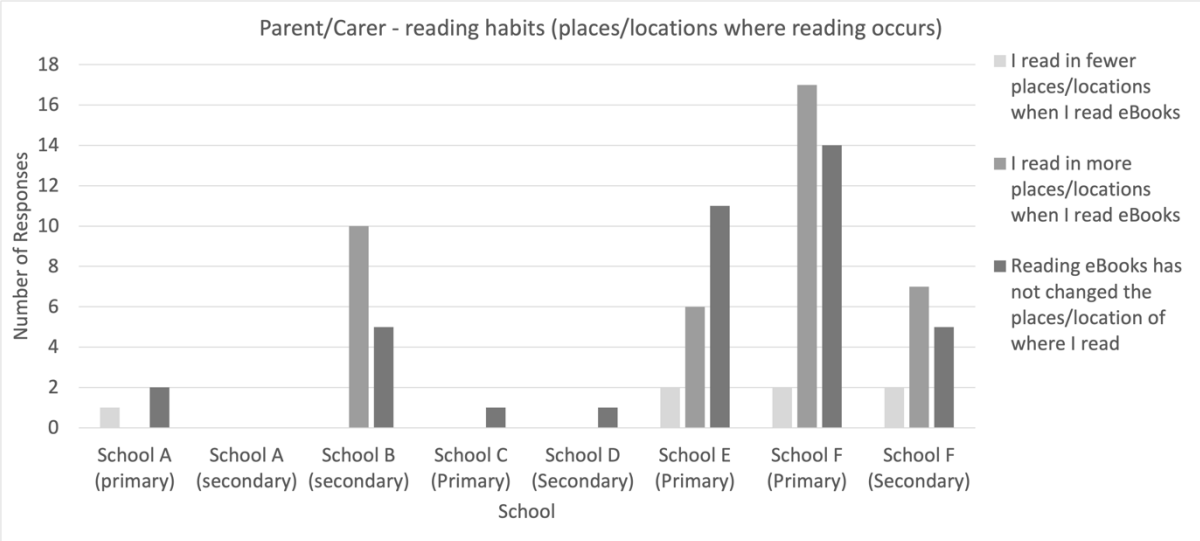


Figure 10: Change in the places/locations read – parents/carers

Figure 10 shows that most parents/carers at School B and School F (primary and secondary) read in more places/locations when they read eBooks. Most parents/carers at School A, C, D and E reported no change in the places/locations where they read when reading eBooks. Only a small number of parents/carers reported reading in fewer places/locations when reading eBooks (School A, School E, School F).

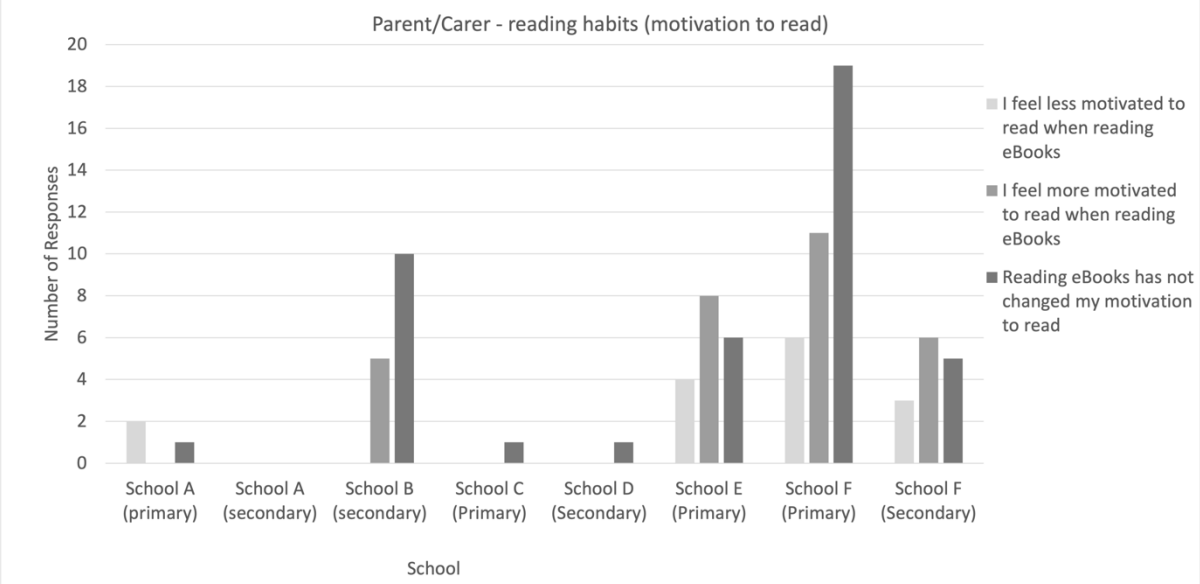


Figure 11: Change in motivation to read – parents/carers

Figure 11 shows that most parents/carers at School B, School C, School D and School F (primary) did not feel that eBooks had changed their motivation to read. Most parents/carers at School E and School F (secondary) reported that reading eBooks improved their motivation to read. Parents/carers at School A, School E, and School F reported feeling less motivated to read when reading eBooks.

Parent/Carer Involvement in eBook Decision-Making

Parents/carers were asked about their involvement in their child's eBook decision-making. Parents/Carers were presented with a closed-response item with four options describing their involvement (see Appendix B: Questionnaire [Primary] and Appendix C: Questionnaire [Secondary]). Table 8 below reports this data.

Table 8: Parent/Carer involvement in eBook decision making

School	Sector	Location	Response			
			Always	Sometimes	Only if Child Asks	Never
A	Primary	Regional	0	1	0	1
	Secondary	Regional	0	0	1	0
B	Secondary	Regional	1	4	7	2
C	Primary	Regional	0	0	0	0
D	Secondary	Metro	0	0	1	0
E	Primary	Metro	4	5	4	1
F	Primary	Metro	8	20	2	3
	Secondary	Metro	1	11	3	1

Parents/Carers had varied involvement in their child's eBook decision-making. The majority of parents/carers reported being involved in these decisions sometimes (50%) or only if asked by the child (22%). A minority reported being always involved (14%) or never involved (9%). Most parents/carers from both sectors reported sometimes participating in their child's eBook decision-making. However, a far larger percentage of parents/carers of primary-aged children reported always participating in such decision-making (40%) compared with parents/carers of secondary-aged children (6%). The location also influenced eBook decision-making. Parents/Carers in regional locations reported participating in their child's eBook decision-making only if asked (44%) to a much greater extent than metropolitan parents/carers (7%). Further, a larger proportion of metropolitan parents/carers reported sometimes participating in their child's eBook decision-making (56%) compared with their regional counterparts (30%).

Parents/Carers were asked to rank who had the most significant influence on the book choice, in order from most influential (1) to least influential (7). The mean is presented in Table 9 for each cohort and ranked from most influential to least via mean.

Table 9: Primary influence on young people's book choice

School	Sector	Location		Influencer						
				Parents/Carers	Siblings	Friends	Teacher	Librarian	Social Media	Other
B	Secondary	Regional	Mean	3.9	3.4	3.8	4.1	4.8	3.6	5
			Rank	4	**1**	3	5	6	2	7
E	Primary	Metro	Mean	2.7	3.75	4.3	4.6	4	5.5	4.75
			Rank	**1**	2	4	5	3	7	6
F	Primary	Metro	Mean	2.56	4.41	3.73	2.32	4.48	5.5	5.9
			Rank	2	4	3	**1**	5	6	7
F	Secondary	Metro	Mean	4.12	3.36	3.44	3.82	3.87	3.44	6
			Rank	5	**1**	2	3	4	2	6

Table 9 shows that in School B, other young people (siblings and peers) and social media were the most influential on young people's reading choices. Notably, the school had not had a librarian for the past 18 months, which may have affected their influence.

Parents/Carers at School E felt they had the most influence on their child's eBook choices, followed by the child's siblings. Parents/Carers in School E felt that social media was the least influential on eBook choices. Parents/Carers at School E perceived influence on reading practices was reinforced in their open comments. One parent/carer noted that reading provided an opportunity for 'family bonding' (Questionnaire, Primary). Another observed that they helped their child choose books depending on what is happening in their life circumstances,

> Sometimes we select books with particular themes that help him work through things he has been asking about/has concerns about, e.g., friends, where he came from etc. By having factual, age-appropriate resources to explore these things helps him to work through his feelings/questions/concerns. (Questionnaire, Primary)

The prominence of parent/carer influence at School E may have been due to the relatively young age of the readers, with one parent/carer stating that their child needed assistance, 'so most of [the] time I need to be with her' (Questionnaire, Primary). Similarly, another parent/carer reported the need to be present when their child reads because 'it's a big jump from kindergarten to prep, and he can feel overwhelmed and frustrated by the volume/challenge of reading homework' (Questionnaire, Primary).

There are several differences between the primary and secondary cohorts at School F, mainly the adult influence on reading choices. Parents'/Carers' and teachers' influence decreased as young people entered secondary school. The teacher was the main influence in primary school. However, siblings, friends and social media were the main influence on book choice in secondary school. Notably, the impact of the librarian increased in secondary schools, rising slightly in importance.

Communication Regarding eBooks to Parents/Carers:

Parents/Carers who had indicated their child read eBooks were asked about the communication they had received from the school or Department of Education about health and wellbeing strategies when using eBooks, how to access or navigate eBooks, recommendations and strategies for reading eBooks, or for reading generally. The findings are reported in Table 10. It is to be noted that parents/carers had three options in relation to each item of communication: 'Yes,' 'No' or 'Not applicable.' Only the 'Yes' findings are reported.

Table 10: Communication regarding eBooks to parents/carers

School	Sector	Location	Response					
			Health	Wellbeing	Access Navigation	Recommendations	eBook Specific Strategics	Reading Strategies
A	Primary	Regional	0	0	2	0	1	1
	Secondary	Regional	0	0	0	0	0	0
B	Secondary	Regional	1	1	0	0	0	0
C	Primary	Regional	0	0	0	0	0	0
D	Secondary	Metro	2	2	2	2	2	2
E	Primary	Metro	3	3	5	5	0	6
F	Primary	Metro	2	2	12	5	3	3
	Secondary	Metro	1	2	3	5	0	2

Eighty parents/carers recalled receiving communication about eBook use by the schools and the Department of Education. Most communication that parents/carers received related to accessing and navigating eBooks (30%), followed by eBook recommendations (21%) and reading strategies generally

(17%). Regarding school location, parents/carers in metropolitan locations reported more communication from the school and the education department than in regional areas.

Part 2: Health, Wellbeing and eBooks

This second part of the questionnaire considered child physical activity during the week and on weekends and the amount of time spent active. It also considered parents'/carers' views of the benefits and challenges of reading to wellbeing and health.

Young People and Physical Activity

This section included closed-response questionnaire items about young people's physical activity. This section included an item about weekday participation (Table 11) in physical activity ('1 day', '2 days' – '5 days') and another about the length of time doing so ('Less than 30 minutes', '30 minutes to 60 minutes', 'More than 60 minutes'). It also included an item about physical activity on weekends (on 'One day' or 'Two days') and the amount of time doing so ('Less than 30 minutes', '30 minutes to 60 minutes', 'More than 60 minutes'), reported in Table 12. Table 11 below shows young people's physical activity on weekdays.

Table 11: Physical activity of children on weekdays

School	Sector	Location	Days of Physical activity					Minutes of Physical Activity/Weekday		
			1	2	3	4	5	<30	30-60	>60
A	Primary	Regional	0	0	1	1	1	0	1	2
	Secondary	Regional	1	0	0	0	0	1	0	0
B	Secondary	Regional	3	6	3	3	7	4	13	6
C	Primary	Regional	0	0	0	0	0	0	0	0
D	Secondary	Metro	0	0	0	1	0	1	0	0
E	Primary	Metro	3	6	8	1	2	2	8	10
F	Primary	Metro	8	6	4	3	4	9	14	16
	Secondary	Metro	2	7	4	3	6	4	10	9

Young people from all six schools engaged in physical activity during weekdays. Most did so one to three times a week. Forty-two percent of young people engaged in physical activity between 30-60 minutes and 39% participated in physical activity for more than an hour. It was more common for young people in primary schools to engage in physical activity for one to three days during the week (75%) than four to five days a week (25%) and to do so for 30-60 minutes per day or more than 60 minutes per day. Young people from regional locations participated in physical activity during weekdays, almost evenly distributed between those who did so one to three days a week and those who did so for four to five days a week. These young people often participated in physical activity for between 30-60 minutes. Young people from metropolitan locations also varied in their weekday physical activity. However, a larger portion participated for one to three days per week than four to five days.

Table 12: Physical activity of children on weekends

School	Sector	Location	Days of Physical Activity		Minutes of Physical Activity/Weekend Day		
			1	2	<30	30-60	>60
A	Primary	Regional	1	2	0	0	3
	Secondary	Regional	0	0	0	0	0
B	Secondary	Regional	14	6	3	11	7
C	Primary	Regional	0	0	0	0	0
D	Secondary	Metro	1	0	1	0	0
E	Primary	Metro	9	11	5	4	12
F	Primary	Metro	28	16	5	11	29
	Secondary	Metro	17	4	3	11	8

The overwhelming majority of young people also engaged in physical activity over the weekend (99% see Table 12). Young people were mostly physically active for one day of the weekend (63%), compared to those who were physically active two days over the weekend (35%). On weekends, young people usually spent more than an hour in physical activity (54%), compared with those who spent between 30-60 minutes (33%) or less than 30 minutes per day (15%). Most primary-aged young people engaged in physical activity one day on the weekend, with most doing so for more than one hour. Young people in secondary schools engaged in physical activity on more days of the week than primary-aged children, with 54% doing so for one to three days per week. Most secondary-aged young people also engaged in physical activity on one day of the weekend, with most doing so for more than an hour. They also participated in physical activity on one day on weekends. Young people from metropolitan locations participated in physical activity on weekends, usually on one day rather than two. Still, they often did so for longer, with many reporting more than an hour of physical activity in metropolitan areas.

Wellbeing and Health Benefits and Challenges Related to Reading

In this questionnaire section, parents/carers were asked to identify the benefits (Table 13) and challenges (Table 14) to their child's health and wellbeing presented by reading in text boxes. Responses were then grouped into emerging themes and presented in table form, as shown in Table 13.

Table 13: Benefits to children's health and wellbeing

School	Sector	Location	Themes – Benefits to Children's Health and Wellbeing					
			Emotional Health and wellbeing (relaxation and regulating emotions)	Mental Health and wellbeing (brain development)	Enjoyment of Reading	Improve Literacy and Learning	Enhances Thinking Skills	Agreed With the Question (no reason provided)
A	Primary	Regional	1	1	0	0	1	0
	Secondary	Regional	0	0	0	0	0	0
B	Secondary	Regional	6	8	0	1	0	0
C	Primary	Regional	0	0	0	0	0	0
D	Secondary	Metro	2	0	0	0	0	0
E	Primary	Metro	2	2	2	3	0	2
F	Primary	Metro	7	4	10	10	3	9
	Secondary	Metro	8	2	2	6	2	0

At School B, parents/carers felt reading contributed positively to their child's education and development. Parents/Carers felt that reading gave their children a 'broad world view,' helped them be empathic through 'learning about the human condition, other places and other points of view' and 'keeps their mind and imagination active' (Questionnaire, Secondary). One parent/carer explained that their child read a lot of non-fiction, particularly biographies, as it inspired her to work towards her goals. Many parents/carers also noted that reading developed or improved spelling, grammar, punctuation, comprehension, writing and knowledge of different subjects. Many parents/carers described the enjoyment and mental health benefits of reading. As one parent/carer stated, reading 'relaxes, gives space to escape stress and be interested in life outside the normal experience' (Questionnaire, Secondary). Parents/Carers acknowledged the anxieties students experienced during secondary school and described how reading was a 'good distraction to the challenges of high school life' (Questionnaire, Secondary) and 'helps [students] relax at the end of a busy day' (Questionnaire, Secondary). One parent/carer explained that reading was their child's 'go-to … when stressed,' and another felt it 'lessened anxiety' (Questionnaire, Secondary). Two parents/carers noted that they felt there was the potential to connect with peers and parents/carers through reading, 'my [child] reads the same books as her peers, so is a good talking point with peers' (Questionnaire, Secondary).

At School E, several parents/carers described their child's enjoyment of reading. One parent, for example, recounted, 'He loves books and can sit for hours looking at the pictures and deciphering the story. He has a little library of books that he goes to for fun or when he wants some alone time' (Questionnaire, Primary). However, another parent/carer also noted that the learning to read process had impacted upon this reading for pleasure element, 'I feel that the pressure to read the words has taken the love out of reading a little' (Questionnaire, Primary). Parents/Carers reported their children reading a mix of genres, as exemplified in this comment '[child's name] particularly likes non-fiction books about nature and science as well as funny fiction books' (Questionnaire, Primary). Analysis of parents/carers' comments about reading at School E highlighted their belief in the literacy benefits of reading. Among the benefits parents/carers noted were: 'increased vocabulary;' 'learning new vocabulary;' 'His vocabulary and spellings are constantly improving;' and 'makes her more creative in her writings' (Questionnaire, Primary). Another parent/carer noted that reading contributed to expanding their child's knowledge, and another commented that 'It provides him with a platform through which to explore and better understand himself and the world around him' (Questionnaire,

Primary). Several parents/carers noted the positive effects of reading on health and wellbeing, particularly with respect to mental wellbeing. Typical comments included, 'It benefits their mental health,' 'mindfulness,' and 'Reading books calms my kid' (Questionnaire, Primary). These mental health benefits were emphasised by one parent/carer, who shared the following,

> [child] has had to have frequent visits to the hospital growing up, and I always take books with us to read. I find that they help keep him calm, focussed [sic] and positive. He has a book that explains his medical condition (actually aimed at parents) but he's made it his own – he's found it useful to understand and process some of his health challenges. (Questionnaire, Primary)

eBooks were also positioned by parents/carers at School E as a positive alternative to other screen-based activities, and one parent/carer saw reading eBooks as a 'calm activity that is preferred in place of TV' (Questionnaire, Primary).

At School F, several parents/carers commented that their children liked reading, found it a source of enjoyment, pleasure and entertainment, and supported their development as active citizens. The following quote typified the comments offered by parents/carers in this regard, 'reading is something my daughter loves to do. It is her downtime, and it's part of her life' (Questionnaire, Primary).

Parents'/Carers' comments about the potential for eBooks in education at School F tended to fall into two categories: (1) that reading eBooks supports literacy development and (2) that reading eBooks supports learning development generally. Parents/Carers of primary-aged children mentioned that reading improved their child's vocabulary, spelling and grammar and helped build their confidence to learn to read. Parents/Carers of secondary-aged children also identified improved vocabulary, grammar and spelling as benefits of their child's eBook use. In addition, they reported that eBooks could help their child learn English and gain reading speed. One parent/carer, in particular, commented that eBook use provided their child 'exposure to more complex words and how they are intended to be used' (Questionnaire, Secondary). Parents/Carers from both cohorts felt eBooks could benefit critical thinking skills, creativity, empathy, and curiosity and enhance their worldview. Parents/Carers also felt eBooks could improve learning habits and provide 'exposure to technology that will develop skills to support future learning' (Questionnaire, Primary).

The impact of eBooks on mental health was raised by several parents/carers from both the primary and secondary year levels at School F. Many parents/carers noted that reading helped relax their child. For instance, one parent/carer noted that reading 'helps my child wind down at the end of a busy' (Questionnaire Primary). In contrast, another noted that it helped their child 'sleep better and calmer' (Questionnaire, Primary), and a third parent/carer felt reading had the potential to 'reset if things were bothering her or were too much, she gets lost in the world of books!' (Questionnaire, Primary). Parents/Carers of secondary-aged children had similar views. However, there were more comments from this cohort about how reading provided a break from studying. These parents/carers felt that when their children read, they were more focused when they studied and that reading could release stress caused by study and improve mental wellbeing, particularly in the senior years of schooling. These parents/carers also saw reading, even if on a screen, as a more favourable alternative to other screen activities such as watching TV or YouTube.

Parents/Carers of primary-aged students at School F also noted that reading supported their development. For example, comments were made that reading 'helped with cognitive development' (Questionnaire, Primary) and 'broadened his mind to understand various terminologies, norms, diversity and cultural values' (Questionnaire, Primary). Other parents/carers identified that reading developed thinking processes, taught young people that it is ok to make mistakes and learn at their own pace and development independence, and helped with daily play and confidence. Parents/Carers of primary-aged children commented that reading could increase creativity, improve learning habits and increase imagination. Parents/Carers of secondary-aged children noted that reading has the

potential to 'provoke conversation' (Questionnaire, Primary) and 'help [young people] relate to people' and can result in 'more well-rounded' (Questionnaire, Primary) young people.

Parents/Carers of secondary-aged students at School F noted similar positives, including expanding imagination and 'challenges their ideas and attitudes towards life' (Questionnaire, Secondary). Other parents/carers supported this notion that reading had the potential to increase social awareness, change their views and increase open-mindedness. Three parents/carers stated that reading increased the general knowledge of their child.

Table 14: Challenges to children's health and wellbeing

School	Sector	Location	Themes – challenges to young people's health and wellbeing						
			Exposure to Inappropriate Books or Material	Biomechanical Issues	Leaving eBooks/ Distractions	Technology Issues	Sleep	Physical Inactivity	No
A	Prim	Regional	0	1	0	0	0	0	1
	Sec	Regional	0	0	0	0	0	0	0
B	Sec	Regional	2	1	0	0	3	0	9
C	Prim	Regional	0	0	0	0	0	0	0
D	Sec	Metro	0	1	1	0	0	0	0
E	Prim	Metro	1	5	1	0	0	0	5
F	Prim	Metro	5	10	1	3	0	2	12
	Sec	Metro	3	8	0	0	0	0	12

Most parents/carers identified no challenges to young people's health and wellbeing (see Table 14). Those who raised concerns were mainly about physical issues such as eye strain, neck strain or incorrect posture. Few parents/carers identified challenges related to their child's sleep, technology issues, or being distracted by other features on the device.

Because of the context, the children of parents/carers from School A who responded to the questionnaire completed long periods of schooling on an electronic device. Consequently, parents/carers at School A had more health and wellbeing concerns about eBooks. One parent/carer expressed, 'I'm concerned about eBooks and what they do to their eyes. Already have too much screen time with school' (Questionnaire, Primary). Another parent/carer noted that their child's 'eyes sting from too much screen time' (Questionnaire, Primary). Other parents/carers, too, were worried about too much device time and expressed the sentiment that it would be better if their child were 'outside playing' (Questionnaire, Primary) rather than reading. Nevertheless, two parents/carers reported that reading was beneficial insofar as it helped their child calm down or relax before bed.

At School B, one parent/carer was concerned about students' posture when using eBooks. However, unlike teachers, a number of parents/carers were concerned about eye strain, poor lighting and the negative effects of reading on a small screen one students' eyesight. Four parents/carers at School B said reading helped their child sleep or 'wind down their mind before bed' (Questionnaire, Secondary). Nevertheless, the impact on sleep was also a concern for parents/carers, with some explaining that young people experienced 'sleep deprivation after getting so engrossed in a book you can't put it down,' 'read too late at night' and had trouble 'switching the device off after reading at night' (Questionnaire, Secondary).

Other parents/carers at School B felt a challenge was ensuring their child didn't read eBooks 'above her age group' (Questionnaire, Secondary). Another parent/carer expressed fear about the romance genre, 'I'm a little concerned about some of the topics and concepts in modern-day novels, which are quite sexually explicit content marketed to young adults. My daughter has expressed that sometimes they make her feel uncomfortable' (Questionnaire, Secondary).

At School E, parents'/carers' concerns at School E were overwhelmingly related to eye health, with four parents/carers focused on this issue. One parent/carer also noted a concern that 'some books online are inappropriate for their [child's] age' (Questionnaire, Primary).

Parents/Carers across both primary and secondary year levels had some health concerns about accessing eBooks at School F. These concerns included: posture issues due to long periods sitting or lying incorrectly; eyesight issues/eye strain/myopia due to reading for too long or too close on a device; getting tired quickly; becoming inactive (osteopenia, obesity); and neck strain.

Parents/Carers at School F identified a challenge of the distracting nature of reading on a device. As one parent/carer noted, 'kids get easily distracted by the notion that the same gadget is loaded with fun activities, and reading comes secondary to that' (Questionnaire, Primary). This sentiment was repeated in several parents'/carers' responses. Other concerns raised by parents/carers included student access to inappropriate online material when they are meant to be reading, and one parent/carer indicated they had a 'growing concern about the loss of paper-based reading imagery from the minds of children' (Questionnaire, Primary).

Both cohorts of parents/carers at School F identified the challenge that eBooks could be accessed without their input and that children might access literature that wasn't age-appropriate. The parents/carers of primary school-aged students noted concerns that their child was: 'reading nonsense' (Questionnaire, Primary); being 'exposed to inappropriate content' (Questionnaire, Primary), which may result in online searches; not reading at 'year level expectations' (Questionnaire, Primary); and reading about content which may 'scare young children, like vampires, ghost, demons' (Questionnaire, Primary) or 'death and horror' (Questionnaire, Primary). Regarding challenges to eBook use, parents/carers of secondary school-aged children expressed concerns that it is difficult to supervise 'what material is being read' (Questionnaire, Secondary), that the content accessed might be too advanced and it can be difficult to 'ensur[e] the information [the child] is accessing is factual ... not damaging in any way to his emotional and mental health' (Questionnaire, Secondary).

Part 3: eBooks and Education

This third part of the questionnaire considered young people's reading habits, bedtime reading behaviours and the extent of their reading for interest and enjoyment (number of days per week and time spent reading). It also considered young people's eBook reading behaviour, including the history of their eBook use, their use of eBook functionality, as well as the impact of eBook reading on their literacy development (the amount of reading, the genre or type of book being read, the location for reading and their motivation to read). Finally, this part of the questionnaire also considered parents'/carers' views of the benefits and challenges of eBook reading.

Reading Habits of Young People

Parents/Carers were presented with closed-response questionnaire items about their child's reading habits. The first item asked them to choose a response that best described the types of books their child read ('Mix of eBooks and print books,' 'Only print books,' 'Doesn't read books' or 'Only eBooks', Figure 12). The second item asked how long their child had been reading eBooks (six options provided from 0-1 year to 10+ years, Figure 13). The third item asked them to specify the number of days their child read for interest and enjoyment each week ('1 day', '2 days' etc., Table 15). This item was followed by the fourth one, which asked the parent/carer to nominate the daily minutes their child spent reading for interest and enjoyment each week ('Less than 30 minutes' or 'More than 30 minutes'). Parents/Carers were asked about the devices that their child used to access eBooks (Table 16). Parents/Carers also responded to questions asking them to describe any changes to reading practice they had noticed in response to using eBooks in their child in terms of: the extent of reading time (Figure 14), genre of book (Figure 15), places that reading occurred (Figure 16), and motivation to read (Figure 17). The final item asked them to report whether their child typically read at bedtime (Table 17).

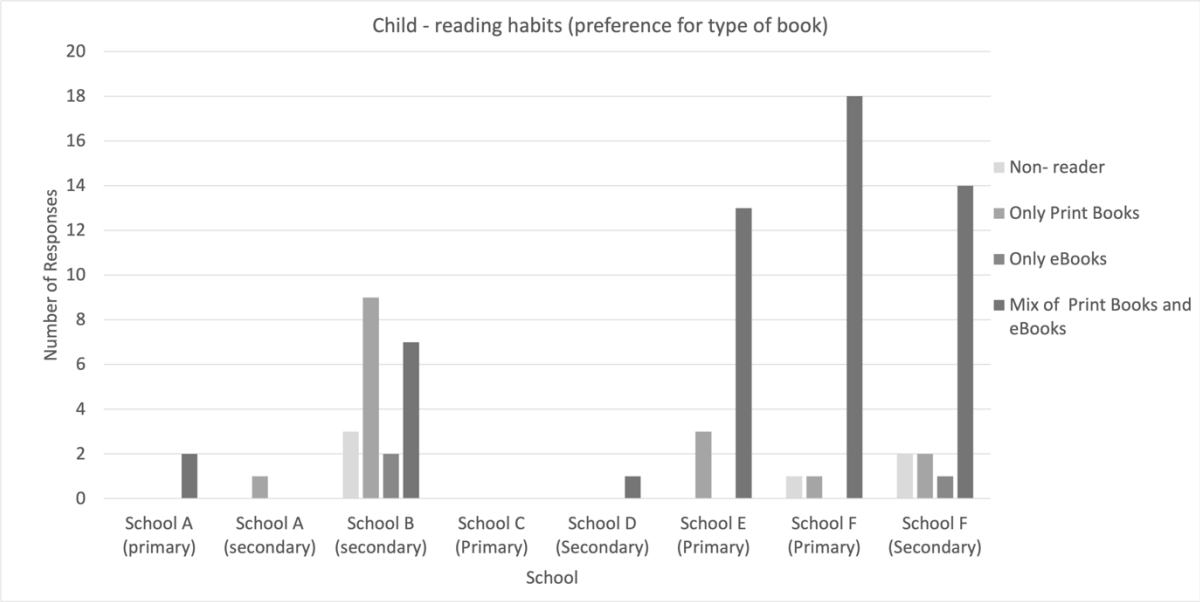


Figure 12: Preference for type of book – children

Parents/Carers from the six schools reported that their child read a mix of print books and eBooks (40%), with a further 22% reading print books only (see Figure 12). Five per cent of young people read eBooks only and 9% of parents/carers reported their child doesn't read books. Primary-aged and secondary-aged young had similar reading habits. Parents/Carers reported that more primary-aged children read print books only. Young people in regional and metropolitan locations displayed similar reading habits. There was a tendency for young people in regional areas to read only print books or a mix of print books and eBooks, whereas young people in metropolitan areas tended to read a mix of print books and eBooks.

At School B, slightly more parents/carers reported a preference for print books for their child. One parent/carer noted a preference for print books, as they read with their secondary-aged child. As they explained:

> We take turns reading a page each for about an hour most weeknights. We started this two years ago to try and strengthen our daughter's poor literacy skills. This has benefited her greatly by giving her confidence in reading aloud and the opportunity to discover new words and their meanings. This has broadened her vocabulary. It's also benefited her emotionally in that we get to spend time together after a busy day of school and work. We discuss concepts in the book and possible outcomes. The more she reads, the more confident she becomes. Reading regularly together has increased her confidence. Now she can participate in school musicals and class presentations without having a panic attack and leaving class to see the guidance officer. (Questionnaire, Secondary)

Another parent/carer at School B stated that they only allowed print books because they didn't see any benefits from eBooks and because their child 'always takes her novels with her, they don't need a special device or power, and you can hire them for free from the library' (Questionnaire, Secondary). One parent/carer noted that their location and the distances they travel in that rural context influenced their child's preference for eBooks and audiobooks: 'we live in the country and play a lot of sports and travel many kms, so it [sic] easy to read eBooks and to listen to books in the car helps with boredom' (Questionnaire, Secondary).

Thirty parents/carers responded to the question about reading habits at School E. Most parents/carers in School E read a mix of print books and eBooks (66%), one third read print books only, and one parent/carer responded that they didn't read. In the open-ended questionnaire items, parents/carers

from School E gave reasons for their reading preferences. One parent/carer noted, 'I don't enjoy reading eBooks. I prefer the experience of paper-based books' (Questionnaire, Primary). A second parent/carer cited that eBooks were useful when the print version was not accessible but specified that 'trying to read on a tablet or desktop is less handy than a paper book or using a device specifically designed for e-books (e.g., kindle)' (Questionnaire, Primary).

Most primary-aged and secondary-aged students at School F read a mix of print books and eBooks. A higher proportion of primary-aged students used print books only (6/36) compared to (2/19) secondary-aged students. Parents/Carers of primary-aged who identified a preference for print books provided the following reasons: their child 'prefers reading paper-based books instead of eBooks. He generally likes the feel of reading a book before going to bed' (Questionnaire, Primary). Another noted, 'In the early years, I think it's a better experience to have a picture book to hold and discuss, [eBooks] are not as interactive with parents' (Questionnaire, Primary). Regarding attitudes to reading generally at School F, parents/carers of secondary-aged children were more concerned about their child being reluctant readers. Seven parents/carers commented about their child not reading enough, having a lack of interest in reading, only reading when required/told to and 'see[ing reading] as a chore' (Questionnaire, Secondary). The concern about reluctant reading was not evident in the primary context.

Table 15: Reading for enjoyment – children

School	Sector	Location	Days of Reading for Enjoyment								Minutes Reading/Day	
			0	1	2	3	4	5	6	7	<30	>30
A	Primary	Regional	0	0	0	0	0	2	0	0	1	1
	Secondary	Regional	0	0	0	0	0	0	0	0	0	0
B	Secondary	Regional	4	0	1	6	1	5	0	5	10	10
C	Primary	Regional	0	0	0	0	0	0	0	0	0	0
D	Secondary	Metro	0	0	0	0	1	0	0	0	0	1
E	Primary	Metro	0	5	0	3	3	0	0	4	6	9
F	Primary	Metro	1	3	2	3	2	6	6	12	18	18
	Secondary	Metro	3	2	4	2	1	2	1	2	10	6

Most young people read across the week (see Table 15). Some read one to three days (37%), with more reading for four to seven days (64%). Reading for interest or engagement was split evenly between less than 30 minutes and more than 30 minutes a day.

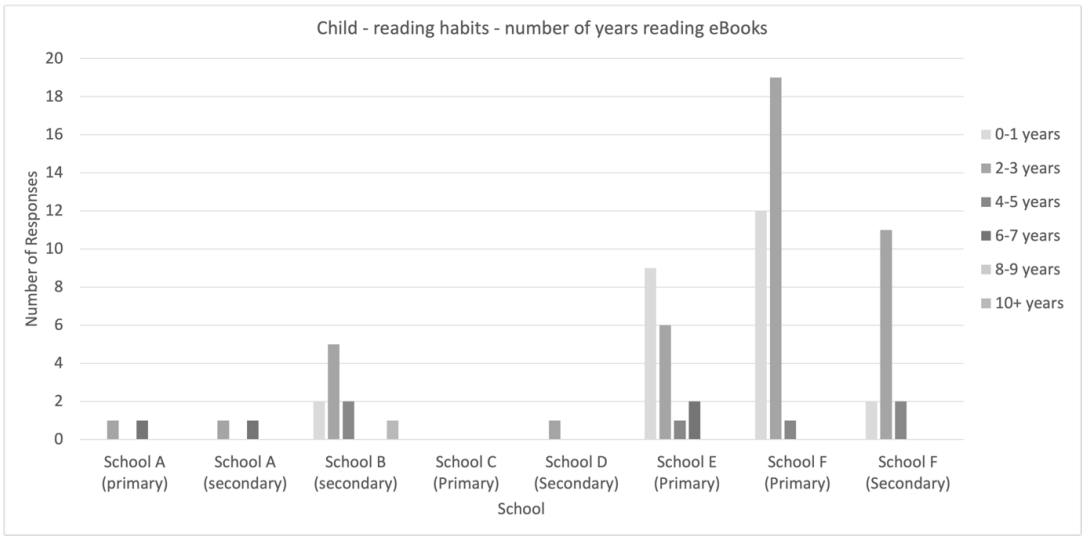


Figure 13: Number of years reading eBooks – children

Figure 13 shows that many participants' children had been reading eBooks for 2-3 years. Some parents/carers reported that their children had only been reading eBooks for 0-1 years in primary. Very few parents/carers reported that their child had been reading eBooks for more than 4 years.

Table 16: Technology used by children to access eBooks

School	Sector	Location	Device				
			Desktop	Laptop	eReader	Table	Mobile Phone
A	Primary	Regional	0	2	0	1	0
	Secondary	Regional	0	0	0	0	0
B	Secondary	Regional	0	3	1	4	8
C	Primary	Regional	0	0	0	0	0
D	Secondary	Metro	0	0	0	1	0
E	Primary	Metro	2	0	1	16	0
F	Primary	Metro	0	4	1	29	1
	Secondary	Metro	2	15	0	9	6

In Table 16, it can be seen that parents/carers reported their child using generalist devices such as a tablet or laptop rather than a specialist device such as an eReader. In School B (a secondary school), more parents/carers reported their child using a phone to access eBooks than any other type of device. Only one parent of a primary school-aged child reported that their child used a phone to access eBooks.

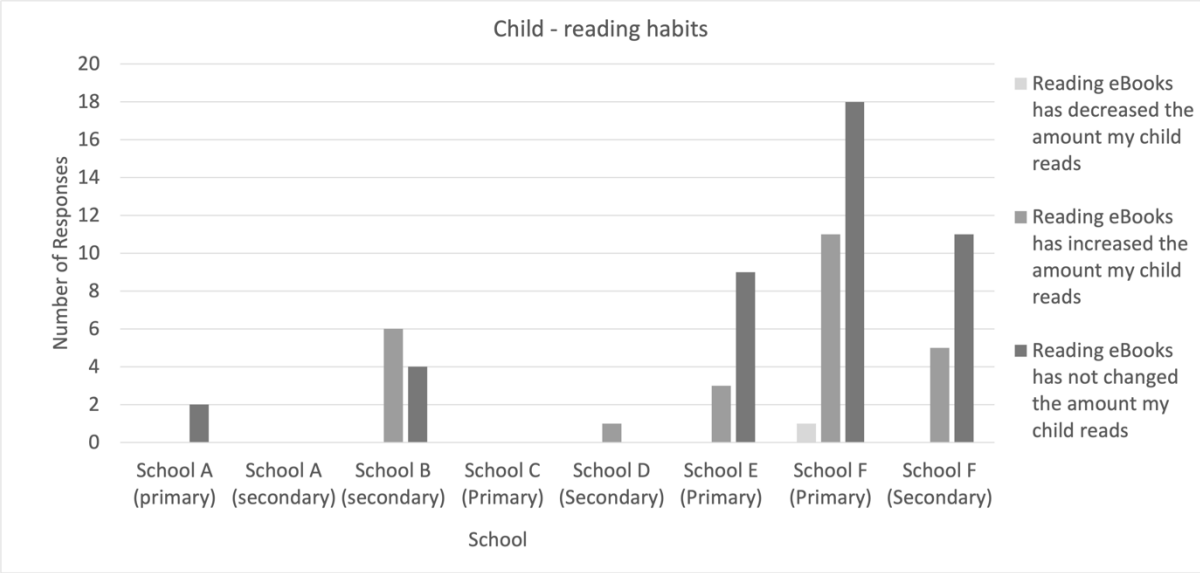


Figure 14: Change in the extent of reading time – children

Figure 14 shows that at almost every school (except School B and School D), most parents/carers felt that reading eBooks had not changed the amount their children read. At School B and School D, most parents/carers reported that reading eBooks had increased the amount of time their child reads. Only one parent/carer at School F (primary) reported that reading eBooks had decreased the amount their child reads.

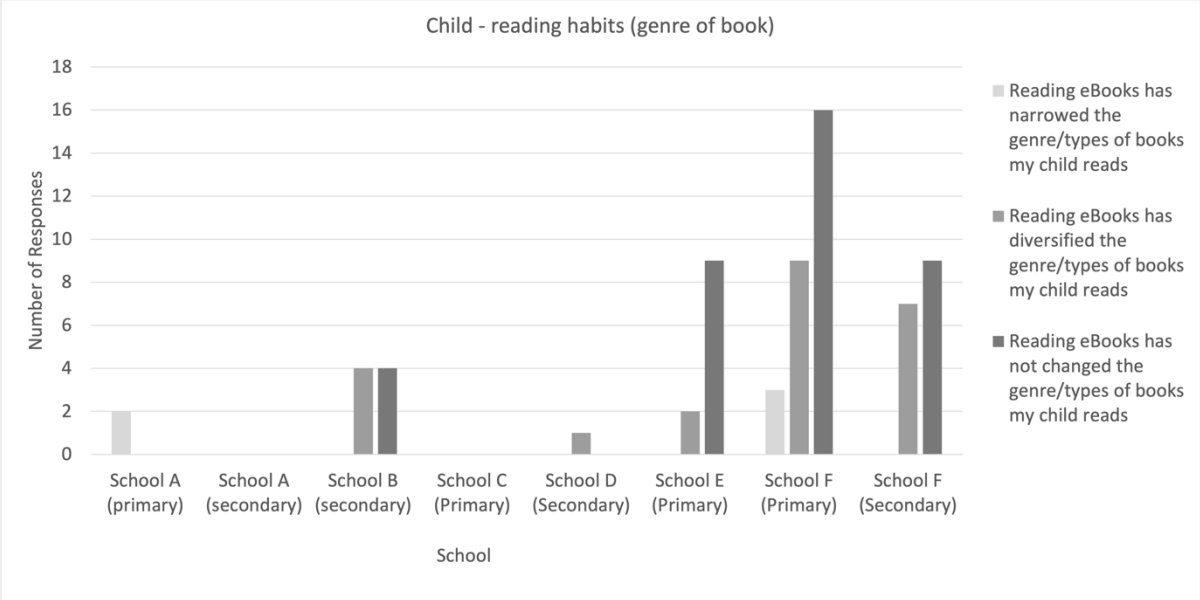


Figure 15: Change in the genre/type of book read – children

Figure 15 shows that at School B, School E and School F (primary and secondary), most parents/carers felt reading eBooks had not changed the genre or type of book their child read. At School B and School D, most parents/carers reported eBooks have diversified the genre/type of books their child read. A very small number of parents/carers reported that reading eBooks had narrowed the genre/type of books children read (at School A [primary] and School F [primary]).

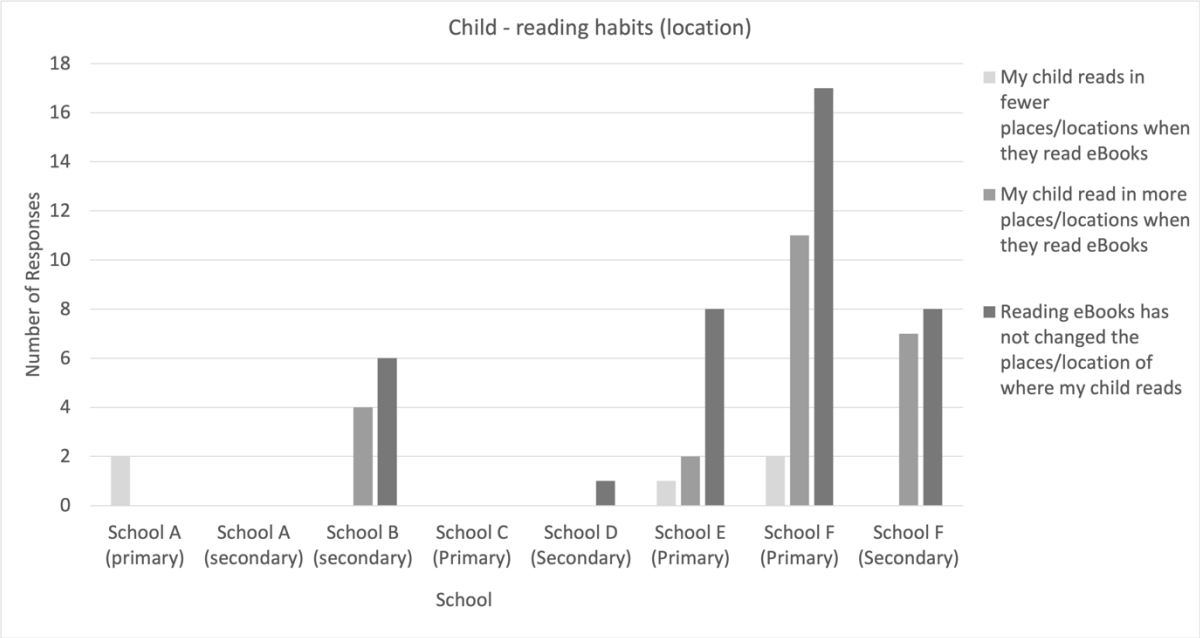


Figure 16: Change in the places/locations read – children

Figure 16 shows that most parents/carers at Schools B, D, E and F reported no change in the places/locations where their child read when reading eBooks. Only a small number of parents/carers reported their child reading in fewer places/locations when reading eBooks (Schools A, E and F).

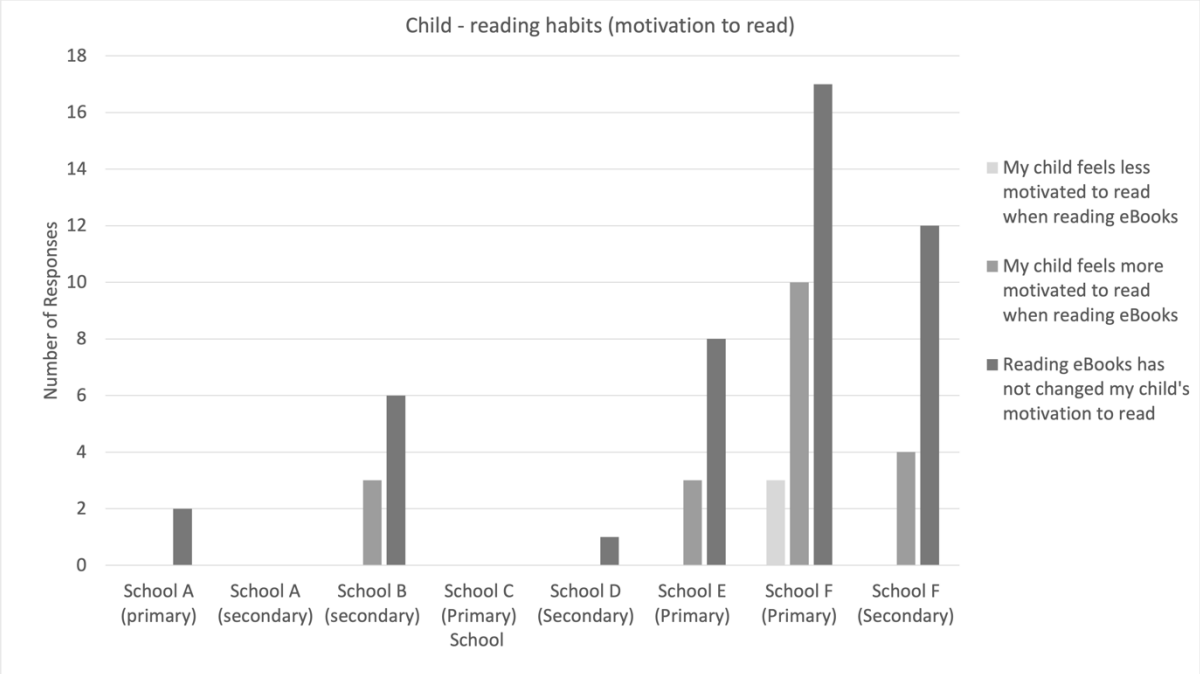


Figure 17: Change in motivation to read – children

Figure 17 shows that most of the parents/carers at all schools did not feel eBooks had changed their child's motivation to read. Parents/Carers at School F (primary) reported their child felt less motivated to read when reading eBooks.

Most parents/carers who responded to this section of the questionnaire answered that their child's reading habits and behaviours had not changed with the use of eBooks. This was the case for the 64% of parents/carers who felt it had not influenced the amount read, the 57% who reported no impact on genre read, the 57% who felt it had not influenced location or places young people read, and the

68% who believed it had had no impact on their child's motivation to read. Indeed, only 33% of parents/carers responded that the amount their child read had increased with the use of eBooks. Similarly, 33% agreed that their child's genre choice had diversified, 34% indicated that their child read in more places due to using eBooks, and 29% believed their child was more motivated to read when they accessed eBooks. Very few parents/carers thought the amount of reading their child engaged in had decreased (1 parent/carer response), that the genre their child read had narrowed (5 parent/carer responses), that their child read in fewer places (5 parent/carer responses), or that their child was less motivated to read (2 parent/carer responses).

A similar set of patterns were evident when the data were analysed according to sector. The majority of parents/carers of primary-aged children felt reading habits and behaviour had not changed. However, 30% of parents/carers among the primary cohort believed the amount their child read had increased, 25% responded that the genre their child accessed had diversified, 29% indicated their child read in more places, and 31% reported their child being more motivated to read. Similarly, parents/carers of secondary-aged children reported that the amount they had read increased (37%), that the genres their child accessed had diversified (48%), and that their child read in more places as a result of using eBooks (44%). Notably, no parents/carers of secondary-aged children thought the amount their child read had declined, nor that the genres their child accessed had narrowed, that their child read in fewer places, or that their child was less motivated to read because of eBook use.

In the questionnaire, parents/carers could indicate as many reading habits of their child before bedtime as were relevant. The questions for primary-aged children asked parents to differentiate between independent (ind.) and adult supported (adult support) bedtime reading habits. These data are presented in Table 17.

Table 17: Reading habits at bedtime (young people) – primary

School	Location	Reads Print Books Assigned by the School		Reads eBooks assigned by the school		Reads eBooks		Listens to Audiobooks		Reads Print Books		Reads a Mix of eBooks and Print Books	
		Ind.	Adult Support	Ind.	Adult Support	Ind.	Adult Support	Ind.	Adult Support	Ind.	Adult Support	Ind.	Adult Support
A	Regional	0	0	0	0	0	0	0	0	2	1	0	0
C	Regional	0	0	0	0	0	0	0	0	0	0	0	0
E	Metro	9	8	2	2	6	3	2	2	10	3	6	3
F	Metro	10	10	1	0	2	1	3	1	19	14	5	6

Table 17 shows parents/carers at School A described bedtime routines that included only print books with some adult support. In School E, most young people read before bed, and the majority read print books assigned by the school (either with an adult or independently), followed by reading eBooks, print books, or a mix independently. This trend was similar to School F, however, more young people read print books before bed than any other option.

The questions for secondary-aged children asked parents to select different bedtime reading habits. These data are presented in Table 18.

Table 18: Reading habits at bedtime (young people) – secondary

School	Location	Reads Print Books Assigned by the School	Reads eBooks Assigned by the School	Reads eBooks	Listens to Audiobooks	Reads print Books	Reads a Mix of eBooks and Print Books
A	Regional	0	0	0	0	0	0
B	Regional	1	0	2	1	7	4
D	Metro	0	0	1	0	0	0
F	Metro	3	3	1	1	4	7

As seen in Table 18, parents/carers described bedtime routines that included reading a mix of eBooks and print books (such as School F) or print books (such as School B). Few were reading any books assigned by the school, and few were reading eBooks or listening to audiobooks.

eBook Functionality

Parents/Carers were presented with a closed-ended multiple-response item about the functionality their child utilised when reading eBooks. The results are presented in Table 19.

Table 19: eBook functionality utilised by children

School	Sector	Location	Functionality							
			Font Size	Backlighting	Hyperlinks	Dictionary	Search	Print	Enlarge	Highlight
A	Primary	Regional	1	0	0	0	0	0	1	0
	Secondary	Regional	0	0	0	0	0	0	0	0
B	Secondary	Regional	1	3	2	2	1	0	1	1
C	Primary	Regional	0	0	0	0	0	0	0	0
D	Secondary	Metro	0	1	0	0	0	0	0	0
E	Primary	Metro	7	6	2	2	5	2	5	1
F	Primary	Metro	13	13	3	13	6	0	7	1
	Secondary	Metro	8	10	3	4	1	1	4	0

The parents/carers reporting on their child's use of eBook functionality indicated that most young people were not using all eight functions. The functions most used were 'Backlighting' (44%) and 'Font size' (40%), with 'Print' and 'Highlight' used least (both at 4%). This trend was seen in both primary-aged and secondary-aged children. Young people in regional locations did not show a clear preference for any of the eight listed functions, while children in metropolitan locations followed the general trend identified.

At School B, several parents/carers were concerned about font size when reading eBooks on a device, as most of the young people were primarily accessing mobile phones at home (phones at school were not allowed). Another parent/carer noted their child liked using the audio features to learn new words or pronunciation.

At School F, parents/carers were familiar with the functionalities offered by eBooks. Font size, backlighting and dictionary were the functionalities most commonly reported by the parents/carers of primary school children. Among secondary school-aged young people, there was a higher reported use of the hyperlinks function, while the modification of font size was also frequently reported. Parents/Carers identified that eBooks' affordances helped young people learn different words, particularly how words 'sound or are pronounced' (Questionnaire, Secondary). Parents/Carers liked

that eBooks were backlit and could be read without relying on additional lighting. Parents/Carers also acknowledged the functionality of changing font size and screen size.

Benefits and Challenges of Reading eBooks

Parents/Carers were asked two open-response questions about their perceptions of the benefits and the challenges of eBook reading. Responses were then grouped into emerging themes and presented in Table 20.

Table 20: Benefits and challenges of reading eBooks identified by parents/carers

School	Sector	Location	Themes – Benefits of eBooks			Themes – Challenges of eBooks			
			Convenience and Access	Technology Development	Financial Cost	Increased Screen Time	Physical Health	Finding Books of Interest	Technical
A	Prim	Regional	1	0	0	0	2	0	0
	Sec	Regional	0	0	0	0	0	0	0
B	Sec	Regional	6	0	0	5	0	0	5
C	Prim	Regional	0	0	0	0	0	0	0
D	Sec	Metro	1	0	0	0	0	0	1
E	Prim	Metro	1	0	0	0	1	0	0
F	Prim	Metro	9	3	1	4	2	3	0
	Sec	Metro	6	0	1	1	2	1	2

The number of parents/carers who responded to these questions about the benefits and challenges of reading eBooks was small. Most of these parents/carers thought convenience and access to a diversity of books was the main benefit (88%). Parents/Carers of primary-aged children at a metropolitan school (School F) also identified exposure to technology as a benefit.

At School A, Parents/Carers felt reading had a positive impact on their child. One parent/carer believed reading 'keeps his mind active' (Questionnaire, Primary), and another agreed that it 'spikes his imagination' (Questionnaire, Primary). Another parent/carer reported that after finding a genre/theme that interested their child, the child's reading and learning had improved, 'She reads books about things she's interested in and now connects learning to reading. Because she reads quite well now, after struggling in the beginning, he finds school easier' (Questionnaire, Primary).

At School B, the most significant benefit of eBook use identified by parents/carers was accessibility. For example, parents/carers indicated that eBooks provided: a 'whole library of books at your fingertips;' 'books they wouldn't normally have access to'; 'more available because it's on his phone'; and given the rural context, eBooks 'gives her access to books she would not have normally in a small regional town' (Questionnaire, Secondary). Another parent/carer felt their child's reading time and frequency had increased due to reading eBooks. Parents/Carers noted a wide variety of genres that their child read, from 'motorbike manuals' to 'non-fiction and fiction,' 'biographies' and 'romance' (Questionnaire, Secondary).

At School E, the most significant benefit of eBook use identified by parents/carers was also related to access. As one parent/carer noted, 'It's not too bulky for them to bring since it can be accessed online anytime' (Questionnaire, Primary). Another parent/carer added 'accessibility, range of publications available' (Questionnaire, Primary) was a key benefit.

At School F, parents/carers of primary-aged children identified more benefits than secondary school-aged parents/carers. Parents/Carers of primary-aged children reported convenience, portability, access and 'customised solutions' as benefits (Questionnaire, Primary). Indeed, access, diversity, and availability of books and genres are frequently featured in their questionnaire responses. Three

parents/carers noted that eBook use meant not having to rely on local or school libraries. Parents/Carers of primary school-aged children also noted the lower financial costs of eBooks as a benefit. And parents/carers of secondary-aged children noted accessibility to diverse books and genres, flexibility, convenience and financial cost as benefits of eBook use.

Parents/Carers had mixed views about the challenges of reading eBooks, with 34% expressing concerns about increased screen time, 27% providing responses about technical issues (e.g., screen size, battery life, internet access, remembering to charge), and 24% raising health-related concerns (e.g., posture, eye health). Parents/Carers of primary-aged and secondary-aged children identified similar challenges in relation to reading eBooks. However, only parents/carers of secondary-aged children identified technical challenges (e.g., screen size, battery life, internet charging). There were similarities in how parents/carers from regional and metropolitan locations responded. However, finding books that interest was only identified as a challenge in a metropolitan location (School F).

At School B, the challenges that parents/carers identified tended to be primarily technology related. Parents/Carers reported issues with charging the device and battery life, losing technological equipment, gaining internet access, and using internet data. Parents/Carers were also concerned about their children having too much screen time and accessing the internet and other apps when they shouldn't be. This led to further concerns about accessing content that wasn't age-appropriate or being easily distracted while on technology, with one parent/carer noting that their child had 'ASD/ADD and [reading] eBooks would interrupt their ability to concentrate for more than a few minutes' (Questionnaire, Secondary).

Nine parents/carers at School F across both primary and secondary-aged children were concerned about the increased screen time associated with reading via eBooks, which in turn, influenced their preference for print books. One parent/carer justified this stance as follows, 'we choose [print] books due to an increase in screen usage at school and believe that eBooks would add to this' (Questionnaire, Secondary). Another noted, 'a paper book is always a better option. He has enough exposure to screens for school use and personal' (Questionnaire, Secondary). A third parent/carer was concerned that the screen would keep their child awake at night and therefore limited night-time reading to print books or audiobooks. Similarly, parents/carers of primary-aged children noted that they limited screen time and didn't permit their children to access a device after school. As one reported, 'my daughter would continue to read at great lengths, but in turn means more than necessary time on the screen hence giving her the love of paper books' (Questionnaire, Primary).

Findings from the Parents'/Carers' Perspectives about eBooks

The following are key findings from the perspectives of parents/carers in terms of an overview of the respondents:

- There were low response rates from School A (primary and secondary, regional), School C (primary, regional) and School D (secondary, metropolitan). Very few respondents from those schools provided answers to the short answer parts of the questionnaire. While all responses have been included, reporting from the parents/carers at School B (secondary, regional), School E (primary, metropolitan) and School F (primary and secondary, metropolitan) is more detailed.
- Responses from Schools B, E and F, included primary and secondary school students aged between 5-17, with differences within the family structure and a relatively even distribution of gender. More parents/carers of female children responded in both the primary and secondary sections of School F.

Part 1 of the questionnaire considered parents/carers reading habits, their involvement in their child's eBook decision making and the communication about eBook use they received from schools and the education department:

- Most parents/carers read a mix of print books and eBooks. There was a clear pattern in some parents/carers reading for one day or seven days a week. There was also a pattern in parents/carers either being relatively new to reading eBooks (many reading eBooks for three years or less) or established eBook readers (reading eBooks for eight years or more).
- No pattern related to sector or location was associated with the amount of time parents/carers spent reading each day.
- Parents/Carers of primary- and secondary-aged children had similar reading habits, though parents/carers of secondary-aged children had been reading eBooks for longer. Parents/Carers of children in regional and metropolitan schools also had similar reading habits. However, those in regional schools are more likely to read for seven days a week and more than 30 minutes at a time compared to those in Metropolitan schools. They were also more likely to have been reading eBooks for ten years or more.
- Parents/carers used devices such as tablets or phones to read eBooks rather than laptops, desktop computers or eReaders.
- Most parents/carers reported that they did not feel that using eBooks changed the amount of time, the genre/type of book, or the motivation to read. Some did report that it increased the number of places/locations where they read, and some reported some increase in motivation.
- Parents/Carers had varied involvement in their child's eBook decision-making, with most involved sometimes or only if the child asked. Parents/Carers of primary-aged children were more likely to consistently participate in this decision-making, while parents/carers of secondary-aged children were likely to participate only if asked. Parents/Carers in regional locations were more likely to participate only if asked than metropolitan parents/carers, who were likely to participate sometimes. When asked to rank the influencers in their child's reading decisions, siblings and parents/carers were ranked highly, as were the teacher and friends. Social media was ranked as influential amongst the parents/carers of secondary students.
- Most parents/carers reported some communication about eBook use from schools and the Department of Education. Most communication was aimed at accessing and navigating eBooks, followed by general reading strategies and eBook recommendations. Parents/Carers of primary-aged children reported more communication than parents/carers of secondary-aged children. Parents/Carers in metropolitan locations reported more communication than parents/carers in regional locations. There was very little communication about anything associated with health and wellbeing.

Part 2 of the questionnaire considered children's physical activity and parents'/carers' perceptions of the impact of reading on their child's health and wellbeing:

- Parents/Carers reported that many young people from the six schools engaged in physical activity during the week and on the weekend. During the week, this participation was usually on one to three days, between 30-60 minutes, or for more than an hour. On the weekend, young people were usually physically active, typically on one day for more than 60 minutes. Young people in secondary schools engaged in physical activity on weekdays more than those in primary schools. However, both primary-aged and secondary-aged children engaged in the same amount of physical activity. While young people from regional locations spread physical activity across weekdays, those from metropolitan locations were more likely to do so on one-to-three days. Young people from both locations participated in physical activity for at least one day of the weekend, with those in metropolitan locations doing so for longer than young people who live in regional areas.
- Parents/Carers reported benefits of eBooks for their children related to learning (expanding access to texts, vocabulary, and improving cognitive development), encouraging enjoyment of reading and mental health in terms of relaxation and calming their children.

- More parents/carers from a primary sector and metropolitan locations identified literacy and learning development as the main wellbeing benefit of reading. More parents/carers of secondary-aged children from regional locations identified the relaxation and calming effects of reading as the main wellbeing benefit. More parents/carers from both primary and secondary sectors, as well as from regional locations, identified mental health and brain development as the main health benefit of reading. In contrast, metropolitan parents/carers identified emotional wellbeing (including improved sleep patterns).
- Parents/Carers reported few concerns about eBooks. Those who did were concerned with eyestrain (primarily from the school with a highly screen-intensive approach) and posture. Other challenges were monitoring activity, book choice, and the ease with which children could navigate away from eBooks. Sleep concerns were related to children being absorbed in a book rather than the impact of the screens themselves.

Part 3 of the questionnaire addressed young people's reading habits, including their eBook reading and its impact on their literacy development, as well as perceptions of the benefits and challenges of eBook reading:

- Parents/Carers from the six schools reported that their children read a mix of print books and eBooks, with quite high numbers also reading only print books. Fewer reported reading only eBooks or not reading at all. Their children had been using eBooks for four years or less and read 4-7 days a week for enjoyment, evenly split between less than 30 minutes and more than 30 minutes. Parents/Carers reported few changes in reading behaviour overall in response to eBooks. A third of all parents/carers thought their child's amount of reading had increased, that the genres their child read had diversified, that their child read in more places, and their child was more motivated to read as a result of eBook use. However, those noting increases in the amount and motivation of their children to read were from regional and secondary schools.
- Parents/Carers reported that their child used devices such as tablets or laptops to read eBooks rather than phones, desktop computers or eReaders.
- Most parents/carers reported that bedtime routines included reading a mix of eBooks and print books. For primary-aged children, this included a mix of independent reading and adult support and a higher number of books assigned by the school.
- Parents/Carers reported that their children were using functionalities of eBooks such as font size and enlarge (to accommodate the use of mobile phones) and backlighting. Dictionary was identified by parents/carers of primary-aged children at one school as being used. Most parents/carers reported that their child didn't use the eight listed functions.
- Many parents/carers from both sectors and locations thought the main benefit of eBook reading was convenience and access. The main challenges parents/carers identified were related to managing screen time, technical troubleshooting and potential impacts on physical health and activity. Only parents/carers of secondary-aged children identified technology-related challenges. Only parents/carers from metropolitan locations (all from School F) identified finding books that interest their child as a challenge.

Teachers' Perspectives about eBooks

Across the six participating schools, teachers contributed to the research by participating in 39 individual semi-structured interviews and focus groups, as well as 10 observations. These data collection methods generated transcripts, field notes and images. These qualitative data were thematically analysed using a dynamic, nonlinear, two-stage process consisting of open and integrative coding. The project's research questions were used as a key reference point during both coding phases, as were the design brief and the literature review findings. Findings related to teachers' perspectives about eBooks are presented as six school-based case studies. Each case study reports teachers' perspectives of: (1) reading and eBooks, (2) eBooks in education, (3) the implementation of eBooks in education, and (4) eBooks and health and wellbeing. To recap: School A was an outer-regional, combined Prep-12 school of distance education; School B was an inner-regional secondary school; School C was an outer-regional primary school; School D was a metropolitan secondary school; School E was a metropolitan primary school; and School F was a metropolitan, combined Prep-12 school. A cross-case summary of findings is also presented.

Case Study School A

School A employed more than 120 teachers and had a student enrolment of more than 4,000 students. The student population at School A was characterised by relative social and educational disadvantage. Three-quarters of students enrolled in School A were positioned in the bottom two quartiles for socio-educational advantage. One in every seven students at School A identified as Aboriginal or Torres Strait Islander, and one in every 25 had a language background other than English. This case study presents interview data drawn from two teachers. It also reports on data from one classroom observation. School A was a distance school of education that services prep-12. Case study School A draws upon data from two interviews, one observation, and a follow-up interview.

Reading and eBooks

Teacher Perspectives

The two teachers interviewed at School A have used eBooks but preferred to read print books. One teacher explained this preference by saying, 'Because of the time of day that I read, I don't like to use devices late at night' (Interview). The other teacher used a mix of print books, eBooks and audiobooks. This preference was partly due to the rural location and the commute to work, as she explains,

> …mainly because I drive about half an hour to work, so I get to listen to [audiobooks]. I was working at home for a while, so when COVID[-19] was at its peak, which was an opportunity to have more time [to read print books]. But if I go walking, I'll listen to the audiobooks as well. (Interview)

One teacher thought that eBooks would be used more in the future and that the use of print books would decline. This teacher also added that the trend would depend on leadership in schools, as she notes, 'I think that if it becomes a priority for principals, it [eBooks] will be used more. But otherwise, it will be the same' (Interview).

When asked whether they thought eBooks impacted student reading habits, both teachers explained that it was challenging to determine the impact given the school context. As a school of distance education, teachers and students interacted primarily in an online space. Thus, students did not bring their books into the same physical space as the teacher. As a result, these teachers were 'not observing the books that they [i.e., students] are selecting' (Interview) or engaging with students' book choices and reading habits, as they might have been in different school contexts.

One teacher noted that students at School A accessed books differently depending on their circumstances and age. To this teacher, this observation was unsurprising because the school serviced students in preschool through to Year 12 and because, as a cohort, these students had a wide range

of reading levels and preferences. The teacher noted that primary school parents/carers and/or students at School A preferred the school to 'send out the books. You know, [parents/carers] figure the kids already have enough digital time. They don't need that extra digital time' (Interview). However, with the secondary-aged cohort, there was more 'targeted use of eBooks' (Interview).

eBooks in Education

Teacher Perspectives

As a distance education school, the teachers at School A felt the context influenced how they (and their students) utilised eBooks. The eBook platform was primarily used as a resource students could access outside of school hours for personal reading.

Within the classroom, eBooks were used as part of a suite of technology platforms. One teacher explained that students often have multiple screens and applications they engage with when learning, stating that students 'they've got Ultra open, they've got OneDrive open, and then they could have their eBook open as well' (Interview).

The other teacher highlighted the potential she could see for eBooks to be used in a similar manner to the way she currently used electronic textbooks with students, a practice which involved sharing, interacting and analysing texts. As she described, 'when I share the screen, I can put it up on the whiteboard. I can use my pen to draw all over it, circle highlight and the kids can see that happening real-time on the screen' (Interview). However, according to this teacher, working in this way was not universally applicable. As she emphasised, her decision to share her screen 'would depend on the age of and how confident they [students] are using the resource' (Interview).

Both teachers spoke about how eBook functionality could facilitate learning for students with special needs. One teacher, in particular, spoke in favourable terms about the audio function, stating, 'there are great features on there where it will read the text for the student... how good's that' (Interview). Another teacher noted that 'they have like tools where they can highlight and yeah, and they can link into websites' (Interview).

Commenting on the school context, both teachers noted that the school didn't have a dedicated librarian. However, one teacher mentioned that the school had a mail room where print books were posted to distance education students. Finally, both teachers participated in eBook professional development focused on operational aspects.

Implementation of eBooks in Education

Enablers to the Implementation of eBooks in Education

Teachers in School A identified numerous enablers to using eBooks. One teacher thought it was a positive that students didn't need to be concerned about book damage with eBooks. The other believed eBooks reduced the resourcing issues involved with posting books to students, which this teacher described as a 'massive undertaking' (Interview). Teachers also felt eBooks helped students access books in different ways, thereby providing them with the kinds of access they would have had if they lived closer to libraries or bookstores. As one teacher emphasised,

> We have a lot of students who have sporting commitments…we had one girl who was a high-level equestrian and another one who was a ballerina...and they had to juggle what they were doing external to the school with their distance Ed. And they would often be travelling for competitions. So, there was never that excuse of I haven't got [a book]. Similar to in a mainstream school, there was a lot of students who had dual living arrangements with their parents and it be ohh I left my book with Dad. (Interview)

Another teacher had previously been at a school with higher eBook use and identified having all key stakeholders of parents/carers, leadership and teachers supporting the initiative as a critical enabler

of an eBook program. As this teacher commented, 'just like anything at a school. You've got to get all the key stakeholders involved and get them to help push what's happening and pushing from home, pushing from school' (Interview).

Barriers to the Implementation of eBooks in Education

One of the teachers did not think there were many barriers to using technology at School A, adding that as a distance education school, they did not encounter many issues with internet connectivity or access to devices. However, the other teacher did raise such issues, commenting specifically about how bandwidth issues affected her teaching,

> …it's the bandwidth…As soon as I share my screen theirs drops off... so I'll turn my camera on every now and then, but I won't turn it on all the time if it's going to impact the internet. And then they miss out on that, that whole nonverbal communication component by not seeing what the teachers doing and but it's just the way it is and certainly, the internet's improved so much in the last 10 years. (Interview)

Both teachers voiced concerns about the need to monitor the sites or apps students were and could access. As one said, 'I can see that the work that they've completed. In pretty much real time. But you can't see whereabouts they're accessing, and you can't observe them like you would in a classroom' (Interview). One of the teachers spent considerable time talking about the barriers to eBook use. Among her concerns was the amount of time students spent on devices. She also thought about the skills students needed to use multiple screens simultaneously when using eBooks and the impact on information retention. As she said,

> When students are using an eBook and not a physical book-that they can have next to them-it's a different skill, and they can quickly go between screens, and they do. But are they getting the quality? Like, are they taking in the information as they would if they were to actually…next to them? (Interview)

One teacher commented that students often shared one device/laptop with parents/carers or siblings, which could be a barrier for some families in this school context.

eBooks and Health and Wellbeing

Teacher Perspectives

Both teachers talked about how embedded breaks within lessons were an expectation at School A. As one explained, '…it's just encouraged that they [students] take a break. Take your eyes away, you know, look outside during your brain break' (Interview). Another teacher expanded,

> For distance ed, we have every 30 minutes we have a brain break. So, we encourage the students to take their eyes away from the computer, look out into nature, and look at the trees and get a drink of water and do some stretches. So that's built into our lesson planning for every teacher here. (Interview)

The other teacher reported communicating with students about the importance of using a blue screen light at night and encouraged students to use a larger screen or two screens so they could use multiple programs simultaneously without as much eyestrain.

Observations of Young People

In the learning experience observed, students used digital textbooks following explicit instructions given through the Blackboard Collaborate platform. When the teacher asked students about their eBook preferences, the entire class stated that they preferred print books when reading for pleasure/interest but liked digital formats for textbooks. Their reasoning for the preference for print books related to health and wellbeing. They stated that eBooks hurt their eyes after a while and that reading print books afforded them the opportunity to have a break from screens. These students expressed a concern that there were health issues associated with being on screens for too long.

Case Study School B

School B employed approximately 100 teachers and had a student enrolment of about 1,000. The student population at School B was characterised by relative social and educational disadvantage. Four-fifths of students enrolled in School B were positioned in the bottom two quartiles for socio-educational advantage. Roughly one in every five students at School B identified as Aboriginal or Torres Strait Islander, and one in every 17 students had a language background other than English. The case study of School B presents data from seven teachers' interviews, a focus group of six teachers, and follow-up observation interviews with five teachers. One classroom observation was conducted. The observations were limited as the school primarily offered eBooks as an out-of-school service.

Reading and eBooks

Attitudes, Preferences and Use of eBooks

Teacher Perspectives

Most teachers read and preferred print books. Several teachers spoke about how they liked the feel of print books. As one teacher described, 'I guess I like the physical, tangible aspect of it. There's nothing like buying a new book and opening up, the smell of it' (Interview). One also spoke about how she liked to browse in bookshops, picking up books and flicking through their pages. Several teachers talked about finding print books more accessible and engaging. For instance,

> If you want to go back and look for something, I find it much easier in an actual book than on a screen. . .it's so much easier to flick through pages than, you know, move your finger across the screen at 100 miles an hour to try to find what you're doing. (Interview)

Most teachers also spoke about using print books at home for leisure but tended to use eBooks more at school. As one of these teachers commented, doing so provided a 'physical escape' (Interview) from using the laptop in her professional capacity. Another teacher explained their preference in this way:

> I use them for work, so I don't use them for leisure. Really. Yeah. Honestly, when I'm not working, I try not to look at my computer screen because I spent so much of my life looking at a laptop screen. (Interview)

Several teachers associated their preference for reading print books with being old-fashioned. As one said, 'I'm a bit old school, so I like the good old fashioned hardcover book' (Interview). Another commented, 'because I'm of a certain age. I still prefer paper just because that's what my brain is used to' (Interview).

Most of the teachers thought that the use of eBooks would increase in the next 5 to 10 years. Even a teacher who favoured the print books for herself and her students thought this would be the case, adding, 'I think just given technology and the digital nature of the world we live in today … there will definitely be a shift' (Interview). Several teachers explained that access would still be a problem for many students from low socio-economic backgrounds, including those at this school. As one teacher commented, 'there's still a lot of students that won't have access to the digital unless we as a school actually provide them with a laptop' (Interview). Similarly, another teacher commented that increased eBooks use would occur primarily in metropolitan areas, 'I would be really surprised if Metropolitan schools don't go more and more this way, as that is where industry is navigating us' (Interview).

Most teachers felt eBook use would increase as the technology became more affordable and accessible. As one teacher stated, 'when they have a good financial incentive to get the eBooks, that's going to encourage people to buy them more too' (Interview). Several teachers also spoke about the environmental benefits, 'the greenie in me doesn't wanna kill trees, so I'm quite happy for it to go that way' (Interview). One teacher, however, was concerned that an overreliance on eBooks could

have detrimental effects on creating learning pathways in the brain and that overuse of screens would lessen young people's ability to think critically and problem-solve, as the teacher explains:

> I've done a lot of research into how much [accessing screens] creates different learning pathways in your brain if everything you learn is screen-based. So yeah, I suppose just having that break from the screen and being able to engage with different sorts of thinking. (Interview)

Reading Habits of Young People

Teacher Perspectives

Participating teachers identified several factors that impacted students' selection of books. This included the teachers themselves and accessibility (whether the book needed to be transported to and from home and school). Several teachers also identified the cost of purchasing books not always in the library, for instance, anime and graphic novels. Several teachers also spoke about the influence of social media on the choice of books and for finding 'books which they know that they're going to be interested in' (Interview). Another spoke about how she thought student interest in print books was declining as part of the decline in reading fiction generally. She thought that technology had a lot to do with this decline, commenting, 'technology is a whole different thing for them now, and I worry that reading itself is not a thing for them anymore' (Interview). As she elaborated, she thought that academic students still read, but others didn't. She also spoke about how access to print books was declining and about how the school library had been reduced by half in the last five years, the school librarian had left, and the bookshop in the town had closed, all of which she argued had an impact on reading levels.

Most teachers were unsure whether students' reading habits had changed with the use of eBooks or hadn't noticed any change. However, one teacher spoke about how she thought students could now binge-read, as eBooks were much more readily available. As she commented, 'they just can't comprehend the having to wait a week for another episode or whatever' (Interview).

eBooks in Education

eBooks in Learning and Classroom Practice

Teacher Perspectives

Teachers' use of eBooks in classroom practice and within learning experiences was limited. One teacher noted that they used to do silent reading using both print books and eBooks. As she outlined, 'The kids loved it because you could do like 15 minutes for silent reading or whatever as a warm-up or cooldown' (Interview). One teacher chose not to use it at all 'because of the access to technology' in the school (Interview).

While several teachers said they didn't access eBooks, they talked at length about the use of electronic textbooks. Teachers explained how they used it as an instructional tool, such as linking to a projector to screen content. Most also could not give examples from their practice of eBook use, as it is seen as an out-of-school literacy or activity. As one teacher replied, 'I'm personally not really aware of what else I can do with the program other than opening up and use it' (Interview).

When asked whether their interactions with the librarian had changed, most teachers said they had not. However, one commented that she thought the librarian was resistant to eBook use, and another felt that the librarian wasn't that helpful, adding that 'they just tell you to go and look it up rather than take you for a walk through the library' (Focus Group).

Focus group participants spent considerable time making recommendations for eBook use in education generally. The conversation centred on improving student access to devices. As shown in the following comment, some teachers thought this was part of more significant issues around equitable access in all schools. As she said,

> Yeah. It's a cultural thing. Some schools you go to, nearly every kid has their own laptop and you've got some supplied by the school ... it's the opposite here. I don't know quite how we make that shift, but yeah, it would have to be a united front, obviously, all teachers would want to implement it [technology] to use it more. (Focus Group)

Several teachers spoke about the need for school leaders to help drive the positive implementation of eBooks. One teacher spoke about how the school's eBook champion had left and that this departure had created a void, 'we need one deputy who is excited by it and who would run with it because I think no one wants the IT portfolio here' (Focus Group). Several teachers also commented that department heads had varying levels of enthusiasm for eBooks and that a more unified approach was needed.

There was also some discussion among teachers about the needs for parents/carers to be more supportive. One teacher spoke about how parents/carers needed to realise that being able to use technology would be required for future work. Another teacher summarised this point, 'this is the best way to prepare your child for the world we're in now' (Focus Group).

In relation to the government, the teachers spoke about how more money was needed to fund an extensive rollout and the employment of technical support staff. As one teacher commented,

> I'd love the government to do, like what they did with the dental scheme. Like, you've got $1,000 to go towards dental, so that the kids would go to the dentist, they should and come and go, you got $1,000 is going to buy a laptop ... but that would be really good across the board for our students, I think, in our state. (Focus Group)

One teacher suggested the eBook library should be free for everyone and automatically part of the enrolment process. She expanded by saying that any implementation has to consider the differences between schools and classes. She spoke about how different classes of students react differently to the use of technology:

> When I said we're going to work on laptops, half of the kids in that class are off with the fairies, touching everyone's, turning on/off… like running around, hiding behind the bookcase, not wanting to do it. Honestly, some of them are ok and get irritated with them because they want to do it, saying [to their peer], "can you shut up and sit down" and to me "Miss won't book them again." So, it's chaos. (Focus Group)

She then contrasted this behaviour and the use of eBooks with students in the STEM specialised class—a specialised stream that integrated technology into their learning program. Students in the STEM class, which is by application only, had one-to-one access throughout the day to school laptops. Several spoke explicitly in favour of expanding the STEM class access model so that teachers build their capacity to use technology, as one teacher commented.

> I think that was a really good way for me to learn a lot of stuff and experiment with a lot of stuff, and then I can take it to a faculty meeting and show people what worked and what didn't work and start getting them enthusiastic. But I think expanding on that would be good, to be good. (Focus Group)

Observations of Young People

Observations confirmed the different levels of technology in the STEM class; multiple devices were being used, as seen in Figure 18. The lack of technology across other schools impacted the utilisation of eBooks in learning experiences.

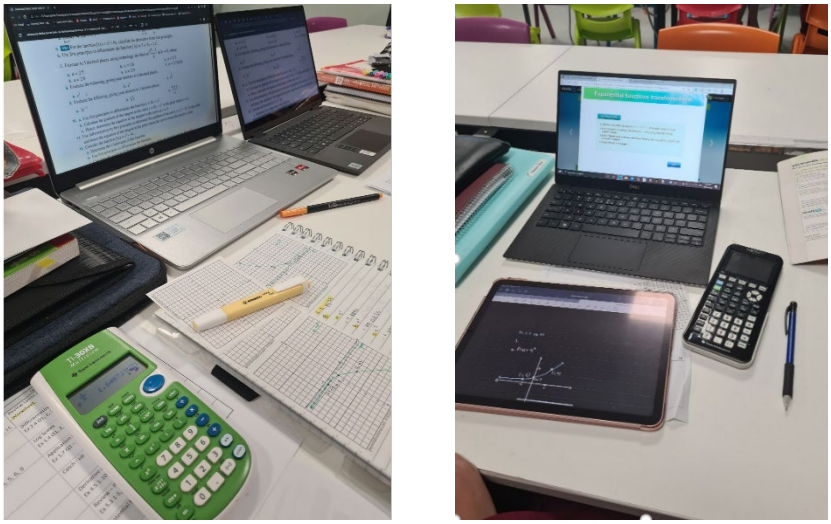


Figure 18: Access to technology in class – School B

Teaching and Learning Affordances

Teacher Perspectives

Most teachers could not articulate any affordances of eBooks or how they may be used to differentiate learning or support students with special needs; this was not surprising as they were not being used regularly in classroom activities. One teacher noted that some students might choose to annotate their digital texts. Others could see the potential of extending their top students. However, others felt that issues with technology and behaviour issues with their low-level students would impact any application use. As one of these teachers explained,

> The lower-end kids are really resistant to laptops, like they are really negative. I will have a look at the attendance in the morning to see if particular boys are there [and this determines] whether I book laptops for the lesson because I know if I get laptops out, they're going to crack it because they don't like them. (Interview)

Later he talks about how he would speak to several students beforehand and give them the choice of whether to use technology. As he adds,

> Yeah, because they will literally go around and start like turning off other people's laptops and go and hide behind the bookcase and lay on the floor and everything to get out of using the laptop. (Interview)

Implementation of eBooks in Education

Enablers to the Implementation of eBooks in Education

Teacher Perspectives

Teachers in School B identified numerous enablers to using eBooks. Indeed, most teachers favoured an increase in usage of eBooks within their school, noting that students: wouldn't have to carry heavy and bulky books/textbooks; would be able to store more content on them; and would be able to search for and retrieve information much easier. These teachers also observed that as laptops and eBooks became more affordable, they were becoming more accessible to more students.

Two teachers also spoke about how they thought students were more engaged in class activities when using eBooks. As one teacher remarked, these higher levels of engagement occurred even on topics students often said were boring, adding, 'They seem to work quicker on the computers than they do and anything else' (Interview). Yet, as another teacher commented, this engagement with the tool may be fleeting.

> It just mixes up and is engaging and makes it a bit more interesting for them. I know they get bored really easily. They even get bored if you do laptops too often, they'd…. be like ugh again… it gets you another tool that you can change as well. (Interview)

Several teachers identified that they were key enablers in the process of using eBooks more:

> [T]he teachers' involvement and encouragement is a major push. Like you can pretty much get kids to do what you want if you have the right approach … a really good organised teacher that had everything set up nicely and had made the time to show kids how to use it. (Interview)

Another key enabler identified by the teachers was the feeder primary school. Teachers could identify the primary school the students had attended as one had a BYOD policy, and students from that school had higher technology skills and familiarity with using technology in an educational context

Barriers to the Implementation of eBooks in Education

Teacher Perspectives

When identifying barriers to eBook use, teachers commonly raised (1) access and (2) reluctance by staff and students in school implementation. These are discussed in turn.

Access to computers and laptops was often identified as prohibitive. Access could not always be guaranteed, resulting in the teacher reorganising her teaching or providing students with print copies of the content.

As one of the teachers said, 'access to technology, even in that class where they're all very high academic kids, they don't all have access to laptops' (Interview). This lack of access to technology for most students was contrasted with the levels of access by STEM students who had one-to-one access.

> That's the beauty of the STEM (class) is that they have their own individual computer that they pick up, and so they're logging into the same computer every time… it doesn't take as long to log in, because every time you log into a new device, it has to load all of your stuff. (Focus Group)

Access issues also included problems with internet speeds and bandwidth. As one teacher said, 'So internet access is a problem' (Focus Group), adding that, 'you only have to be a few kilometres out of town to require mobile internet' (Focus Group), and that, 'our bandwidth like our internet access here is pretty atrocious as well (multiple others agreed)' (Focus Group). Another teacher commented how these bandwidth issues didn't support staff collaboration, 'you can't even put faculty documents on SharePoint' (Focus Group), which also limited teacher modelling of technology. Teachers spoke about having to book computer use. Given this isn't a regular occurrence, there were issues with loading times, typing speed, log in times, and computers being functional: '24 laptops on that trolley. You go and get them, but five of them aren't working' (Focus Group). Teachers also highlighted the need to book laptops as a barrier to technology use. As one teacher explained, 'booking, that's the overwhelming difficulty. That's why there's such a fight in weeks seven and eight [between teachers], when everyone's trying to write up assessment [in class]' (Focus Group).

Teachers also noted that the cost of technology impacted access. Many teachers stated that School B would be considered a school with a high proportion of students from low socio-economic backgrounds. They were, therefore, cognisant of technology cost and the equity issues this created. As one teacher explained:

> [T]here's a massive difference between access at our school. So, we have some students that will turn up like this one in year 11 who's got a laptop and a tablet. And some kids don't have a computer or internet at home, and they'll be in the same class. (Interview)

As another teacher expanded, 'cost was felt by the family, many of whom came from low socio-economic backgrounds' (Interview). And a third teacher noted:

> The ones that don't bring a laptop at all to school, just don't have computers at home. There are a few of them from quite low socio-economic families. They probably have one computer that's the parents/carers or something. They do all the assignments at school. You see them in the library, at lunchtime for the assignment time, using the school computers. (Focus Group)

According to one teacher, the school had tried a BYOD policy, but it failed because of the costs involved. However, access issues were not isolated to laptops, with one teacher also talking about student reluctance to use print textbooks. Her solution then was to give these students printed handouts, 'they literally have a pack in the classroom with their book and a pen and a pencil and stuff in it. And I give them a worksheet that they stick in each lesson, they literally bring nothing' (Interview). Thus, there were equity issues across all modes of learning. Access issues amplified student and staff reluctance.

One teacher contrasted the situation at School B with her experiences at her previous school, where students were more engaged in using eBooks. As she said,

> It really hit me in the face, I've come from [another] smaller country town where they used it, but it was ingrained. Here I got resistance from kids … I couldn't sell them the story that it would be better for them to use it properly in terms of time and ability to access secondary data. … And that's a cultural thing. That's not the twelve of them thinking by themselves "I don't want to do it". That's a broader issue than those twelve kids. (Focus Group)

One teacher also thought that some staff were reluctant to use the eBooks. As she said,

> There are quite a few old school teachers as well that aren't keen to move into the technological world … because if the teachers aren't willing to put the time and effort into, I guess, teaching the kids how to use those programs and things, then it really puts them at a disadvantage. There are a lot of people that don't like devices in general. (Interview)

The school implementation of eBooks was also criticised by teachers, as shown in the following comments,

> It hasn't been set up properly. And whoever started to set it up has sort of moved on. So, we're in this weird sort of limbo. We're not using it because nobody's really been pushing it, and we probably don't know how to. (Interview)

As she went on to add,

> I think there has to be a culture within your school that everybody is using it and everybody. So maybe a culture change is necessary as well. And maybe some leadership from someone who's going to make it work and make it easier for the rest of us. Somebody come and save us and make me not have to do it [laughs]. (Interview)

Professional Development and Support for eBook Implementation in Education

Teacher Perspectives

Most of these teachers had not undertaken professional learning relating to using eBooks. One recalled that the deputy principal had 'introduced eBooks to the school, who did a five-minute presentation at the staff meeting off you go' (Interview). Most teachers reported undertaking their own learning on an "as needs" basis. One teacher added that she still could not access eBooks on her device. As she then said, 'And I can't do it. I don't know what I don't know' (Interview).

Teachers were open to more professional development in eBooks but contrasted what they had received with the amount they got in other learning areas and on other topics:

> You go to a maths conference, you basically get bombarded with all of the different stuff that's out there, and the office staff have to veto phone calls now to me as well because of the amount of IT resource people that ring up to try and sell me stuff… as well so much for maths yeah but not eBooks. (Interview)

None of the teachers provided training to students on how to use eBooks. Most seemed to assume that students would not need such training. As one teacher said, 'it's sort of more they play around with themselves, yeah' (Interview). And this, 'they all seem to be able to get on really easily…And they don't seem to have any sort of trouble navigating around' (Interview). Nor did teachers provide training for parents/carers, because it was seen as unnecessary. Another teacher commented that she didn't think training had been undertaken 'because we're still baby stepping with it' (Interview). The deputy principal who had introduced eBooks had left the school, COVID-19 had disrupted school processes, and 'probably because we don't use them as much as other schools do' (Interview). However, one teacher suggested that some general technology 'skills and drills' (Interview) were needed to increase students' proficiency with eBooks.

eBooks and Health and Wellbeing

Teacher Perspectives

Several teachers reported sometimes reminding students to sit correctly while using eBooks. As one of these teachers said, 'it's not something that I'll set up beforehand, but if they are like slouching or right up or whatever, I'll correct it at the time, but not before' (Interview). Although, one teacher did say that they felt using eBooks lessened what students needed to carry in their schoolbags, which helps improve their posture. Several teachers indicated they did not have time to attend to such issues. One teacher said this was 'not something that when you enter a classroom with a bunch of seniors, you're thinking about the generally speaking, you would not thinking about their posture' (Interview). Another similarly said, 'we just need to get through whatever we're trying to get through, let alone anything else' (Interview).

Case Study School C

School C had a student enrolment of approximately 150 students and employed around 20 teachers. High levels of relative social and educational disadvantage characterised the student population. More than half the students enrolled in School C were positioned in the bottom quartile for socio-educational advantage, and about one-third were positioned in the lower middle quartile. One in every twelve students currently enrolled at School C identified as Aboriginal or Torres Strait Islander, and one in every thirty students had a language background other than English. This case study presents data generated through an interview with one teacher. As eBooks were primarily used as an out-of-school resource, no observations were conducted at this school.

Reading and eBooks

Teacher Perspectives

The teacher interviewed at School C has used eBooks but prefers to read print books, 'I do like the paper. But then again, I'll move to eBooks, too, because I get more options' (Interview). She then went on to explain that as a parent/carer, her preference is print,

> I think we feel the kids should have a book in front of them. I can't imagine sitting on my phone with my kids watching the screen, me reading a book like I would with paper books. I've never ever read a book on my phone to my kids. (Interview)

eBooks in Education

Teacher Perspectives

The teacher recalled one teacher at the school who used eBooks. Explaining how this teacher used this tool in her classroom, she said, 'So she was teaching poetry, and found texts that way for her age group that were similar through the "like texts" links…I've also seen her put things on the board and read to the class together' (Interview). The participating teacher believed eBooks would be used in the classroom more in the future because the school had recently moved to online readers, and because key stakeholders were becoming more aware of and comfortable with eBook use. As she explained,

> We've just made the transition to decodables for all readers. We've only got so many readers. So, I think the online version of that is also good. I think the more we use it we get more comfortable with them [eBooks]. (Interview)

The teacher interviewed used the eBooks platform to search for books based on a theme, genre or similar text and to help students find books of interest for their out-of-school reading. However, the teacher did not explicitly use eBooks during lessons with her students.

The teacher felt eBook affordances and features might help reluctant readers and/or students who read at a lower level of proficiency. As she said about the potential of audiobooks or the audio feature,

> We have got lots of kids who can't read, lots of kids that should be able to read. Like I'm talking up to high school [age] who can't read. So, there's a big opportunity to get kids engaged in reading through audiobooks. We're also finding we have kids who can read really fluently, but the comprehension is not there. So, whether or not taking that cognitive load out of reading through audiobooks might actually help with comprehension as well. We just did some testing not long ago, … but it was scary. Kids could read but really can't go about beyond the lines or even between the lines of what the text is actually trying to say. And so, maybe eBooks and audiobooks could help. (Interview)

The teacher felt that a more teacher-friendly version of Sora could support their use. She believed that if similar features to the Story Box Library website were adopted within Sora, such as age grouping and classroom activities, it would increase teacher use of eBooks.

Implementation of eBooks in Education

Enablers to the Implementation of eBooks in Education

The teacher in School C identified numerous enablers to using eBooks. These enablers clustered around the topic of access as it related to the specific context of the school and community. For instance, the teacher outlined how the rural location and size of the school/town could inhibit the variety of print-based books students could access. However, eBooks provided students with access to more reading options, as she explained,

> For a small school like ours, you can only provide so many books and options for kids. You can only have so many books in your library, and it is getting harder and harder to get kids to continue to read, especially when you get to that grade 6, 7, 8. It's difficult to find something of interest to all kids. Like if you got eBooks means you have got so many more options, I guess. So that will mean people will use them more. (Interview)

The teacher also felt that for students who may not have access to books at home, eBooks were a practical option for young people to access reading material they would not otherwise have been able to,

> We have got kids at school who don't have a book in their house. It's scary. There is nothing to pick up. There's no newspaper or magazine because their parents are just using their phone. So, if we got these subscriptions that they can access via the phone then they might have a bit more opportunity to access it. (Interview)

Barriers to the Implementation of eBooks in Education

The lack of access to technology in the school was identified as a barrier. As the teacher outlined,

> We have 20, maybe 30 iPads in the whole school. We have around 140 kids in the whole school, but you can book them out at different times. There is the option for parents to use the same resources as well. But we aren't a BYOD school, so we tend to use paper-based stuff. (Interview)

The teacher also saw the ease with which students could access off-task material while reading as a barrier. This concern mainly pertained to when students were using iPads, which didn't have monitoring software. The teacher felt this discouraged teachers at the school, herself included, from using eBooks in the classroom,

> I think there's a bit of a worry that the kids will just play games instead of doing schoolwork. We have a program actually where we can actually watch the screens of the kid's laptops, but that doesn't transfer to the iPad. If we could do that with the iPads that would be good so that we have peace of mind that you know what they are doing and looking at I suppose. (Interview)

The teacher spent considerable time focused on the barriers to accessing and using technology generally because of the school's geographic location and socio-economic context,

> What we've found out during COVID[-19] is that other than their phones, parents and kids don't have much technology at home, which we were surprised about because we live in a very technological time. Our kids don't know how to use the computer as they don't have one, they know how to swipe on their phone and how to get into games. But they don't actually know to use computers effectively So yeah, we've got to teach a lot of that at school, and we might be a little bit different to other areas, being we

> are a very small country town and a low socio-economic town, I suppose that influences this. (Interview)

To overcome some of these barriers and facilitate the success of a school eBook program, the teacher recommended schools like hers need to explicitly teach more technology skills,

> We can't assume they [young people] are going to know how to use it, like how to make words bigger, how to turn the page. We think they are very computer literate, but they are not in some aspects. So, I'd say you'd have to be very guided to start off with. And I think you'd need to give teachers professional development around how they could make it work. And how they could make it work for the kids in their classroom, and how you could differentiate. (Interview)

Case Study School D

School D employed more than 200 teachers and had a student enrolment of more than 3,000. High levels of relative social and educational advantage characterised the student population at School D. Almost half the students enrolled in School D were positioned in the top quartile for socio-educational advantage. Only one in every 100 students at School D identified as Aboriginal or Torres Strait Islander, but more than half of the students had a language background other than English. This case study analyses data from seven teachers (interview and focus group) and four observations.

Reading and eBooks

School Support for eBooks Program

Teacher Perspectives

School D had a strong commitment to reading generally, and eBooks specifically, driven by the library educators and key English department teachers (e.g., Literacy Coordinator). When the eBooks program (Sora) was introduced at the school, the librarian ensured every person employed at the school and student had access. As one of the current librarians explained,

> My predecessor was very passionate about the fact that everyone was signed up for [eBooks]. So, it was all the kids, and it was all the staff. I said, "Okay, maybe we should just do like the teaching staff and the teacher aides, maybe not the cleaners," and she said, "no, everyone is going to be signed up." Everybody has access – administration, grounds people, everyone who is on staff, and every student has access. (Interview)

One key strategy when introducing eBooks into the school was through competitions and prizes for students who logged on and borrowed books. As explained by the librarian, 'we knew that some kids are only going to log on for the competition, but the ones that are keen then have a way in and can keep going' (Interview). The library also builds eBook exposure and support into Year 7 orientation each year,

> When we have the year seven's come through in their orientation, we have a little bookmark that we've printed, and we give that to them to get them online and get them to have a look at it. But many of them, we find now, have had [Sora] in primary schools. So, they are familiar. (Interview)

One of the librarians at the school (there are currently three librarians) spoke about how she had noticed that students were using their devices in the library. As she said, 'so we get a lot more kids who use computers in here now, so we don't see as many of the traditional library dwellers' (Interview).

Support for eBooks was also encouraged through the school's Literacy Coordinator (an English and digital technology teacher). She explained the different ways she connects with staff and students regarding eBooks and the Sora platform as follows,

> I send out emails and reminders that come out from Sora to the school and teachers. For example, we have to Wear it Purple day here. So, when that day was coming around, I sent out an email to students. Sora had already emailed me about all the books on [LGBTQIA+] inclusion. I just let them know that they are here, and this is a good way to formulate their own opinions and make them aware of all the literature there. I also send things out before for the more well-known holidays like Christmas, Halloween and Valentine's Day. (Interview)

Another teacher outlined that they supported the reading of eBooks through dedicated classroom time,

> At the start of each term, we do a choosing session on Sora. I tell them all they've just got to browse for that entire time, and they can get samples and download what they

like. And they really do have a lot of conversations about what they're looking up and again. That's probably not what you're doing in a library. So that's definitely a different experience for them. (Interview)

Supporting eBooks and promoting Sora was reflected in the advice teachers would give other schools implementing an eBook program. One teacher stated the need for a key person to implement the program and ensure 'buy-in from multiple people and levels in the school' (Interview).

Observations of Young People

Observations confirmed that literature and reading were promoted in School D. There were quotes from notable writers about literature and literacy displayed on walls, doors, staircases and signs throughout the school (e.g., Figure 19)

Figure 19: Library staircase – School D

Observations in the library also illustrated the school's support of reading, principally through a dedicated quiet room for reading at break times. The librarian noted that this reading room was full most lunchtimes. In observing this room, students read a mix of print books and eBooks via iPads or laptops.

Department designed posters about eBooks were displayed within the library (Figure 20). These physical resources were supported by emails to students, a sample of which from Harmony Day is provided in Figure 21.

Figure 20: eBook poster in the library – School D

Figure 21: Sample email communication to staff and students – School D

Reading Habits of Young People

Teacher Perspectives

Teachers in School D felt young people had made their choice about eBook or print book preference by the time they reached secondary school. This sentiment is illustrated in the following comment,

> I kind of feel it's that it's almost at saturation point now. I think there was a moment when it was eBooks are going to take over paper books, and then you sort of had a bit of backlash or, um, we have a lot of kids who are very much still into paper books. (Interview)

Two teachers thought eBooks and print books use would remain the same. As one said, 'there's still a lot of students who like physical books, and that's fine. I think it's a complimentary thing at the moment' (Interview).

The teachers identified several factors they thought influenced the reading selection of young people. Most thought friends and peers had a significant influence. As one of the teachers explained, 'we've got a book club in the library, and they put up reviews all around the library… Actually, the kids are into it, so word of mouth' (Interview). This teacher felt something like a book review by young people on Sora would also support students' reading selection.

Most teachers spoke about the influence of genre on their reading habits. One teacher exemplified this view, 'we've got some [students] that are just sort of very genre specific …And they will stick with that genre, um, and just want to read more in that genre' (Interview). One teacher thought this approach could be limiting and argued she had a role to play in widening students' reading experiences. As she said, 'So they go through the genre stage, they go through the author stage, and I think that's really for the natural. So, my challenge is trying to break them out of that' (Interview). Teacher intervention in reading selection was also mentioned in the focus group, where one teacher commented,

> When we take them to the library, they make a point of saying, um, they have to choose a book that they wouldn't normally consider ... I think they're very genre based. These kids, they will know themselves, science fiction or fantasy or they have their specific genres. I think it's hard for them to escape the genre. (Interview)

Several teachers also spoke about their influence in terms of encouraging class discussion on books and giving students recommendations. Another teacher spoke about the influence of the media, commenting, 'they are influenced a lot more now by media, so that might be, you know, something they like on Netflix … what they see on TikTok and things like that' (Interview). Netflix and book-to-film/TV were mentioned as having an impact in two further interviews, for instance, 'when Anne with an E came out on Netflix I went, hey, look, you know you should read the book' (Interview).

Some teachers spoke about how they thought eBooks had changed the reading habits of young people, especially reluctant readers,

> Even those students who will tell you I don't like reading, once the quiet is established for silent reading, everybody is sucked in … It is very hard for them to argue with the whole state library's worth of books and magazines. I know we shouldn't group [students] together, but lots of the junior boys read magazines on there. They love all the sports magazines, which you could never offer them in the classroom. (Interview)

Another teacher in the focus group also commented that she thought boys were engaged when using eBooks,

> I think that the boys are more encouraged to read on the device. The boys just seem a little bit more engaged with their laptop than with the paper book. I think it's more that they don't have to remember to bring a book. (Interview)

The librarian and two teachers noted that the recent change in reading habits they had witnessed in young people was the increased use of audiobooks. As the librarian outlined,

> What we're seeing a huge take-up in audiobooks ... We have difficulty dealing with that as a library, because we can't, you know, they don't offer school subscriptions to Audible and things like that. So, um, it's not something we've been able to service, but the state school eBook library does have audiobooks ... So, audiobooks are where I see the huge growth rather than eBooks. (Interview)

The teachers reported that most students were accessing eBooks on their laptop, or on their iPad if in a specialised stream. As explained by one of these teachers,

> So, it's a BYOD school, so it's pretty much all laptops. The only ones that use iPads are the technology-integrated curriculum students. Those kids have iPads. If they're doing [reading] in school, they will mostly do it on their computers. I'm not sure how they do it outside of school. I'm sure some of them would use their phones because the app is quite user-friendly. (Interview)

Two teachers commented that they didn't think eReaders were widely used by students. One of these teachers noted, 'Yeah, they don't bring in eReaders. They did in the early days of eReaders, but you don't see them often now. Kids haven't talked to me about them, but they probably don't bring them to school now as they are quite expensive' (Interview). The second teacher elaborated,

> What I think would be missing in a lot of our kids would be that tablet eReader, sort of market, which is how I tend to access eBooks. Because kids have that one device. Unless their parents are buying them multiple [devices], it would be the phone or the laptop. So, um, I would suggest it would be the laptop because they would see it if they are accessing it, particularly their class novels, um, they would sort of see it at school. (Interview)

Observations of Young People

Observations confirmed that most students accessed eBooks via their laptop or iPad or read a print book. Access to eBooks via mobile phone was not observed, as the school policy stipulates that students need to place their phones in their lockers when they arrive at school and that they can't

take them out again until they leave at the end of the day (if students have their phone on them during school hours, they receive an instant 2-day suspension).

In Classroom 1, the class was part of the Technology Integrated Curriculum (TIC) program. This one-on-one program uses Apple's iPad Pro and Apple's educational systems to enrich and extend students' learning inside and outside the classroom. So, unlike the other classrooms observed, every student used an iPad. The teacher of this class explained that because iPads are expensive, there is pressure from parents/carers and school leaders to use iPads extensively and thus ensure the cost of the device was worth the investment. There is very little use of paper/worksheets generally, and no print books were noted.

During the observation of Classroom 1, students were working on a robotics project. Because there were a limited number of robots, students waiting for access to a robot had a choice of reading an eBook or finishing other assessment tasks. Approximately half of the students decided to read eBooks, which these students did exclusively on their iPads via Sora. Almost a third of students in this class choose to read non-fiction books during this activity.

Many of the students used and were familiar with the Sora platform. When questioned by the teacher about reading, many students said they enjoyed the option of reading when they finished work early in the observed class rather than completing additional learning, which was what was typically set in other subjects. Students enjoyed quiet reading as part of the classroom routine and wished for more curriculum areas to adopt this strategy as they said it relaxed them and helped them focus on learning.

In Classroom 2, a grade 8 classroom, laptops were exclusively used to access eBooks. Students were reading a mix of graphic novels, picture story books (low-level literacy students) and novels. The teacher explained how one student had only read graphic novels all year. The student replied that it was easier to read at school when doing silent reading as there were still a lot of distractions at school, and he found it hard to focus, but that he read print books at home because it was quieter and because there were fewer interruptions. Other students said they read print books at home but eBooks at school because they were concerned the print books would be damaged. Another student commented to the teacher that they read two books simultaneously, one for school (eBook) and one for home (print book), and several others indicated that they did the same.

eBooks access was primarily through the BYOD laptops in Classroom 3. Students could read eBooks, print books or news websites as part of silent reading at the beginning of class. A small collection of print books was available to the students (bought in by the teacher and transported from class to class, see Figure 22)

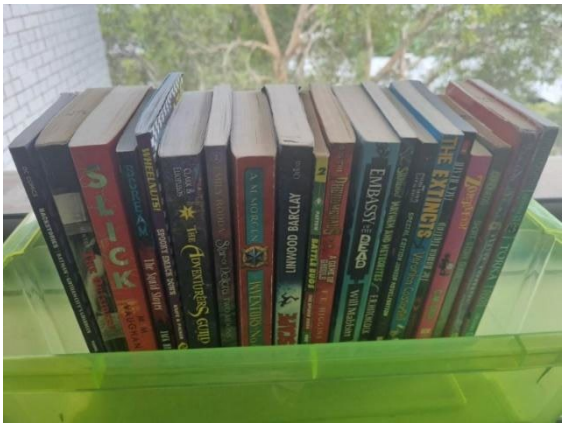


Figure 22: Classroom library – School D

During the observed lesson, the teacher led a discussion about finding books for their upcoming holidays. She asked students where they found recommendations for books to read. A few students said TikTok and peers, and others wished there was more variety of books for young teens on Sora.

One student said, 'books and reading have become cool lately. Mostly because of "booktok" on TikTok and authors releasing alternative endings and side stories on Instagram (Observation, Classroom 3).

Some said students looked forward to reading more print books over the upcoming holidays because they were sick of their laptops, but the school library didn't allow borrowing over that period.

In Classroom 4, most students were accessing eBooks via the BYOD laptop. In Classroom 3, the teacher had a library of books that students could choose from if they didn't have a book or their laptop wasn't working. Five students accessed a book from the class library. Only one student had their own print book. Many of the books being read by students were related to movies (e.g., maze runner) or TV shows (e.g., Enola Holmes) or books in a series (e.g., Divergent Trilogy).

eBooks in Education

eBooks in Learning and Classroom Practice

Teacher Perspectives

In School D, eBooks were predominately used as part of silent reading. The classroom routine of starting the lesson with silent reading was done for a number of reasons. One teacher commented, 'I would say I've always used the eBooks as enhancement, our enrichment in the classroom' (Interview). Other teachers explained this classroom routine was used as a settling or focusing activity, 'it's a great way just to calm the brain by reading for those first 10 minutes of coming in, and then you can move on to something else' (Focus Group). Another teacher added, 'my Year 7 class always does 10-15 minutes of silent reading at the start of the lesson to settle and quieten students, get them to focused on learning' (Focus Group). In the focus group, one teacher added that there was some concern in the school about the appropriateness of silent reading activities. As she said, 'some [teachers] in the school have the perception that silent reading is not a valid activity' (Interview).

Teachers adopted eBooks as part of silent reading for several reasons. Firstly, they described it as a way to reduce the number of books they carried, purchased or lent to students:

> I'm now not lugging around 40 novels and whatever for my students to read. I went, "why the hell am I doing that?" ... I realised I've been doing myself a bit of a disservice. Why am I doing that when I've got all these books which are absolutely free of charge? I can actually say to my students, "look at this book on Sora" or "see what's there and that you what to read." And as far as remote learning, the fact that I can assign a book, I've got students with me all the time going, "How can I expand?" "What do you recommend?" I read, and I go, "Oh, look, go and check these out." That means I don't have to lend them my books anymore. It's so that that way it has been. It's been good. (Interview)

Two other teachers also raised this issue,

> Rather than me carrying around 40 books [and have students] look at them all and go, "well these are terrible". I can simply say, "go look this up." And the idea that I don't have to go to QBD and pay for a book to loan to students is great. (Interview)

> And I had my own mini library that I would carry around with me with 20 or so books they could use. But it's just not efficient and not always doable, especially in a school like this, which is huge to be carting books around. And you found that students bring fewer books to school now because they do so much work electronically. (Interview)

Some teachers also felt eBooks could reduce educational inequities. As they explained, 'it's actually almost more like equitable because all the students have access to all of the books, which is very different to asking them to bring the book from home' (Interview). Other teachers used eBooks as part of the silent reading process based on students' preferences and the diversity of books. As one teacher said, 'I include eBooks as an option for students who prefer eBooks as I would like them to

have more options than the bookshelf I have in the classroom' (Interview). A second teacher commented,

> My initial thing is that I wanted every student to bring in a book - that doesn't happen. So, then I bring in books, but then they go, "well, they don't like my books." So that's where the eBooks come in. (Interview)

Two teachers explained how they used silent reading as a way to model reading on both print books and eBooks:

> Previously, when the students read, I would also take out a book, like a paper book, and just read in front of them. Now, with Sora, in particular, this year, what I've been doing is whatever I'm reading [on the eBook], I have [projected] on the board . . .I have just finished rereading the Day of the Triffids, and that was on the board. And sometimes I'll see the kids just look at the board and stare at that while I'm reading. (Interview)

Teachers also used this opportunity to discuss reading and literature. One of the teachers provided an example of this, ' At the end of our silent reading, I will try quite regularly to just ask a few people randomly. What are you reading? Why did you choose that? Can you give us a bit of a synopsis?' (Interview). Most teachers used eBooks as part of silent reading instead of more formal curriculum-based activities because there weren't enough licences for class sets. As a teacher explained, 'obviously, there are limited licences. I don't think I've ever done a lesson that is solely focused on using eBooks. I've always just used it as that reading enrichment for them' (Interview).

Nevertheless, several teachers thought they could use eBooks for more activities than just silent reading. As one teacher commented, 'we probably could be using it more than just choosing books for pleasure, like starting to find those reading and research materials that they could be referencing in their work' (Interview). When prompted on this topic, one teacher stated,

> Perhaps having comprehension activities that are to do with genre styles or topics of books. So, it doesn't mean that every student needs a licence to read the same book. You know, a book on a certain topic and then do some comprehension or close reading work with that book. (Interview)

A second teacher offered another possibility,

> Students could start to find research materials they could be referencing in their work more on eBooks. Um, you know, even in year seven, when one of the first tasks we do is about Ned Kelly, and they do an argument essay and need to refer to other sources to say whether or not Ned Kelly is a hero or a villain. So certainly, I think there could be encouragement to use the state library online. See if you can find some other books that are to do with that time in history or Ned Kelly or Bushrangers that can be where you get your extra evidence from. I know that I've not done that in the past, so probably that's something we could definitely move forward with using it more like how we would have gone to a library, you know, once upon a time to select other books around the subject. (Interview)

While most teachers stated they would use eBooks more if there were class sets, they acknowledged that it is part of a broader technological and political environment and the decision to reduce print book class sets had flow on outcomes,

> If there were more class sets, you would use eBooks more. Well, it's a hard one, because students pay fees specifically for the novels, and this helps maintain our library and our extensive class sets of novels. We rely on those payments, which is why I can't just say yeah, because there's a pdf go read. That would cause a lot of drama. If we could come to a system with class sets that we could access, that sort of thing would be magic. (Interview)

Observations of Young People

As noted above, all four observations in Schools C involved silent reading. This classroom routine was used in the three English classrooms observed, where every lesson started with 10-15 minutes of silent reading before moving on to the lesson. Students were familiar with the expectations and processes involved. In Classroom 1, the digital technology class, students could opt to read eBooks if they had finished their assessment and were waiting to use the equipment.

The teachers did not interact directly with students during silent reading in two English lesson observations. One teacher read simultaneously with the students, and another marked the roll and set up the classroom activities for that lesson. At the end of silent reading in Classroom 3, the teacher discussed how she accessed and read the news (as students were allowed to access news websites as an alternative to eBooks). She shared her news access habits and the advantages and disadvantages of reading the news online compared to listening to the news on the radio or watching it on TV.

In Classroom 2, the teacher interacted with students on book choice and had discussions with individual students about the authors during silent reading. After concluding the lesson's silent reading section, the teacher reminded students about the bookmark function on the eBook platform.

The teacher in Classroom 4 roved around the room and monitored students reading, redirecting them if they felt the text was too low for them (i.e., ensuring students were reading texts at the level expected by year 8). In an exchange with a student, this teacher said, 'you left that book in primary [school], choose something else,' to which the student replied, 'it is all kid's books as the system locks us out of the good stuff' (Observation, Classroom 4).

Teaching and Learning Affordances

Teacher Perspectives

Several teachers spoke about how eBooks supported access for a diversity of student reading levels. As one teacher said of this affordance, 'students can access books that interest them and that they both agree on is appropriate – the right level' (Interview). Another teacher noted that eBooks provided alternative texts for differentiation purposes.

> We have written into the curriculum there are some alternative texts. So sometimes, if we've got a student that's working at a particularly low level, we'll look at getting alternative texts for them, and sometimes that can be done electronically. (Interview)

Another teacher commented,

> So, we have quite a lot of kids from non-English speaking backgrounds, and some may need simpler texts, an easier text. And we just tend to replace the text, something, you know, either with a similar theme or whatever. But just with simpler language. (Interview)

Another teacher described how this affordance of eBooks was particularly valuable in a large school,

> The school has a lot of students and it can be difficult to provide paper-based reading to suit all their needs. I mean, we're certainly not rolling in money by any sense of the imagination, but in terms of providing services for the kids that we have, it's the same as providing them with a database. You know, it's an important resource that, um, and if we can reach some kids that we may not reach with our resources here, then that's that a plus. (Interview)

Several teachers discussed how they used eBooks to support students with special needs. One spoke about sending a discrete email about Sora to a student with dyslexia but added, 'I usually just leave it at that' (Interview). Another teacher spoke about preparing audio resources for a student who had severe eyesight disabilities.

Two teachers mentioned using audio functions inside the eBook platform or accompanying eBooks. One of these teachers recalled an exchange he had with a student,

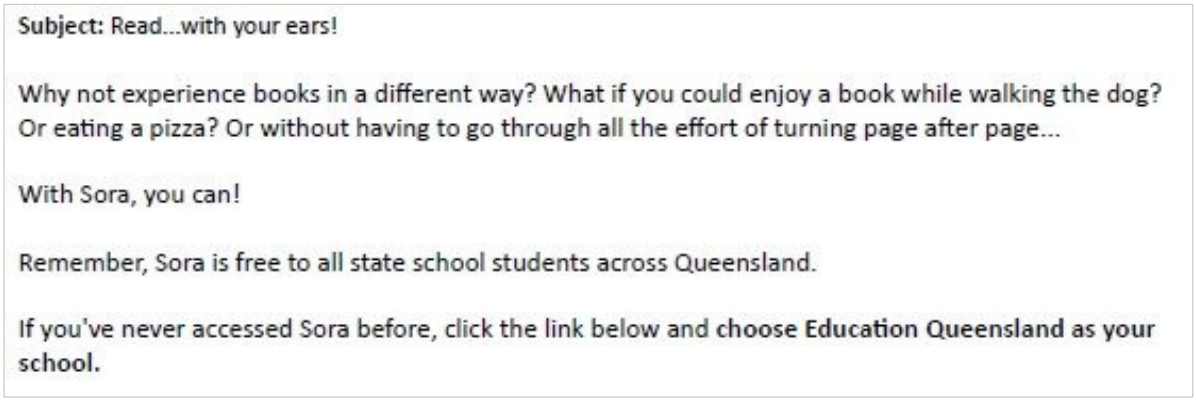
> I've got two low-level boys, and it was great as soon as they found out they could have it read to them. I asked a kid why do you have headphones on, and he said, "I'm listening to my book." And it was great. And then another boy I said, "come over here. He's listening to it" and when the other student was able to do that, he got through the whole thing and finished his essay. (Interview)

The librarian noted that they usually buy the audiobook on CD for students who might require it 'because that's the only way that we can sort of make them available. Streaming doesn't really, really work in our model' (Interview).

Regarding eBook functionalities, teachers listed features such as annotating text, highlighting text, adding notes, clicking and dragging, copying and pasting, changing fonts, and searching the text. One teacher stated they were unsure what students use in terms of eBook function as 'they are not monitoring them enough to know' (Interview).

Observations of Young People

While observing classes at School D, there was evidence of students changing the font, modifying screen colours (white text on black screen) and utilising the bookmark feature when interacting with eBooks. The school had encouraged some of the affordances of eBooks for students via email, which was aimed at engaging with audiobooks (Figure 23) and reading formats (Figure 24).



Subject: Read...with your ears!

Why not experience books in a different way? What if you could enjoy a book while walking the dog? Or eating a pizza? Or without having to go through all the effort of turning page after page...

With Sora, you can!

Remember, Sora is free to all state school students across Queensland.

If you've never accessed Sora before, click the link below and **choose Education Queensland as your school.**

Figure 23: Email about the audiobook feature – School D

Implementation of eBooks in Education

Enablers to the Implementation of eBooks in Education

Teachers' Perspectives

Teachers identified several enablers of eBook use. Student engagement was a common theme. For example, one teacher commented, 'I think eBooks offer an amazing area to engage students. I would simply recommend that teachers choose to encourage their use and that schools promote them' (Interview). Another teacher correlated engagement with using the screen, as shown in this comment, 'the visual engagement of them, um, is really good students. Students like to see things on the screen' (Interview).

The Literacy Coordinator outlined how the analytical function was an enabler to engage students as an educator who wanted to support reading and praise students, as she explained,

> We get a little report that says how many books students have read. Um, so I have emailed students about that in the past, it's just something else to celebrate with them and acknowledge that they're doing a good job on that front. . . Every bit of data we

get, which allows us to recognise something students are doing, lets us praise them. So, there's definitely engagement from those students who are reading. (Interview).

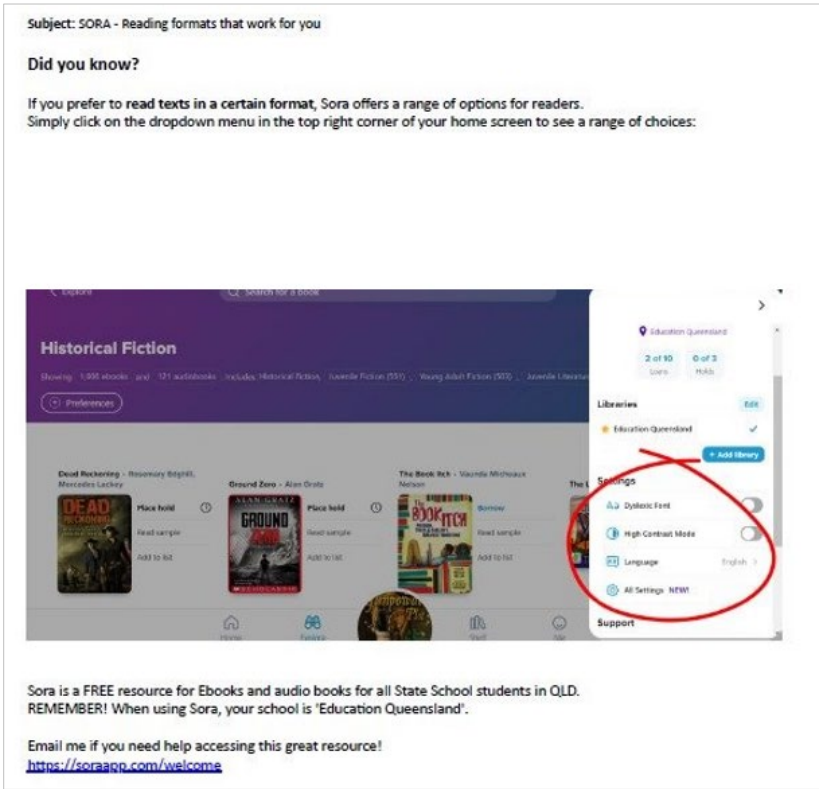


Figure 24: Email about reading format feature – School D

The teachers also felt that access to a diversity of books, formats and genres, including fiction, audiobooks, magazines, fiction and non-fiction, graphic novels, manga, and cartoon strip books, supported engagement. As one teacher explained, she had always encouraged students to read in her classes through library visits during class time and provided a mini library for students, she felt that access to SORA means that 'there's never a student without a book' (Interview). The Literacy Coordinator promoted the diversity of modes, formats and genres available via eBooks, 'I've also sent emails out to students before saying, "Maybe you don't feel like you're a big reader or reading is hard for you," and I've pointed out the different forms available and also all the audiobooks available' (Interview).

Another enabler teachers identified was the convenience and ease of using the platform, exemplified by this quote, 'Sora is really easy for them to log into like there's no difficult password to remember' (Interview). Similarly, a teacher in the focus group stated,

> I sway towards eBooks for logistics. It's just so much easier. Like they forget the book and then they won't return it. And we get emails about this child hasn't brought the book back. That is just so much easier to go. Click read, done. Yeah, yeah, much easier. Um, so I like that. (Interview)

One teacher felt that the ease of use of eBooks was an enabler, as it not only had a settling effect on students but also reduced transition time/classroom management. As she said,

> I think it's easy for us as adults to forget that any activity is disruptive for students. So, the activity of sitting down and then getting up again to go to your bag to find a book that might be underneath something else. To get back to your seat, have a little chat on the way. Sit down. Remember where you're up to realise that actually, I'm past that point. Find it again. That can take up a whole 10 minutes of the 15 minutes reading time. (Interview)

Students with reliable access to technology and technological skills were also cited as enablers. Several teachers explicitly mentioned the school's BYOD or iPad-supported use of eBooks. For instance, 'well, enablers is definitely them having their own device. Um, I think that makes it a whole lot easier because, you know, when you're logging in and stuff like that, you like to have your own device' (Interview).

Observations of Young People

School D is a BYOD school in which students predominantly use laptops and where a few students use iPads (one or two per year level). The specialised technology-enhanced class used iPads exclusively. A key enabler in this technology-rich environment was the resources supporting device use. For example, the school had a library of devices available for loan in case of issues requiring repair or replacement (e.g., batteries). It also had a well-supported IT staff that serviced students and staff.

Barriers to the Implementation of eBooks in Education

Teacher Perspectives

Some teachers did not identify barriers to eBook use, with one teacher inferring this was because access to the internet was good and students had their own devices. However, another teacher did note there were some families with technology access issues,

> Some students don't have Wi-Fi at home. I guess I know if they're organised, they can download a book at school and read it once they're at home. But I often find that the students who have, you know, technology challenges at home might also have other challenges going on. So, they won't always be the students that has the time to be organised. (Interview)

The barriers to using eBooks noted by the teachers in their interviews and focus groups ranged from licensing issues, managing expectations around limited copies when borrowing books, the cost per student for the school to sign students up for the service, and difficulties accessing some publications, including classics.

The consistent theme around barriers was behaviour management, particularly ensuring students were on task. As one teacher outlined, 'the biggest barrier is certainly ensuring they are actually using their device to read eBooks. Devices offer so many distractions and possibilities that they can easily get off task' (Focus Group). This teacher explained that she had only recently permitted her year 7 students to use eBooks because she now felt they were likely to remain on task,

> I have started allowing the class to read on their laptops this term [term 4]. Most of the year, I have stuck to hard copy books to ensure they are actually reading, rather than checking emails or playing games. (Focus Group)

Another teacher felt students could not be 'trusted to stay on the right thing' (Interview), but added that this was a concern if using eBook or print books,

> It's a very it's a small number [of students] who will, if you're not looking over their shoulder, be doing something else, and there's always going be those ones. That small number. It doesn't matter if it's a laptop or an actual book. If it's an actual book, they will just stare at the ceiling, so the diversion doesn't actually change with the device, just with the student. (Interview)

Another teacher identified having students choose the book they are reading as a barrier to extending reading skills and levels and stated they often redirected students from books,

> I always have to do that thing of you know, *Diary of a Wimpy Kid*. "No, you're better than that. Get off. Get off that." I'll do a reminder like "remember, graphic novels and not what we're here for, you know?" So, there's a few of the boys who will just go "I want something easy". (Interview)

Observations of Young People

When students were asked about eBooks by the teacher, they spoke about the barriers of long wait times on Sora 'once something gets popular' (Observation, Classroom 2). In Classroom 4, two girls raised the issue of the age restrictions on the Sora platform, which could also be considered a barrier to use. One student stated they only read eBooks in class, as she didn't like sharing the titles or themes of the print books she was reading at home with her peers. Another stated that she preferred print books as she could borrow more complex, teenage-themed books from the library that she could not access on Sora. Given the age restrictions, this student felt she was reading "down" when she accessed fiction on eBooks.

Professional Development and Support for eBook Implementation in Education

None of the participating teachers had undertaken formal professional development around eBooks beyond the introductory session provided by the Librarian, which consisted of an introductory session that included instructions on accessing eBooks and logging into the platform. Several teachers also reported learning how to use eBooks by experimenting. This learning by experimentation approach also extended to the school's librarian who, while noting that her librarian course at university provided her with some knowledge and skills about eBooks, nonetheless stated,

> My training is only fairly recent... So, you know, eBooks were around then. So, it was part of a discussion. But I guess just experimenting myself and just using the same sort of pedagogy, that I've would use with anything else. (Interview)

Most teachers recalled the librarian presenting a session about eBooks as part of the regular English department meetings. The teachers felt that this introduction and education supported their uptake and continued use of eBooks,

> I think it was [librarian] had sent an email out about Sora. Genuinely. I just thought it was incredible. And I thought it must be something new, like this idea that kids had free access to the state library. Um, and I showed my classes straight away. I always have since then. And I actually think a lot of students and their families don't know about it either, because the kids are always pretty blown away by just how many books you've got access to and they use it. (Interview)

The Literacy Coordinator in the school also regularly shared reading strategies, instructions on how to use different eBook functions and promotional material from Sora to support teachers' development. As she explained,

> I sent a staff email out highlighting the capabilities for the dyslexic fonts and the different settings, fonts and the different backgrounds, etc. So, I tried to be familiar with what we can do with them and then to share it when I can. (Interview)

She extended this promotion of eBooks features and functions to students,

> I used to send out almost every term an email about Sora. So, I get an email from Sora, then I just put that into students speak with all the pictures, and I'd send it out to our students. And I would very often get students replying to say, "Oh, yeah, I will read this month's suggestion" or "I am going to read in the holidays" or "I've read that book." (Interview)

Most teachers did not provide students with training in how to use eBooks. Indeed, one teacher commented that such training was not necessary, 'I don't think so. Our kids are pretty savvy' (Interview). Most teachers recalled that the library provided a session at the start of the year to introduce year seven students to the platform and step through login and navigation. The librarian elaborated that they also produced short videos on how to use Sora, for example, how to log in, borrow a book etc., so students could access the information at the point of need. Bookmarks were

handed out as part of the year seven orientation and permanently available in the library, targeting different genres and instructions (see Figure 25).

Figure 25: Bookmarks in the library about eBooks – School D

eBooks and Health and Wellbeing

Teacher Perspectives

None of the teachers commented on how they supported student use of eBooks to promote or maintain health and wellbeing. As one teacher explained, 'I haven't even talked about those kinds of things [health and wellbeing]. I talk to them about recommendations for books, but not about reading as a physical activity' (Interview) and didn't talk to them about posture, eyesight etc. Several teachers thought support was unnecessary and assumed students would implement their own strategies learned through observation and mimicry. For example, one teacher said she used white text on a black screen to support eye health, and many of her students followed her lead as 'word had gone around about what steps to take' (Interview). Another teacher outlined that 'the actual technologies are usually quite up to date with that. Now, I think they know the whole settings on your iPad to have the blue light filter on them, and they tend to be set to that' (Interview). Teachers wanted students to feel comfortable during silent reading and were happy for them to sit in a position that supported comfort. In this way, a comfortable reading position was considered a "good" or "natural" reading posture, as illustrated in the following quote describing students reading on their laptop in class,

> … [when reading] they really see themselves as if they're reading a book … so their backs on the wall and hold the laptop or iPad on the lap like the reading a book. So, they're probably naturally falling into that book reading posture once they've got something that looks like pages in front of them. (Interview)

Observations of Young People

In the observations, there was evidence of students using white text on a black screen and moving into positions of comfort (not necessarily adopting sound posture). One teacher prompted a student to sit correctly in Classroom 4, by which she meant not to slouch over the device. When observing the iPad class, a discussion about reading resulted in three comments from students concerning eye strain when reading eBooks on the iPad and using the iPad intensely at school. The first student commented that they preferred audiobooks or print books because they 'get dizzy if I read too much on the screen' (Observation, Classroom 1). The second student stated, 'I like audiobooks once my eyes get tired,' and the third outlined, 'eBooks are lighter to carry around, but they hurt my eyes' (Observation, Classroom 1).

Case Study School E

School E had a student enrolment of around 700 students and employed approximately 50 teachers. The student population was characterised by very high levels of relative social and educational advantage. More than half the students enrolled in School E were positioned in the top quartile for socio-educational advantage, and about one-third were positioned in the upper-middle quartile. Only one in every 100 students at School E identified as Aboriginal or Torres Strait Islander, but four in every five students had a language background other than English. The case study of School E analyses data from interviews and focus groups with seven teachers and two classroom observations.

Reading and eBooks

Attitudes, Preferences and Use of eBooks

Teacher Perspectives

While the teachers at School E used eBooks for teaching and sometimes for pleasure, in the main, they preferred to read print-based books. Sometimes this preference was also linked to habits and previous experiences. As one teacher commented,

> If I'm reading for pleasure, I'm a person who will grab a book and hide in my room and please don't disturb me until I finish reading the book kind of person…I like books, I like the smell of them. It's my happy place. (Interview)

And this,

> I prefer paper. I think it's very generational. In saying that, I do use devices in other capacities, but not so much for books. I've never really got into them for books. I prefer to read actual hard-copy books. (Interview)

For some teachers, technology was a deciding factor for not using eBooks. As noted by one teacher, 'eBooks is a little foreign to me in terms of my daily life…I was never a big reader myself. And when it comes to eBooks, there are other things digitally that I'd like to be exposed to' (Interview).

Teachers had varying opinions about whether eBook use would increase. Some thought it would increase because eBooks had many benefits, including being cheaper than print-based books. As one teacher explained, 'It could probably be a cheaper resource than having all the books in the library. Certainly, makes it [reading] more accessible for students if they have access to those devices' (Interview). Another thought eBook use would increase if schools made use a priority, commenting that, 'I think it depends on what school you're in and obviously the priorities of that school too, whether it's going to be promoted within the school or not' (Interview). One teacher suggested increased eBook use was inevitable, 'So I just think the way with technology, there's definitely going to be a lot more use of eBooks in the coming years' (Interview). However, another presented a contradictory view suggesting that, 'I think we've gone through the phase of eBooks for the be-all-and-end-all, and they're all high school transition to digital textbooks only, and a lot of them have actually pulled back on [eBooks]' (Interview).

While one teacher noted that they believed most students, 'go to an eBook above a normal book' (Interview), several teachers thought print books would still be used because teachers preferred to use them. Another teacher thought children liked print books, commenting, 'My prediction is about the same. I think it will stay the way it is because the kids that we teach love [print books]' (Interview). And a third teacher commented that print books suited younger readers in primary schools and couldn't be replaced by eBooks. As she explained,

> I also think, particularly in early learning and younger children, there's nothing that doesn't replace the tactile. Picking it up, turning the pages, turning back to check things. You can't do that as easily in a digital book…I think there might be some

> difference in adult reading habits, maybe over time, but for kids, I still think that print book is not replaceable at this point. (Interview)

The school librarian noted that reading has increased among students since introducing the eBook program, 'I do a library report annually, and the eBooks have increased annually' (Interview). She went on to say that this increase coincided with the introduction of the school's one-on-one iPad school policy. According to the teachers, this school policy impacted the mode of eBook access, with most students accessing eBooks via their iPads.

The teachers' approach and philosophy to eBooks and print-based books also influenced how young people accessed each kind of reading material. As one teacher explained,

> I have a rule, my students must borrow one paper book every week. They can access the digital books at our school…so my expectation is that every student, every week, must borrow a minimum of one book. And so, when we go to the library, we only go for 15 minutes, just because it's a time pressure with access to the library, and it's fast, it's go in, find your books, borrow, and you can't leave without borrowing. (Interview)

Similarly, another teacher commented,

> Not very often, once a week, I allow my kids to read an eBook instead of a hard copy book. But I value actual books over and above eBooks. Once a week, they can read eBooks, and the rest of the time, they have to read books from the library. But then it sort of makes it special than when they have that one day. And so, I think they value it more when I do it that way than when it's a blanket, you can read it anytime. (Focus Group)

Reading and Young People

Teacher Perspectives

Teachers at School E thought several factors influenced students' selection of books, including enjoyment, recommendations from other students or teachers, parents/carers and availability. Student interest was also identified as an influence, as shown in this comment,

> The book they're reading is something that it's more related to their personal interests. Whether it might be just science, more about animals, or just about more maths. Some people just like comics, some like picture books, or some people prefer reading big books. (Interview)

A second teacher also commented on the impact of personal interest on reading choices, especially for younger readers,

> In prep, I've got a few boys that love dinosaurs, so when we go to the library lesson, they borrow four home readers, two junior fiction books, and a fiction book. And I know definitely the boys, if there is a dinosaur or a monster or anything like that, or superhero, they'll lean towards that. And the girls are quite similar. A lot of girls in my class like the Princesses and Disney kind of stories. So, they do tend to lean towards those types of books. (Interview)

One teacher thought students' selections were influenced by their reading ability, commenting that 'For my less capable readers, a lot of them select graphic novels and I think they're very swayed by the large amount of visual and less text' (Interview). However, another teacher felt students also had preferences for specific formats of books and that this influenced their reading choices, 'They're very drawn to the very visual, my kids are very into graphic novels, and they would only read that if they had the choice' (Interview).

Teachers had varying views about the impact of eBooks on their students' reading habits. Several thought their students were more engaged in reading because of eBooks and were more likely to finish reading a book as a result. As one teacher said,

> I believe that they are more engaged…I would notice the difference between just doing silent reading. A kid would pick a book, might not finish the book, might just skim a few books, just look at the pictures only. But when it came to eBooks, I've noticed that maybe it is because it's a screen, they're more just sucked into it, and tend to finish the book whether it's on an iPad or a tablet… while they're not aware of it, it's making their habits better just by engaging them more in reading. (Interview)

A second teacher commented,

> …with the books, with hardcovers, a lot of them would just get it and fluff through when want to return it. It was more about the process of going and swapping the book and changing. Whereas with the eBook they will sit there and generally read it for the whole 15 minutes. I mean, obviously they can make those changes there and then, they don't have to get up from their desk. But they do seem to be more focused when they're reading and not as easily distracted and then with the paper book. (Interview)

A third commented, 'Some [eBooks] might have read aloud or just illustrations that are moving, just animations that some things are physical or paper books can't offer' (Interview). One teacher commented explicitly on the impact of eBooks on a particular cohort of students,

> I tend to notice that in general, my more athletic, sporty kids tend to go more for the digital books, I think it's just faster and I think the gratification is more instant for them than sitting down and being calm. (Interview)

Alongside their interests, reading ability and technology use, peers were also identified as an influence on students' reading habits, as noted by one teacher 'if someone else is reading something else, the kids will look on and go, "what are you reading?," "Okay, I haven't read that one. I'll search it up", and they will discuss the actual books they're reading' (Interview). A second teacher agreed that peers influenced their students' reading choices,

> A lot of my kids also listen to each other's recommendations…I do have some really avid readers. They actually really like listening to recommendations from each other. I've actually read some that they recommended and loved them. That's been a really nice aspect this year, and it's sort of almost grown in popularity as the year has gone on. (Interview)

Impact of Library Support

All the teachers who participated in the interviews and focus group spoke about the importance of the library and teacher librarian support to the eBook program and the use of eBooks for teaching and learning purposes. These participants identified four main responsibilities that the librarian undertook to support eBooks.

Facilitating library visits and sessions: Many teachers recalled visiting the school library and described how these visits influenced their students' reading choices and habits. As a teacher noted, 'we have class time where we go down to the library and borrow books' (Interview). The librarian explained her role further,

> We do encourage [students] to talk about what they're borrowing, and they borrow. It is not a silent space ever. It is tell your friends, "What do you like to read, what you want to share." So, there's a lot of that peer socialisation. We have a couple of teachers who they'll come in and they'll look at books with the kids and really help them to support their choices. (Interview)

The librarian also facilitated sessions about eBooks for parents/carers and students. As teachers explained these student-focused sessions,

> when [students] first access [Sora], they go down to the library, and the library teacher talks them through all of that because she sets it up as like, oh, "this is how you can borrow on school holidays" and things like that. (Interview)

> in the [library] lessons, the kids actually learn how to log onto [Sora], how to navigate the site and everything like that, which is pretty cool. (Interview)

Promoting eBooks for teaching and learning purposes: In her interview, the librarian described how she sends emails to teachers at the school based on curated lists about particular events (an example provided by the librarian was Mental Health Awareness Week). In addition, other teachers at the school also recounted how the librarian provided links to resources, technology support, eBook specific information linked to the curriculum. These two comments are typical in this regard,

> We're really lucky here because [librarian], always sends us on the stuff, and when we forget about it, she reminds us…I guess the big focus here is it is connected with the curriculum…Especially when there are special celebrations or events like NAIDOC Week, Remembrance Day, and Anzac Day. They're all there on hand. (Focus Group)

> [Librarian] is pretty up on all of the technology and why we should use it… but she links it to the curriculum and the year levels and what you could be using it for. So, it's not just doing technology on the side to tick a Box, but we actually start working with the [librarians] stuff and planning around it. (Focus Group)

Answering questions/tech support: At School E, the librarian also managed digital technology within the school. Many teachers sought out the librarian for technology-related and literacy-related questions. As one teacher commented, 'Our school librarian is amazing. She is so widely read and just knows so much of what's out there and also what we have within our school' (Focus Group). Another teacher shared a similar view,

> basically, if we have any questions, we just go straight to [the librarian] and she's able to answer them for us, so we're pretty lucky… I find [eBooks] quite easy to navigate myself because we've grown up with technology, so I don't find it too difficult. But if I do have any questions, I know I can just go to her and she usually has the answers for me. (Interview)

Monitoring statistics and reading analytics of the library to inform evidence-based decision-making: During the interview, the librarian, on several occasions, recalled the statistics for her school and the analytics related to the reading patterns and habits of the students that she uses to make recommendations and decisions. The following quote is one such example,

> Our statistics here are almost 30,000 eBook loans for the year for the school through Sora. That's the ones I can see... Our print collections, it's 90,000 loans for the year, but that includes students and teachers, home readers for kids, all of that comes through the library too… when I look at what's the most popular texts being borrowed from our students through the print books and through the eBook library, it's actually the same…those graphic novels. *Dog Man* and *Cat Kid* are right at the top of both lists. (Interview)

eBooks in Education

eBooks in Learning and Classroom Practice

Teacher Perspectives

Most teachers tended to use eBooks during silent reading tasks, especially after recess or lunch. As one teacher described, 'Straight after break times, I like to have some quiet calming time and I like to

do reading as that activity' (Interview). One teacher explained that she used eBooks as part of silent reading based on student preference but disagreed with the practice,

> The silent reading is usually students' choice. I actually don't like doing it because I feel like it's just an old-school technique to get the kids to come in and be quiet. I kind of try and call it reading for enjoyment. So, they're picking something they like, so I try and take that sort of swing on it... I guess they've been conditioned over many years to come in and do that quiet reading when they come in. I started with math activities… and they're like, "oh, why can't we do silent reading first? We're really hot, we need to drink, we need to calm down". So, it's something they've probably learned... So, I've just gone with it because it gives me a little bit of time as well. And they seem to appreciate it… I've got a couple of children that won't read... [he] will go outside and catch ants for a little bit, or he'll do a puzzle or something like that…one [student] has been doing drawing, but she's very artistic and creative, and she enjoys doing that. So, I am kind of not strict about it. (Interview)

Another teacher used eBooks for silent reading but also for early finishers. As they explained,

> [I use it] for early finishers or fast finishers, they have access to the iPads … the gears in the brain is still going. That's when I see a lot of students picking up the iPad, and instead of just going straight to just arcade or something that might be more stimulating, some prefer to just read. (Interview)

Several teachers described ways they were using eBooks for teaching and learning purposes. One teacher explained that they projected eBooks onto the whiteboard so they could circle writing conversion or model the deconstruct of text, 'I might say "we know this is a letter because it has a greeting, it has a sign-off, it has a body"' (Interview). Similarly, this teacher circles or highlights the things they can identify in 'relation to what we're learning' (Interview).

Another teacher recounted how eBooks were used as part of a poetry study. In this learning experience, students read and listened to poems, 'picking out the patterns and different poetry devices that we can see in there' (Interview). This teacher used eBooks in conjunction with audio resources to ensure students 'aren't just listening to my voice' (Interview).

Another teacher spoke about how eBooks and Sora were used in a system of other literacy-based digital platforms, for example,

> We use predominantly Sora… we've just recently started using Story Box Library as well. But Story Box is more about listening and following than reading independently…For example, for Remembrance Day, I jumped onto Story Box to share a book with the kids that is topical so we can talk through it…So we just listened to that, and then it led to a really great discussion. And then just through the apps with Literacy Planet and things like that as well. (Interview)

Using a mix of digital platforms also extended to homework tasks. As one teacher highlighted, 'Sometimes I'll put an eBook on Seesaw for part of their homework, and they have to record themselves speaking and reading it' (Interview).

School E also used the website StoryJumper, to make their own eBooks as part of the prep buddy/peer mentoring program,

> I've used it [StoryJumper] in the past for my kids to create a book with their prep buddy…They become the teacher, and they teach the prep how to do things in book creator. So that's been a really fun use of it as well. (Interview)

Observations of Young People

In one of the observations (Classroom 2), students were using their own devices to choose a book and participate in silent reading. The teacher indicated that this was an activity the students had requested

when coming in after the break. If they finished reading that book, they could choose another book. Two students read print books, and the rest read on an iPad. One student was listening to an audiobook while following along with the eBook on the screen. The student commented that only particular books on Sora had this function. Two-thirds of this class were reading graphic novels, and the remainder were reading novels. The teacher supervised students while they were reading. Two students seemed to be constantly choosing a new book or changing their iPad settings during this session rather than reading.

Implementation of eBooks in Education

Enablers to the Implementation of eBooks in Education

Teacher Perspectives

Teachers in School E identified numerous enablers to using eBooks. A key enabler identified was the school's level of support for technology, particularly the school's iPad program, as evident in this quote, '[technology] is a focus for the school, and it's being followed through, then you're aware that you can use these tools' (Interview). However, the overwhelming enabler for the teachers was related to access. Most teachers believed eBooks had many advantages, notably providing access to a large volume and diverse variety of books for students to read. As one teacher said,

> Students seem to get more involved when they are choosing eBooks during sustained reading time. I've been allowing them this term [term 4] to use the eBooks and 99% of the kids are jumping on and using that and choosing that as a preference. And a lot of them are using [eBooks] as I guess they can kind of… get different genres there that may not be readily available on my bookshelf. So, a lot of the anime stuff that they're all really into at the moment… (Interview)

Similarly, another teacher noted that eBooks provided some students with a wider choice than would be available from the school library,

> I have some other kids who are just avid, avid readers, and one of my girls in particular, I've got a few girls who borrow eight books a week and they'll read them, and they're big novels, and it's like they can't get enough and they've virtually almost read everything there is to read in the library. (Interview)

The librarian noted that eBooks afforded students the advantage of quickly accessing the next book in a series if the print-based book was unavailable at the library. Another teacher noted that eBooks allowed students to access reading material that may not be accessible (or supported) at home,

> I got a nice email reminder that we can be using this [Sora], [students] all want to use it, and I think it just gives them that variety. A lot of them choose the graphic novels and all of that, and then they may not get to choose that at home, or it just might not be as easily accessible for them because different genres may hold more value in different families than others. (Interview)

The librarian similarly emphasised the accessibility of eBooks, highlighting the potential for students to borrow books when the school library was not open. Noting the high borrowing rate during the school holidays, she explained,

> It's actually a lot in January before the library opened…. So that's kids from last year rolling through, still using the eBook library over the holidays. Print books have had to be returned to the library on 1 December. They're back to using eBooks in the first couple of days from 1 December. (Interview)

The teachers in School E explained how eBooks supported students with varying learning needs. Several teachers spoke about how eBooks enabled greater access to books suited to children's reading abilities. As one said, 'eBooks are an amazing tool to help support me as a teacher and the student

with their learning in terms of accessing something at the right level' (Interview). Another teacher felt that using eBooks was time efficient and supported differentiation in their classroom,

> I find digital books can be faster in terms of you can search really fast to find something that would match what you're doing at the moment, and would link to the [students'] capability, so that is a real advantage of them… there's some really big possibilities when it comes to eBooks in terms of differentiation for special needs and also helping to keep special needs kids engaged with often much heavier content than they're capable of dealing with…[Sora] can help me find something that's at their level, and they're still part of the class and still part of the learning that their peers are doing. (Interview)

Barriers to the Implementation of eBooks in Education

Teacher Perspectives

Participating teachers spoke about various barriers to eBook use. Notably, access to technology was not seen as a barrier at this school because every student had an iPad. As one teacher explained, 'we're a middle to high socio-economic school, so the vast majority of our kids have them. So, it's not an issue. It's on the book list' (Interview).

However, technology-related issues were raised by several teachers, as illustrated by this teacher,

> The way eBooks work on their own. I honestly don't have any complaints. I think it brings a lot to the table, and I love using them. It's just it being a technology, and technology always we can't always 100% trust. Whether it's the internet at that point or anything from charging to just connection loss, applications not working. I think there are a lot of small hurdles in the way that usually affects it more than the eBook themselves. (Interview)

As she adds, these issues did not pertain to reading print books,

> It varies a lot compared to a book, and generally, most kids know how to pick up a book and read it. But I feel like there are a lot of nuanced steps in eBooks that may seem like a hindrance or demotivating factor for some students, especially with students with special needs. (Interview)

One teacher spoke about the barriers young children had in reading eBooks. Later she elaborated,

> I definitely do prefer them actually holding a book because they're still learning to read from left to right, so it's easier if they hold a book. Okay. You've got to start from this side to this side, and they can feel it. They can get it in their hands as well. (Interview)

This barrier was increased if the student had special needs,

> I do have a student that just can't log into anything by themselves independently. They need a buddy or the teacher to basically step-by-step assist them on the way, whereas with a book, he knows how to just pick it up and just read. So, I think even from that, we can see that there are some ways eBooks can be, not detrimental, but less efficient. (Interview)

The teacher also spoke about students reading superficially when using eBooks. As she said,

> If you're doing a comprehension sheet and they're on the eBooks, they don't actually have to read a paragraph. If it's just the literal, they can just go control find, not getting that inferential and deeper understanding of what the book is actually trying to convey and missing out on those language features. (Interview)

This same teacher spoke about how she thought the ease of accessing eBooks hindered excitement in reading. As she explained,

> I think with an eBook it's just so accessible and on your iPad, you don't really get excited about getting a new book. It's just like, oh yeah, I can get it whenever. Whereas when you get a hard copy book, it's like, oh, this is so cool, I got my own hard copy books. And you just tend to read it over and over again. (Interview)

Other teachers noticed that they interacted less with students in relation to reading and book choice with eBooks,

> When it came to physical books, I was looking at which books they were borrowing. I can see… and there's a lot more interaction happening compared to when we do use eBooks. That could be just the way I use eBooks. I probably could find different ways to interact more using eBooks… I noticed that when it's eBooks, I interact way less and tend to have less interaction with other people. (Interview)

Another barrier was teacher lack of knowledge or comfort in using eBooks, as exemplified by this teacher, 'I guess for teachers using [eBooks] in the classroom just them having knowledge of them… and what they're used for and probably their own personal bias or concerns about it' (Interview). As she later added, 'And as with anything new that comes out, people can be stuck in their ways and reluctant to try new things because it's just something extra that they have to do' (Interview). On this same theme, another teacher spoke about older teachers lacking skills to use eBooks, explaining that,

> A barrier is a big gap in confidence and knowledge between generations. So, like my generation and older, and probably even a bit younger as well, we don't lean towards that technology, so it's not an everyday part of our lives, whereas it is for most of our kids. (Interview)

Other teachers felt that the age of the students was a barrier to eBook use. As one teacher observed,

> Because I have prep, their attention span is very minimal. So sometimes they might get a notification on their iPad that pops up while they're reading, it's like off-topic, and then especially with prep, they can't go back, they can't find where they were at. (Interview)

A second teacher also noted the issue of distractions while using technology,

> Do they get away with stuff on their iPads? Absolutely they do because they're natives, and they know how. So, keeping on top of that for us is a big challenge in our jobs. Now you would have heard me say put your iPad in a tidy tray. That's my rule this term... Like even this morning before you arrived, one of my girls had taken herself over to the corner over there, hidden, and she was in minecraft.edu now, it is not a big deal, but she wasn't supposed to be doing that, and she had done it sneakily, and she didn't ask and the other kids dobbed on her. (Focus Group)

The librarian noted restrictions on Sora, limiting which books different year levels could borrow. However, she felt some of the books aimed at the different year levels could be inappropriate for School E's context,

> They're some long, heavy books. But Sora doesn't let you access these ones until year four. There's a P-3 and a 4-9 year group. It's a little dicey sometimes on the content in [years] 4-9… some of them are a little mature. We have a sheltered group. (Interview)

Professional Development and Support for eBook Implementation in Education

Support for Teachers

Some teachers felt they didn't need professional development in eBooks, and many had said they had learned mainly through exploring the platform and experimenting with it. The following teacher's comment exemplifies this experience,

> I just tend to be more explorative with what I just do. I'd like to at least be informed that there's a new application or there's a new website or a resource. And as much as I believe professional development is very beneficial, sometimes I just like to play with it and have it explore myself. (Interview)

Most teachers acknowledged that the librarian had facilitated the majority of professional learning they had received. This professional learning tended to address eBook logistics and practicalities.

The librarian also provided regular information about eBooks to teachers via email. One teacher explained the influence this has had on her practice thus,

> Our [librarian] obviously sends out [emails] and says, "we have access to all these things." So, I am one of those teachers that go, if we have access, I'm going to have a look at what's here. I don't see as great amount of content for the upper year levels as I do for the lower primary, but at the same time, some of those themes and some of the more picture book types are still good to use in the middle primary classroom when you're trying to build on that content knowledge and language and things like that. (Interview)

Another teacher noted she had learned about eBooks through other means, such as social media,

> I first used [eBooks] in my prep classroom because I saw a fantastic post on Facebook that showed someone using QR codes and having a little reading centre, so I was all in on that. So, I did all them up and made the QR codes and realised QLD Ed had blocked all those sites, so I had to go back and make my own one up. And it did eventually work, and we had like a little reading tree set up in the prep groom with the headphones and everything. So, they could sit by themselves or sit with their friends…and they could listen to the stories depending on what content I'm teaching. (Interview)

Support for Parents/Carers

Many teachers noted that they didn't engage with parents/carers about eBooks because the school librarian facilitated 'some things in the library that gives parents/carers information about the technologies we're using at school' (Interview), including eBooks. The librarian provided an outline of the sessions she delivered for parents/carers in the early years of primary, 'I do an early literacy parent workshops at the beginning of each year. Mostly I show prep parents how to support reading at home with their students' (Interview).

She explained how she also sent bookmarks for the preps and grade ones. These bookmarks were designed as follows,

> …one side is Sora, one side is Story Box Library and includes all the access details, including the child's id, so they can log on easily. I use that in the lesson…at the beginning of each year. Then usually at the end of each term when I'm asking for books and I said, by the way, remember, you still have access to these things. (Interview)

Support for Students

The librarian also recounted providing support and training for students to use eBooks through sessions within students' library lessons. These sessions included information on some of the functionalities and affordances of eBooks,

> We talk about the different font sizes and types that they can change to that's really will talk about the open Dyslexic font is usually available except for graphic novels, but for the actual normal books. So, I'll show them how to access those features to make sure that they can. Because even for little ones… If each page has too much text, it can be overwhelming, but they can increase the font, not have as much on one page.

> Doesn't matter how long it takes to get through it, but it looks a little less intimidating...So, we do talk through how to access those features. (Interview)

A teacher spoke about the peer training and support that she draws on when using eBooks (and technology generally) with her students,

> I am no expert, so they're the experts, so they help teach each other. And sometimes if I have teacher aides in the room or support teachers in the room, they'll know more than me. And so, we just have a very collegial atmosphere where we help each other and teach each other things. And some kids are just natural that everything digital, so they become the teacher for me and others, it wouldn't be me out the front teaching them anything. It's very much about show me how you did that and then we can show each other how we do things. (Interview)

General technology support at School E was also evident in the observation of Classroom 1, where a Year Six class participated in a learning experience related to cyber safety and cyber security. During this experience, students learned key cyber security/safety terms and strategies for protecting themselves online. This lesson involved reflecting on issues that may have arisen during the year, such as cyberbullying, being a bystander online, and reporting concerns to trusted people. All students were using their own iPads. Electronic materials and the interactive whiteboard were used to search terms and reinforce the acronym for keeping safe online being taught.

Recommendations for Professional Development

In the course of the interviews and focus groups, teachers made suggestions and recommendations about professional learning, development and engagement strategies to support their use of eBooks.

Two teachers noted that more professional development based on sharing best practice and teaching ideas would be beneficial. Another teacher outlined a preference for professional development that involved 'being given the time to look at things and think through how things could be used' (Interview). This approach was also proposed in the focus group,

> I think the biggest thing is awareness of knowing what's out there and then seeing it in action. PD for teachers is the biggest thing. I've not been to anything that's specifically just about eBooks. I've been to a Literacy Planet PD, but it's about the whole site. It's not specifically about the eBooks. Mathletics has heaps of eBooks that go with their site, but there isn't specific PD around how they could be used…talking to other teachers and sharing and just finding it. But it's a modelling thing. If we see it, then our awareness rises, then we're more willing to try it, but if we don't see it, we're just so time poor it's unlikely to happen. (Focus Group)

Teachers also believed curated ideas and lessons would be forms of professional learning that would support their use of eBooks,

> I like how it's run on Story Box where you have links and resources and stuff like that. So, if EQ had stuff like that that was specifically related to different topics that we could be using more regularly rather than searching it up, that would certainly make things easier for us. (Focus Group)

> At the moment, I'm just using it as a teaching tool, but is there something more valuable we could use it to? How does that add to our pedagogy those sort of things, if they actually explain it to us…. It's not that we need explaining to, but if it's discussed, then the more likely ones that aren't using it will actually take it on board and give it a go rather than just saying we all use eBooks now so you can't borrow anything from the library and this is how it's going to be done. There's a purpose there obviously, I do it for the enjoyment and or helping the kids get a little bit more connections so we can have those discussions about the topics in the books. I do a lot of the social emotional

> stuff in the choices of the books that I choose, but I guess that's driven by me, not anywhere else. (Focus Group)

Sharing among teachers, not through formal professional learning, was also recommended by a teacher at School E.

> I know there are forums on our SharePoints and our teams that talk about other activities. Like, I'm on the Minecraft one at the moment… But I don't think there's anything like that about eBooks or things like that. Where you can share what you've done or what's worked well for your class and things like that. (Interview)

Teachers also felt there was development work to do with parents/carers to support the use of eBooks. In particular, teachers expressed a perceived need for such work to focus on how to engage with young people when reading eBooks,

> I think also it's about awareness [for parents/carers] of what's out there and also helping them to know the types of things that their kids are reading, engaging with their kids when they're reading an eBook. We encourage parents to sit down and read a book with their kids. Well, sit down and read an eBook with your kid as well and just see what is it that they're looking at. (Focus Group)

The teachers also felt more professional learning about eBooks could be integrated into planning and assessment conversations at the school and department level, posing a series of questions for school leaders,

> In terms of the Department leaders and managers, is there a policy on eBooks? Is there recommendations on eBooks? What do they think about it, and what do they want us to do with it? Probably again, when we're doing curriculum writing and curriculum planning…does eBooks need to be mentioned more within that context? So, it's more of a consideration. (Focus Group)

eBooks and Health and Wellbeing

Teacher Perspectives

Several teachers spoke about the possible health issues involved with students using iPads (not eBooks specifically) as well as the strategies they and the school had in place to alleviate them. As one teacher said,

> I think it's just something I generally do that would help them. Yeah. So, resting your eyes, fixing your posture, it's just something I practice every day, and hopefully, that does influence while they are reading, and it's part of those reading strategies as well. (Interview)

And this,

> I'm very aware of their postures and their necks and their shoulders as we're all sinking down and looking at it … most of them have stands, but the chairs and tables aren't ergonomically friendly to meet everyone's height needs. (Interview)

The school strategies the teachers recalled adopting to mitigate health issues included looking away from the screen after 20 minutes of iPad work and using 'little stands they can put the iPad on the stands we use so they can bring them up to a better height to read' (Interview). Teachers also recounted teaching their students the affordances of the device that might support eye health,

> When I'm teaching them to use the eBook library, I show them the part where they can change the colours, change the background and things. So, we talk about how in the daytime, the white with a black font is a little easier to read. But if you're reading at night or in a darkened area, it's actually better to do that dark background with the

> white because you can see a little bit more clearly. It's a little bit better on your eyes. (Interview)

Another teacher described how she used eBooks (and reading generally) to discuss issues that might arise in her classroom and to teach students about behaviour, relationships and emotions,

> So, if I see particular needs or particular knowledge or discussions, I want to have, sometimes [reading] a nice way to bring up a topic. So, kids may be behaving in a way that's probably not the best way, and I don't know how to explain it to we might bring in something like that [book]. So, it's coming from an outside point of view, and we start that discussion, and then we can begin the reflection on the behaviour. (Focus Group)

Observations of Young People

In the observation in Classroom 2, students participated in silent reading. Most students read material on their iPads. Corroborating the accounts provided by teachers above, the majority of students were using an iPad stand to ensure they weren't looking down on a flat surface to read to support appropriate reading posture (as seen in Figure 26).

Figure 26: Use of stand with iPad – School E

Case Study School F

School F employed more than 200 teachers and had a student enrolment of more than 3,000. Moderate levels of relative social and educational advantage characterised the student population. About a quarter of students enrolled in School F were positioned in the top quartile for socio-educational advantage, and roughly one-third were positioned in the upper-middle quartile. One in every fifty students at School F identified as Aboriginal or Torres Strait Islander, and three in every five students had a language background other than English. The case study of School F presents data from 11 teachers (across interviews and a focus group) and two classroom observations. This case study draws upon an extensive data set as the school is a Prep-12. The data has been organised into primary and secondary cohorts where appropriate.

Reading and eBooks

Attitudes, Preferences and Use of eBooks

Teacher Perspectives

Regarding their reading preferences, most teachers preferred reading print books rather than eBooks. In these teachers' explanations, this preference seemed to stem from their upbringing, personal preferences such as the feel of print books, and a sense of control over the text. As one of these teachers commented, 'It's paper books for me, most definitely—one hundred per cent' (Interview). While expressing a preference for print books, another teacher added, 'I do eBooks if I'm desperate for a title I can't get... I'll do it then' (Interview). A third commented that she had begun to use audiobooks (such as the Harry Potter series), particularly when driving. This same sentiment was commented on by the teacher who preferred to use eBooks, adding that she also used eBooks when completing tasks around the house because it was convenient.

All these teachers thought eBooks would be used more in 5 to 10 years and that this would be at the expense of print books. Often, the rise of eBooks was presented as inevitable. As one teacher said, 'News is digital. Everything's digital. You hardly ever see a newspaper now. Books will slowly go that way as well' (Interview). Several commented that students' use of print books had already been declining. Several reasons were given as to why eBooks would rise in popularity, including their storage capability, increased availability, accessibility (particularly for students who did not purchase print-based texts), practicality, versatility and portability.

The teachers at this school commonly gave several reasons for using eBooks rather than print books in their classrooms. One of the main reasons provided was access to a vast catalogue of books. Ease of use was often mentioned, particularly concerning students' ability to log in, set up and go to the app. Convenience was also discussed. As one teacher explained, the school was so large it was difficult for library classes to be held more frequently than fortnightly or for longer than 15 minutes at a time. eBooks, he went on to say, alleviate these issues:

> With our eBooks, they can borrow any book anytime, anywhere, as many as they want. If they can't get a book, they can put it on hold and get it in a few days. So, it really streamlined that selection process for them to get books. (Focus Group)

A reason for some use of print books at this school instead of eBooks was the backlash from parents/carers. As one teacher explained:

> Parents, I would say, are fairly anti-eBooks. . . So, many of them feel like, "Oh, if I let my child say they're reading in their room, they're probably not going be reading in their room, they're probably going to be doing something else." A lot of parents prefer the security of a paper-based book because they know they can't access anything else. (Interview)

Reading Habits of Young People

Teacher Perspectives

All teachers interviewed thought eBooks were impacting young people's reading habits. As one teacher said, however, 'we can give you anecdotal evidence of the kids reading a lot and enjoying it. To draw any direct links is very, very difficult' (Focus Group). For the most part, this impact seemed to relate to having immediate access to a wide variety of texts and the freedom to choose what they read from among this collection of works. Several teachers spoke about how they thought the eBooks were engaging. As one teacher said, this engagement related to student learning outcomes, 'So, you know if something's really engaging, it's educational, that's going to impact our student outcomes' (Focus Group). Another teacher focused on how she thought eBooks encouraged self-motivation and curiosity 'to discover new things' (Focus Group).

There was some general agreement among teachers that students' reading habits were changing. Teachers reported that students were choosing easier books to read, choosing graphic novels, flicking, clicking through quickly instead of paying attention to words, and not always finishing books. Some teachers preferred to assign books to students, 'I don't let them choose willy-nilly what they'd like to read because they always choose the lower end, the easier option' (Interview). Other teachers saw their role as influencing book choice and noted, 'you can definitely see in their reading behaviours that it does change with the texts that we study, and they're starting to discover new texts in that way as well' (Interview). Another teacher felt that reading habits were influenced by their peers, 'You'll notice a lot of our kids are reading the same books, based on conversations they have or shared general interest' (Interview).

Teachers in School F suggested a range of factors had influenced students' selection of reading material, including friendship groups and in-class reading. One teacher thought students who lacked the resilience and concentration to remain on task for long periods selected picture books because these could be quickly flicked through. Another teacher spoke about how reading age impacted eBook selection in her class of students with higher reading abilities. As she explained, 'they are reading at a higher level, [but] Overdrive or Sora is set to a certain age, … so there are some books that they can't access, that they want to read that are at their level, but because of their age, they can't access' (Interview). She acknowledged, however, that this was also an issue at School F that equally applied to the library's print-based book selection.

Observations of Young People

When observing young people using eBooks in the classroom, in classroom 1, all students accessed eBooks via their iPad individually. There was no option for a print book in this learning experience, even if that was a preference. In classroom 2, a small number of students were also using their laptops. The BYOD school policy influenced the heavy use of technology. Both classrooms used eBooks at the beginning of the activity as "silent reading" as part of the classroom routine after a break. In classroom 1, they were observed collecting their iPads, opening up the eBook reading app, and starting to read. At the end of the activity, the app was closed, and they moved on to the next learning experience. The eBook was selected and borrowed based on pleasure or interest, and the expectation was that they would continue reading these texts out of school (Observation, Primary).

In the observation, it was noted that eBook was selected and borrowed based on pleasure or interest. The expectation was that students would continue reading these texts out of school (Observation, Primary). In classroom 1, students were in the main reading "chapter books," while a few were reading graphic novels. In classroom 2 (upper primary), about half the students were reading "chapter books," while the rest were reading graphic novels. Four students—all boys—were listening to audiobooks. Only one of these students was wearing headphones (Observation, Primary).

eBooks in Education

eBooks in Learning and Classroom Practice

Teacher Perspectives

Regarding recommendations for other schools regarding the use of eBooks, findings were limited. Teachers primarily focused on recommendations for teachers (as distinct from schools) and reflected their own needs. One teacher spoke about wanting to see more non-fiction books, particularly those related to Australian history. Another spoke about wanting to have a range of text types available, not just graphic novels, and being able to access class sets of eBooks for chapter analysis. One other teacher spoke about wanting teachers to be more open to embracing new technologies and the responsibilities that this brought. As he explained,

> I guess convincing teachers that, and as I was talking [about] before, the kids need to be the master of their devices, and they need to own it. They need to be responsible for how they read and having teachers and everyone else open to using these technologies that are often mistakenly seen as evil, when it's really just a cultural change. Ten or twenty years is a big time if you haven't grown up with something, to really embrace it and see it as the norm and remove that entry barrier. When anyone tries anything for the first time, it's a novelty, especially for the younger kids. Once they've used it enough, it ceases to be a novelty and becomes a productive tool, the same as a pencil, pen, and everything else. (Focus Group)

There were mixed views among teachers about whether their interactions with librarians had changed because of the increasing use of eBooks. Two teachers thought there was little change, with one commenting about the librarian, 'She's very passionate about books, but it's kind of embracing both [eBooks and print books] because she wants the kids to read. It's not about how it's delivered' (Interview). Others spoke about the declining use of the library at the school. For example, one teacher spoke about how library lessons in the upper school had been discontinued because of the time constraints mentioned above, but had returned because of staff requests. Another spoke about how as her students were returning to library borrowing, 'a lot of the kids have almost forgotten, being so young, that you do have [print] books' (Interview).

In terms of classroom practice, all the teachers in the focus group spoke about using eBooks via iPads for silent reading, particularly after lunch or scheduled breaks. Using the eBooks in this way also seemed to be tied to encouraging on-task behaviours. As one teacher described,

> To me, it's generally just a time for them to come down after the break. Usually, I do find after the break that they're a little bit hyped up, so not only is it a tool for them to practice their reading stamina, but it's also a way to calm themselves back down to get into learning. (Focus Group)

Thus, it seems that teacher use of eBooks was limited and often confined to the singular activity of silent reading to regulate behaviours. Several spoke about using them as behavioural tools, as 'a good use for wind-down time' or as a 'settling activity… to be quiet and get ready and get their brain settled and ready to go onto other learning' (Interview).

In the interviews, three examples of eBook utilisation were identified. One teacher spoke about using them for poetry analysis in English, in which she airdropped small poems so they could look at them and pull apart text structures. Another teacher added that she used eBooks for text comprehension and building vocabulary. The final teacher noted that they utilised eBooks in a unit that compared books and film adaptations. eBooks were used in literacy rotations and book studies related to that learning experience.

In the main, teachers' comments about eBooks reflected an orientation towards teaching applications rather than a focus on student learning. For example, one teacher spoke about how students could

access different texts in their reading groups. Another spoke about how eBooks overcame supply issues, adding, 'And sometimes enough for everyone. Just sometimes just enough to supplement the shrinking number of physical books that we had' (Focus Group). To these teachers, effective use of eBooks seemed to make their current practice easier, with particular features of the tool identified as facilitating this ease.

Observations of Young People

The two classroom observations confirmed the teachers' view that eBooks were primarily part of silent reading or as a classroom routine to settle or refocus students. In classroom 1, the teacher conducted one-on-one reading comprehension assessments at the front of the room while students engaged with eBooks in this manner. The teacher was sitting side-on to the class and was not visibly monitoring book choice or reading. The teacher was fully engaged in the assessment he was conducting with the selected student. At the end of the silent reading period, the teacher stood up, got the students' attention, and called an end to the task (Observation, Primary). In classroom two, students were expected to read silently. The teacher did not communicate any other expectations, which confirmed that this was a routine part of the school day. In this observation, the teacher circulated the room and monitored students' reading throughout the task's duration.

Teaching and Learning Affordances

Teacher Perspectives

Teachers generally were not that familiar with the affordances and functionalities offered by eBooks. For instance, one teacher who was familiar with the functionality of Mathletics was critical of the capacity of eBooks programs to provide differentiated instruction, track student reading and monitor text selection. This comment demonstrated a low awareness of the affordances of the program's analytics in this school context and how to access them.

Teachers seemed unclear about other functionalities offered by eBooks, but there was some reluctance to use some of the functions. For example, several teachers spoke about students using the audio function. However, one of these teachers commented that she thought this feature was not suitable for her higher-achieving students because,

> Most of my students are very high achieving, so they prefer to read it than have someone else read it to them. Um, yeah, I wouldn't say many in our classroom use the audio option, but perhaps at home, a few do. (Interview)

Two other teachers gave a contrasting view, expressing a concern that lower-achieving students would take advantage of this feature. One teacher thought,

> Some kids prefer the audio feature and listen along, but I very much limit that to my high-end readers, who I know have developed those basic skills already. I would actively discourage that for someone who is still developing. (Interview)

And a fourth teacher, while thinking this feature might benefit lower-skilled students, also thought, 'some would do it just because it was easier. And they're very clever at that [i.e., taking the easy option]' (Interview).

Another teacher at this school spoke about the eBook and iPad interconnectivity and the capacity to hyperlink texts. She felt this was particularly advantageous for students to be able to hyperlink to definitions of difficult or unfamiliar words. She also spoke about students using a split screen, which enabled them to read on one side and an app on the other. However, she later acknowledged that she did not know to use this function herself and that it was something some of her students used and had shown her. Another teacher spoke about how eBooks could enable students to 'go on those tangents of learning' (Focus Group). As she elaborated, students could ask tangential questions and pursue them through the resources available on eBooks. Overall, the teachers had little to say about

whether the affordances of eBooks facilitated the learning of students with special needs or helped to differentiate learning for students generally.

Observations of Young People

The observation of classroom 1 found students used Apple pencils to annotate the texts they were reading, especially those students reading “chapter books”. When asked about her annotation, one student explained she highlighted unfamiliar words in yellow and passages of text she liked in green (see Figure 27).

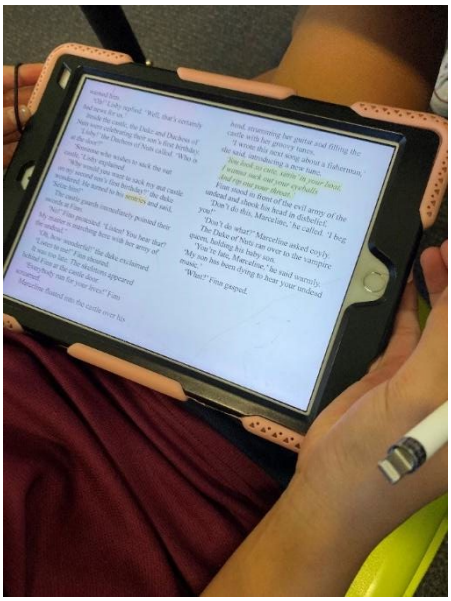


Figure 27: Use of highlight function by a young person – School F

The use of annotation was also evident in a lower primary poetry class. Students used the highlight function to identify and colour-code text conventions as part of a learning experience (see Figure 28).

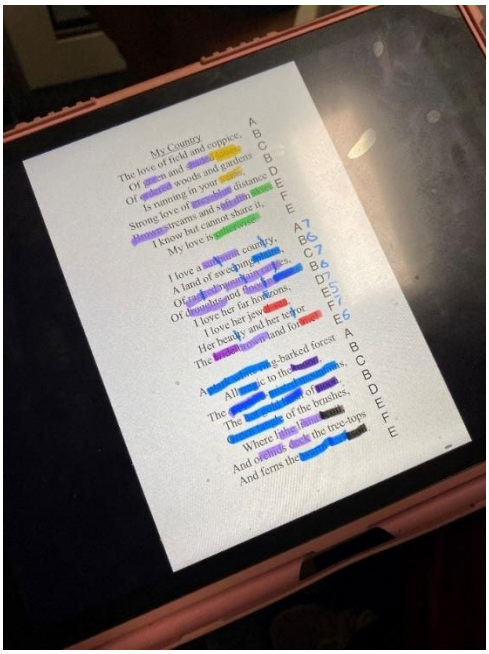


Figure 28: Use of annotation and highlight eBook feature – School F

Another student was noted using hyperlinks and a web browser instead of the eBook reading app. Initially, the teacher believed the student to be “off task.” However, when his teacher spoke about

this “off task” behaviour, the student showed that he had actually been looking up an unfamiliar term in the book. Later another student used the web to look up the same term, and the teacher praised both students for using this affordance to learn vocabulary.

Other affordances identified in the observation included black backgrounds, changes in font size, and students customising either a one-page or two-page layouts of the eBook on the screen.

Implementation of eBooks in Education

Enablers to the Implementation of eBooks in Education

Teacher Perspectives

When exploring factors that enabled eBook use or were barriers to this use, the teachers were quite divided. Several teachers thought the school’s BYOD policy was an enabling factor for the adoption of eBooks. As one teacher said,

> I think we have zero issues with kids bringing in devices here. We’re in a good environment where 96% of our community can bring in an iPad for their kids. So, it might be one student per class that isn’t able to do that, and we’re able to provide that. (Focus Group)

Some teachers indicated that iPads contributed to the effectiveness of eBooks, particularly because they are portable and easy to use and login to. As one such teacher explained,

> I think the benefit of the iPads is that they can just pick it up, open the app and go straight into it. It’s not like a computer where they’re picking it up, logging in, loading the app, and they are inherently waiting longer to get started, loading the web page, logging in, and getting in there. And it’s also easier to get more comfortable reading the iPad. (Focus Group)

Other teachers identified enablers such as ease of access, availability, and convenience, as shown in the following comments.

> They don’t have to worry about only being able to borrow on this day for library and they’re restricted around being able to borrow. On here [eBook app], they don’t have to worry about returning a book on time because it’s just automatically returned, with the expiry they have. (Focus Group)

> I guess convenience. And the fact that they can get to it rather quickly compared to me setting up the [print] books. Everything’s done online. It’s much quicker to go online together than through a hardcover. (Focus Group)

One teacher spoke about how eBook use made it easier for students to share their work at home. She added, ‘So, it allows for more home and school communication with them learning as well’ (Interview). Another spoke about how she thought eBooks encouraged more reading and improved reading. As she explained, this improvement was because parents/carers could regulate or control student reading and keep them on task.

> With the parents being able to have parental controls on their devices at home, they can lock all their games when they should be reading, and they can still do some reading. So, there’s definitely been an improvement in reading. (Focus Group)

In the interview and focus group, other teachers focused on the literary benefits of using eBooks, including giving students access to many different text types, books and making connections. As one teacher explained,

> They can actively find and make those connections between authors. They can search out their style and find new authors. The kids can make the connections between the

> style, the authors, and the style of story they like. That I think that's the major benefit for them. (Interview)

Observations of Young People

Observations confirmed that access to technology (specifically the school's BYOD policy) meant that all students had access to eBooks and supported its utilisation in the classroom. Students used eBook programs from grade three and were used in learning experiences (such as poetry) that exposed them to the functionalities of eBooks from that year onwards. iPads were used throughout routine teaching and learning, and students appeared to have good knowledge of how to use the technology.

Barriers to the Implementation of eBooks in Education

Teacher Perspectives

Overall, teachers perceived the possibility of student distraction and "off-task" behaviour as key barriers to using eBooks. Indeed, concerns about control dominated teachers' discussions of barriers. For example, one teacher said that when the students read eBooks, she (the teacher) 'can't really see what the kids are doing in class sometimes' (Interview). Another stated 'some of these guys here struggle to maintain self-control using the iPads or using the Internet' (Interview). This same teacher added that issues were more common at the start of the year and after holidays when students were likely to still have games loaded. She also thought that 'getting distracted and looking at things they shouldn't… (was) increasing' (Interview). As other teachers explained,

> There is a distraction, as students can click on a game if no one's watching. There are too many options. And if you give children too many options, they will choose all sorts. They're not as disciplined. (Interview)

A similar concern related to the use of iPads to access eBooks,

> Well, it's very easy to press the home button and go to another app. Yeah, and I sometimes see kids drawing instead of the reading that they're supposed to be doing. And it's because it's there. It's right there. Whereas a hardcopy with reading, they can only be reading. (Focus Group)

And as another teacher said,

> There's a lot of that time-wasting on a device. With a book, you get straight into it. I'd say, "Eyes on text," and make sure that eyes are down. If they didn't have this (points to iPad), they'd do this with a book (pretending to read a piece of paper). And I remember saying, "Look at the text," and even if they're just staring at the one page, at least they're getting that reading. But with the iPad, they do with this (mimes swiping) and, you know, they're not looking around, but I'm not seeing reading, and I'd have to go in and spy on them, almost. (Interview)

Thus, concerns were expressed about whether students could become easily distracted by the eBooks and whether features in the devices, such as the capacity to swipe pages, impacted their reading capacity. There was also concern by some teachers that the use of eBooks meant teacher loss of control over monitoring student reading development. Related to this was concern about policing appropriate use. One teacher explained her practice as follows,

> If it is the first time [there is an issue], bring your iPad to the office for the rest of the day, the second time, your parent has to pick it up, third time, you've lost your iPad for a week. So, if the teachers are strong on the BYOD expectations, I don't think it's a problem with the students. (Interview)

However, another teacher saw that both teachers and students were responsible for following appropriate behaviours.

> I'm a big believer in the idea that your job as a teacher is to encourage that culture where, not to lock things down and not to stop people from doing anything on their iPads, but to embrace it. It needs to become a teacher's responsibility and the student's responsibility as well, to say these distractions are part of our life. We need to learn how to manage it. (Interview)

Later this same teacher added that 'the kids need to be the master of their devices, not slaves to their devices' (Interview), a phrase he repeated several times throughout the interview. Other barriers included internet outages, students using a lot of school data usage, charging times, and students needing to remember to download eBooks before going home if they had limited internet access. Another teacher identified the reading age limits set in the app as a barrier, especially for her class of high-achieving students.

> Because they are reading at a higher level, OverDrive or Sora is set to a certain age ... So, there are some books that they can't access and want to read that are at their level, but because of their age, they can't access. (Interview)

Observations of Young People

Observations confirmed that access to technology (BYOD school policy) meant that all students had access to eBooks, reducing access barriers. Classroom 1 observation noted that the classroom was built so that it didn't have an effective mobile phone signal, which the teacher confirmed. The teacher suggested this was a barrier for teachers or students using their mobile phones to access eBooks if there were issues with iPads, rather than for teachers and students connecting to the Wi-Fi.

Professional Development and Support for eBook Implementation in Education

Teacher Perspectives

While several teachers had previously received some professional development in eBook use from another teacher at the school, most teachers, including the teacher who led the professional development program, described themselves as self-taught and learning by experience. As that teacher commented, 'I just played with it until we knew it inside-out. And then I went and told all the teachers about how to use it' (Interview).

The teachers did not feel it was necessary to train students to use eBooks. Rather, they thought students already had the skills to do so, because they had been in used at the school for some time and given that initial issues such as internet interruptions had largely been overcome. If students did lack the skills, as one teacher explained, they could quickly learn from other students.

> They're pretty good at being able to engage with each other if they're having issues with logging in; they're able to help each other out and sort themselves out to get into the program. (Interview)

One teacher also commented on how she thought eBook use was now entrenched practice in the school, with students for example, knowing to have more than one book downloaded at a time. Several teachers also commented that such training was unnecessary as students intrinsically had the skills to use the tools. As one said, 'Yeah, that's kids. It's the technology age. They're good at just exploring and finding things' (Interview). Similarly, when talking about the need to train new students and staff to use eBooks, another teacher commented that 'we almost don't have to show them because culturally they just absorb it' (Interview). Some did comment, however, on the need to support students' selection of appropriate eBooks to read. Another teacher outlined that they had previously provided training for students when they introduced eBooks into the school five years ago. This training program focused on using the app and how to find and borrow books. Some functionality feature, such as changing the font size and bookmarking, were taught, as was explicit reading strategies and having one book they were reading another downloaded were explained.

None of the teachers thought parents/carers needed training or support in using eBooks. For several teachers, the issue of support seemed to relate to whether parents/carers supported the eBook initiative and not whether they required assistance themselves. As one teacher said, 'everyone's a lot more accepting of devices these days because we're all glued to them. Parents are, too. They're almost accepting that it's a reality' (Interview). And as another said, 'most parents are pretty good and happy with students reading on their devices, just happy that they're reading' (Interview). Two other teachers seemed to view providing support as giving more control to parents/carers to manage their child's use of eBooks. One of these teachers spoke about developing online modules that, 'started nearly out of a need for parents to be confident that the kids are doing the right thing' (Interview). He also spoke about how the school could block access to a particular app to help students stay on task instead of flicking between apps. On occasion, he also said that teachers had negotiated a passcode with parents/carers. As he explained,

> You know, Timmy can't control himself. If we want Timmy to use his device in class, I'm going to ask that you give me permission to put a passcode on his device so I can control what he's doing and that will allow him to continue to use his iPad in class. (Focus Group)

eBooks and Health and Wellbeing

Teacher Perspectives

Several teachers spoke about strategies the school had implemented to support safe student use of eBooks. One strategy included the use of a 20-20-20 rule, 'every 20 minutes you look at something 20 feet away for 20 seconds or longer' (Interview). Another teacher spoke about how she reminded parents/carers of the school's 20-20-20 policy during parent/teacher interviews, suggesting it could also be implemented in the home. One teacher mentioned noticing several students using dark screens to preserve battery life, encouraging them 'to not have it set too dark for their eyes, [some] are having to strain to read' (Interview). Another spoke about how some students had started bringing in blue light glasses. Teachers also commented about using tablet stands to aid eye health and using flexible furniture rather than a suite of desks to encourage multiple ways of sitting and facilitate posture health. Some teachers raised concerns about students' posture while reading eBooks, though typically only when directly asked about posture. One teacher described eBook use during silent reading time, 'When it's time to read, it's lounge around and relax and find somewhere to read, on this bean bag, on a cushion, or on the floor. And it's their relaxing time' (Interview).

Observations of Young People

In observing classrooms 1 and 2, there was evidence that the school was trying to address some health concerns, such as poor posture. For example, classrooms were "flexibly furnished," which meant it was filled with a mixture of "wobbly chairs," conventional chairs and desks, and cushions. However, most students involved in the silent reading task were seated at conventional-looking school desks and chairs/"wobbly chairs." A few students sat on the floor, on a cushion, typically with their backs against the wall, which may not have promoted correct posture. Most students seated at desks had their iPad positioned on the desk, either flat or standing up against the cover. One student had his iPad on his lap and was bent forward with his arms on the desk and his forehead resting on his forearms. The teacher was concerned he was asleep and asked if he was reading but did not correct his posture.

Findings from the Teachers' Perspectives about eBooks

The following are key findings from the perspectives of teachers in terms of the respondents:

- Teachers from six schools participated in 39 semi-structured interviews and focus groups, as well as ten observations. The greatest number of participating teachers was at School F and the least at School C, closely followed by School A. Most schools had seven participating

teachers (Schools B, D and E). Three of the participating schools were located in metropolitan areas (Schools D, E and F), and three were located in inner- or outer-regional areas (Schools A, B and C). Four schools taught primary schooling (Schools A, C, E and F), and four taught secondary schooling (Schools A, B, D and F).

The first part of the interviews asked teachers to describe their opinions about eBooks:

- Most teachers read for leisure. The teachers read a mix of print books and eBooks, however, most prefer reading print books. The teachers found print books familiar, liking the feel of the paper (its tangibility) and ease more so than engaging with screens on a digital device. Some explicitly choose to use print books as a reprieve or physical escape from using a digital device. Many teachers mentioned using audiobooks during travel or while walking.
- Limited professional development is available for teachers regarding using eBooks in the classroom. Those who were provided with professional development described a short session, operational in focus, covering topics such as accessing eBooks and logging into the system.
- Teachers reported that in many cases, eBook use relied on champions rather than concerted whole school policy and practice.
- Most teachers thought that eBook use would increase over the next 5 to 10 years and gave various reasons, including convenience, portability, access to many books and the impact of technology. Many thought that print book use would decline given cost incentives and increased use of technology in many other parts of life.

Teachers were asked to describe the ways eBooks use was supported within the school:

- Some of the schools in this project did not have a dedicated librarian. In those schools that did have a librarian, they were important in terms of setting up access to eBooks, providing professional development as well as advice about the functionality of eBooks.
- Teachers described how students selected eBooks, including the influence of teachers, parents/carers and peers. Particular genres and texts become popular due to peer recommendations and sometimes did not align with the texts teachers would prefer students read. Graphic novels and anime were often mentioned as one genre that was popular amongst students. Many teachers also mentioned the rise of social media on reading habits.
- Several schools had explicit BYOD policies, and accessing eBooks was better integrated into these schools. iPads were sometimes used in lower primary schools, with laptops mainly used in upper primary and secondary schools. Access to eBooks also involved internet access and login access, all identified by teachers as potential barriers to implementing eBooks in classroom activities.
- The majority of schools did not provide training for parents/carers about using eBooks. It was assumed that parent/carer support for using eBooks was all that was needed. A few teachers spoke about how they or others in the school emailed parents/carers with some updates on eBooks, including some resources and recommendations. One school described training parents to ensure they had more control and engagement with their children's reading habits.

Teachers were asked about the impact of eBooks on students' reading habits as well as health and wellbeing:

- Most of the teachers found it difficult to talk about the impact of eBooks on student reading habits. Teachers mainly used eBooks for silent reading, and one of the challenges raised was that they were unable to monitor reading habits as easily as they could with print books. Many were not aware of the functionalities in eBooks, nor possible impacts that these may have had on subsequent reading habits. Most teachers thought students were more engaged in reading, because students liked using digital devices and because devices were intrinsically engaging to students.

- Most teachers did not pay specific attention to the physical health aspects of eBook use. Examples of instructions to students included reference to taking a break from looking at a screen, ensuring they were comfortable during silent reading or that devices were at an appropriate height for younger students.
- Teachers were asked if they provided any training for students, and most assumed that students were comfortable using technology and would quickly and easily be able to use eBooks. Some spoke about sessions held at the start of the year to familiarise students with eBooks (how to access login etc.), often as a part of a library induction. Some teachers identified that students who did not have access to the technology did not have a chance to explore and develop these skills and suggested that explicit training for students would be useful.

Teachers were asked to describe the ways they use eBooks in their classrooms, and observations were conducted:

- Teachers used eBooks in limited ways in their classrooms. Mostly teachers used eBooks for silent reading, often following a recess or lunch break as a settling classroom routine. Some teachers connected their eBook to a projector, enabling them to use it as an instructional tool to deliver the same content to the whole class. Some teachers also chose to use eBooks in this way to overcome a lack of student access to devices. These teachers usually had hard copies of resources or print books also in use.
- The majority of teachers were unfamiliar with the term transmedia, often asking the interviewer to give a definition. These teachers were focused on using the device as an instructional tool, sidestepping or ignoring other functionality. Few teachers spoke about using other functions, such as altering text size. For the most part, eBooks were used as a tool to access content, analogous to print handouts or print books. There was little or no acknowledgement that the device could impact student literacy because of its design and functionality. Most teachers did not explore the functionality of eBooks that could support differentiation in any depth. Some general comments were made about students being able to access more appropriate texts suited to their interests and needs. Some teachers talked about using features such as audio to help engage reluctant or low-level readers.

Teachers were asked to describe barriers to implementing eBooks at their school. They detailed the following:

- Lack of access to devices (at school or home environment), having reliable internet, bandwidth, as well as appropriate logins and processes.
- Lack of whole of school policies and expectations regarding eBooks.
- The cost of buying a device and licencing was also identified as a barrier. This was problematic for some schools, where parents/carers struggled to pay levies.
- Lack of access made planning for use in class beyond silent reading activities challenging. Some teachers projected their eBook to share content.
- Some eBooks did not include full functionality (e.g., search or audio).
- The potential for the device to distract students was an issue raised by teachers, many expressed frustration at the lack of methods to monitor student use of devices.
- Many of the teachers in this study wanted access to multiple copies of texts, so the whole class could study the same content. They also wanted one-to-one access to devices, perhaps for management reasons rather than pedagogical ones.

Teachers were asked to describe enablers for eBook implementation and provided the following:

- Providing access to more literary texts and differentiation potential.
- Convenience and portability (saving transporting print copies that could be heavy).
- Students liked the eBooks because they were interactive and engaging.

Discussion

This research investigated eBook use from educational and health perspectives in a range of state school settings across Queensland, Australia and with a range of eBook service providers, including a centralised service run by the Department of Education. The aim was to provide stakeholders (e.g., teachers, parents/carers, principals, students, and the Department of Education) with reliable information upon which they can base decisions about eBook use.

Data were collected in six schools across four stages. The six schools were an outer-regional Prep-12 school of distance education, an inner-regional secondary school, an outer-regional Prep-10 school, a metropolitan secondary school, a metropolitan primary school, and a metropolitan Prep-12 school. In the first stage of the research, 184 parents/carers completed questionnaires across the six schools. During the second, third and four stages, 39 teachers participated in semi-structured interviews and focus groups, and 10 lesson observations were conducted. This research stage aimed to explore the barriers to and enablers of effective eBook use in the participating schools and generate teacher-led, multi-level recommendations for promoting such use. During this time, teachers, students and parents/carers experienced several lockdowns due to COVID-19, staffing shortages due to illness, managed hybrid classrooms with some students unable to attend school in person due to quarantine rules, and a delayed start to the school year in 2022 due to floods in South East Queensland.

The Activity Centred Analysis and Design (ACAD) framework (Goodyear & Carvalho, 2014) was used to guide the analysis of this data. The ACAD framework states that three areas are within the control of educational decision-makers: the digital and physical learning environment; the processes by which learning and teaching occur; and the roles, responsibilities and relationships of the teachers, students and other stakeholders. This framing helps to describe the ecology of devices, people and knowledge that support the use of eBooks in school contexts. It also helps generate deep stakeholder insights and reliable information about eBook use. This section of the report is accordingly organised around those three areas.

Digital and Physical Learning Environments

This research demonstrated that consideration of the complex nature of the digital and physical learning environment is essential to the productive use of eBooks in classrooms. Infrastructure is required for eBooks to be used effectively. This includes: the infrastructure for the devices (for example, phones, tablets, eReaders, laptops); network connectivity (for example, reliable Wi-Fi); access to eBooks (for example, membership to a library or subscription to a service); and continued access while reading (for example, ability to download the book or continued access to a network, the device needs to be charged, the device needs to be available to the person reading). While all these features are essential to the effective use of eBooks, they have not been found to strongly predict positive attitudes towards eBooks (Liaw and Huang, 2016). Other technology considerations to support the implementation of eBooks into classrooms include using stands for tablets to ensure that they are at the right height, projectors and screens to share text, and headphones if audio features are being accessed.

There has been some research comparing eBooks and print books in relation to reading habits and preferences, and learning outcomes (Myrberg, 2017; Myrberg & Wiberg, 2015). The physical nature of a print book provides cues to the reader, teachers and/or parents about young people's progress through the book and the nature of what they are reading. These aspects are more hidden with eBooks for all, which has implications for the assumptions and judgements made about young people's reading habits and engagement.

People have strong preferences for the type of book they choose to read. A teacher at School B spoke about how she liked to browse in bookshops, picking up books and flicking through their pages. Several

teachers talked about finding print books more accessible and engaging. Parents/carers reported reading using both eBooks and print books for their own reading. In some instances, teacher's preferences and habits informed their teaching philosophy and their views on eBook use by students.

Parents/Carers reported using devices such as phones and tablets to access eBooks and their children used laptops and tablets. Very few reported using dedicated eReaders for accessing eBooks. It was evident that young people were accessing reading material using different devices for different purposes, depending on whether they were in the school or home environment. For example, students read print books at home for various reasons (e.g., they didn't want to carry the book or share their book choice with peers). They also had particular reasons for accessing eBooks (e.g., ease of transition and access to different genres or formats) and audiobooks (e.g., for relaxation or taking a break from screens). Several students reported reading several books simultaneously on multiple devices, driven partly by the environment. For example, one student read print books at home because it was quieter and there were fewer interruptions (School D), and other students read print books at home because they were concerned about books being damaged when brought to school (School D). The research showed that students often navigated multiple books across different platforms and devices.

Schools have access to data about student use of eBooks. At School E, the school librarian analysed this data and noted that reading had increased among students since introducing the eBook program and that this increase had coincided with the introduction of the school's one-on-one iPad school policy. According to the teachers, this school policy impacted the mode of eBook access, with most students accessing eBooks via their iPads. In this school, the data showed no significant differences between the titles of books borrowed using eBooks or print – the same books were at the top of both lists.

Teachers also reported that their students used multiple devices and platforms. One teacher from School A (a distance education school) explained that students often used multiple screens and applications they engage with when learning, stating that students have 'got Ultra open, they've got OneDrive open, and then they could have their eBook open as well' (Interview). This observation raised questions for teachers about how to help students engage with the information in a meaningful way.

There are concerns raised by parents/carers about eBooks in relation to their impact on young people's health and wellbeing including: sleep concerns due to the light from the device delaying sleep; eye health concerns due to blue light and also focus on screens; and general implications for human movement such as physical inactivity, posture concerns from sitting in one position for extended periods. This is a complex space, as seen in the results of the parents/carers' perspectives – people use many devices for different purposes beyond reading eBooks. In addition, reading is inherently a sedentary activity and, to date, no studies have attempted to determine a difference between eBook reading and print reading in relation to sedentariness.

Parents/carers and teachers reported concerns regarding increased screen time and the potential for their children to be distracted while on a device. The amount of screen time was seen by parents/carers as a reason not to use eBooks. It was the reason many students identified they read print books at home or used audiobooks in response. At School D, students recounted that they were looking forward to reading more print books over the upcoming holidays because they were 'sick of their laptops.' However, the school library didn't allow borrowing of print books during that period. Some teachers also described concerns about screen time when it came to their own decisions about reading:

> I use them for work, so I don't use them for leisure. Really. Yeah. Honestly, when I'm not working, I try not to look at my computer screen because I spent so much of my life looking at a laptop screen. (Interview, School B)

In general, there was very little knowledge and understanding of the health implications identified in the literature. The research conducted in primary schools demonstrated more specific health-related strategies than that conducted in secondary schools. There wasn't any specific professional development aimed at the health implications of using eBooks. In many cases, students were using eBooks during silent reading for 10-15 minutes, and so students were encouraged to be comfortable for the relatively small amount of time spent on this activity.

Teachers discussed the benefits of eBooks in terms of the physical impact on themselves and their students of carrying heavy, bulky print books/textbooks (School B). A teacher at School D described:

> I'm now not lugging around 40 novels and whatever for my students to read. I went, "why the hell am I doing that?"... I realised I've been doing myself a bit of a disservice. Why am I doing that when I've got all these books which are absolutely free of charge? I can actually say to my students, "look at this book on Sora" or "see what's there and that you what to read." And as far as remote learning, the fact that I can assign a book, I've got students with me all the time going, "How can I expand?" "What do you recommend?" I read, and I go, "Oh, look, go and check these out." That means I don't have to lend them my books anymore. It's so that that way it has been. It's been good. (Interview)

At School D, eBooks were used for activities other than silent reading; however, none of the teachers commented on specific ways they supported student use of eBooks in ways designed to promote or maintain health and wellbeing. As one teacher explained, 'I haven't even talked about those kinds of things [health and wellbeing]. I talk to them about recommendations for books, but not about reading as a physical activity' (Interview). During observations at School D, one student commented that they preferred audiobooks or print books because they 'get dizzy if I read too much on the screen' (Observation, Classroom 1). The second student stated, 'I like audiobooks once my eyes get tired,' and the third outlined, 'eBooks are lighter to carry around, but they hurt my eyes' (Observation, Classroom 1). Despite these concerns, most parents were motivated by the potential to increase their children's reading time and frequency, even if this meant accessing a device/screen time.

The functionality of eBooks supported reading for pleasure and increased motivation to read (for reluctant readers) and to support those who read at a lower level of proficiency. A teacher at School C described the potential of the audio feature as follows:

> We have got lots of kids who can't read, lots of kids that should be able to read. Like I'm talking up to high school [age] who can't read. So, there's a big opportunity to get kids engaged in reading through audiobooks. We're also finding we have kids who can read really fluently, but the comprehension is not there. So, whether or not taking that cognitive load out of reading through audiobooks might actually help with comprehension as well. We just did some testing not long ago, … but it was scary. Kids could read but really can't go about beyond the lines or even between the lines of what the text is actually trying to say. And so, maybe eBooks and audiobooks could help. (Interview)

In general, when it came to eBook functionality, teachers at School D listed features such as annotating text, highlighting text, adding notes, clicking and dragging, copying and pasting, changing fonts, and searching the text. Others described projecting the eBook on a screen (School B, D and E). Convenience in terms of access has been described as a benefit so that if students are not at school for sporting reasons, remote learning, or have dual living arrangements, they can still access the text (School A). A

teacher at School F spoke about how eBooks could enable students to 'go on those tangents of learning' (Focus Group). As she elaborated, students could ask tangential questions and pursue them through the resources available on eBooks.

Greater access to books means that students can make decisions about reading for themselves. Some families have priorities that do not include reading for pleasure. A teacher at School C (a small state primary school in outer-regional Queensland with high levels of relative social and education disadvantage) felt that for students who may not have access to books at home, eBooks were an effective option to access reading material they would not otherwise have been able to,

> We have got kids at school who don't have a book in their house. It's scary. There is nothing to pick up. There's no newspaper or magazine because their parents are just using their phone. So, if we got these subscriptions that they can access via the phone then they might have a bit more opportunity to access it. (Interview)

Access to an eBook library means that readers can potentially choose from more titles than a school library, or even a community library, would have available. There is also more likelihood of being able to read the next book in the series or a widen their genre choice. Young people can access these books during school holidays when school libraries are closed. A teacher from School C described this in the following way:

> For a small school like ours, you can only provide so many books and options for kids. You can only have so many books in your library, and it is getting harder and harder to get kids to continue to read, especially when you get to that Grade 6, 7, 8. It's difficult to find something of interest to all kids. Like if you got eBooks means you have got so many more options, I guess. So that will mean people will use them more. (Interview)

In the schools included in this research, how students accessed print books and eBooks (including the platform and the device) was influenced by policies at different levels. This included classroom-based decisions, priorities and policies, such as the use of eBooks permitted by teachers to school-based decisions, priorities and policies, such as BYOD initiatives. Classroom-based decisions were connected to the teacher's personal preferences, as seen in the following comments,

> I have a rule, my students must borrow one paper book every week. They can access the digital books at our school…so my expectation is that every student, every week, must borrow a minimum of one book. And so, when we go to the library, we only go for 15 minutes, just because it's a time pressure with access to the library, and it's fast, it's go in, find your books, borrow, and you can't leave without borrowing. (Interview, School E)

> I think we feel the kids should have a book in front of them. I can't imagine sitting on my phone with my kids watching the screen, me reading a book like I would with paper books. I've never ever read a book on my phone to my kids. (Interview, School B)

> Previously, when the students read, I would also take out a book, like a paper book, and just read in front of them. Now, with Sora, in particular, this year, what I've been doing is whatever I'm reading [on the eBook], I have [projected] on the board . . .I have just finished rereading the Day of the Triffids, and that was on the board. And sometimes I'll see the kids just look at the board and stare at that while I'm reading. (Interview, School D)

Four schools included in this study were BYOD schools. In those cases, the supporting infrastructure and expectation that students have a device on which books can be read were established by the school's leadership and teachers, as well as a culture of learning and teaching that supported the practice,

> So, it's a BYOD school, so it's pretty much all laptops. The only ones that use iPads are the technology-integrated curriculum students. Those kids have iPads. If they're doing [reading] in school, they will mostly do it on their computers. I'm not sure how they do it outside of school. I'm sure some of them would use their phones because the app is quite user-friendly. (Interview, School D)

Significant differences were observed between BYOD schools and non-BYOD schools in terms of access to the technological infrastructure for accessing eBooks. One teacher at School C reported:

> We have 20, maybe 30 iPads in the whole school. We have around 140 kids in the whole school, but you can book them out at different times. There is the option for parents to use the same resources as well. But we aren't a BYOD school, so we tend to use paper-based stuff. (Interview)

Subscribing to an eBooks program meant every student had access to a broader selection of books beyond their home environment (School D). However, this depended on reliable access to technology and network connectivity. Socio-economic status and location played a significant role in access to both devices and ICT infrastructure. This divide was particularly evident in the distinction between the rural/regional schools and metropolitan school data. While students with limited connectivity could download books to their devices at school to read at home, they often shared one device or laptop with parents or siblings (School A). Other participants noted that 'there's still a lot of students that won't have access to the digital unless we as a school actually provide them with a laptop' (Interview, School B). Families often met the costs of participation in technology and BYOD initiatives, which can be cost-prohibitive. Access to technology and technological knowledge and skills also impacted access,

> What we've found out during COVID[-19] is that other than their phones, parents and kids don't have much technology at home, which we were surprised about because we live in a very technological time. Our kids don't know how to use the computer as they don't have one, they know how to swipe on their phone and how to get into games. But they don't actually know to use computers effectively So yeah, we've got to teach a lot of that at school, and we might be a little bit different to other areas, being we are a very small country town and a low socio-economic town, I suppose that influences this. (Interview, School C)

Teaching and Learning with eBooks

The use of eBooks in classroom teaching is related to national priorities related to literacy and the aim of teachers and parents/carers to nurture an enjoyment of reading in their students and children. This study did not explicitly investigate relationships between eBook use and literacy outcomes. Instead, the research focused on topics identified as important to literacy through the literature review, including motivation to read, transmedia skills and reading for interest or pleasure.

The parents/carers who reported on their children's use of eBooks detailed that some of the main benefits they associated with eBook use concerned broadening access to literary texts, improving vocabulary, and developing cognitive skills. The majority reported no change in reading behaviours in themselves or their children through the use of eBooks. Parents/carers who reported positive changes in reading behaviours after their children used eBooks were those in regional areas and whose children were in secondary schools. In these cases, increased motivation to read and increased time spent reading were reported. These findings aligned with early research into the use of eBooks that found that the novelty of technology can enhance motivation to read (Ciampa, 2012a; Ciampa, 2012b; Felvégi & Matthew, 2012; Maynard, 2010; Roskos et al., 2012; Taylor, 2012), especially with older children (McGeown et al., 2015).

In most schools included in this study, teachers described using eBooks as a direct substitute for print books. Some of the observations of the use of eBooks in a classroom context were part of independent reading (e.g., School E), as a settling mechanism (e.g., School D), as a classroom beginning routine (e.g., School D), as an optional activity while other activities were completed by students (e.g., School C), or sometimes as a resource that students could access outside of school (e.g., School A). Several teachers at School F spoke about using eBooks as behavioural tools, as 'a good use for wind-down time' or as a 'settling activity… to be quiet and get ready and get their brain settled and ready to go onto other learning' (Interview). Common activities included silent reading or projecting the book onto a screen. Many teachers said they would like access to class sets of eBooks because these were not available within the subscription package their school had purchased. As a consequence, these teachers felt limited in how they could use eBooks in their classroom practice,

> If there were more class sets, you would use eBooks more. Well, it's a hard one, because students pay fees specifically for the novels, and this helps maintain our library and our extensive class sets of novels. We rely on those payments, which is why I can't just say yeah, because there's a pdf go read. That would cause a lot of drama. If we could come to a system with class sets that we could access, that sort of thing would be magic. (Interview, School D)

Teachers made assumptions about students' reading habits based on the limited silent reading time conducted. Reading habits were also influenced by eBook access, program/platform and classroom/school context. Many teachers used observations of students' progress through books and book choice as informal methods to track students' motivation to read, reading level and the extent to which they read for pleasure. Class sets were another way for teachers to monitor this.

Teachers also reported using eBooks to support advanced as well as low-level and reluctant readers in their classes. Many primary teachers spoke about how eBooks were part of their take-home readers program. Such use, via the affordances and functionalities of eBooks, helped these teachers manage different reading levels within their classes and extend their students' understanding of texts,

> They can actively find and make those connections between authors. They can search out their style and find new authors. The kids can make the connections between the style, the authors, and the style of story they like. That I think that's the major benefit for them. (Interview, School F)

With a focus on nurturing reading for pleasure, teachers from secondary schools also noted that eBooks enabled them to provide alternatives to class sets or set reading. This access was especially important for low-level readers who could read graphic novels and non-fiction books that were not readily available in libraries or their home environment. Teachers also discussed using the audio function while reading print books as an engagement strategy for reluctant readers. Teachers reported that the diversity of genres/types available for reading meant reluctant readers had more opportunities to engage,

> Even those students who will tell you I don't like reading, once the quiet is established for silent reading, everybody is sucked in … It is very hard for them to argue with the whole state library's worth of books and magazines. I know we shouldn't group [students] together, but lots of the junior boys read magazines on there. They love all the sports magazines, which you could never offer them in the classroom. (Interview, School D)

Chambers et al. (2018) conducted an international study into the use of iPads that identified benefits such as student engagement/motivation, content availability, accessibility, flexibility and individualisation/differentiation that are directly related to teachers' eBook practice in this study. Teachers at School A (a distance education school) described using the functionality of eBooks to

support students with special needs. Using the audio and highlight function to support students' reading practices and accessing online links to better understand a text were both mentioned as positive features of eBooks. The teachers that did discuss this functionality described students being able to listen to the book and follow along. Parents/carers described their children changing the font and enlarging displays; however, this was in relation to small screen sizes (for example, on a mobile phone).

Several authors have published recommendation papers based on experience and literature reviews to guide teacher practice with eBooks (e.g., McNelly (2018); Schugar et al., 2013); Serafini et al., 2016; Yokota & Teale, 2014). While these are useful and include advice regarding implementing eBooks in classrooms, there are fewer examples of teacher practices that integrate eBooks.

Teachers in this study experienced challenges when using eBooks for learning activities beyond silent reading. Some of the functionality of eBooks need to be considered and learning and assessment tasks adjusted (e.g., comprehension tasks in which students could use the 'search' function),

> If you're doing a comprehension sheet and they're on the eBooks, they don't actually have to read a paragraph. If it's just the literal, they can just go control find, not getting that inferential and deeper understanding of what the book is actually trying to convey and missing out on those language features. (Interview, School E)

Teachers in one of the schools described new pedagogical approaches using eBooks that included units related to poetry as well as recommender systems for books. Other examples included students making their own eBooks (book construction), comprehension strategies, class reading and vocabulary building tasks. Very few of these were directly connected to the Australian Curriculum.

The professional learning offered to teachers varied depending on the school and the support by eBooks champions such as librarians, literacy coaches or curriculum area leaders. All the schools that discussed professional learning described a similar approach of participating in introductory sessions about operational aspects of eBook use, followed by self-motivated and self-directed exploration. At School E, most teachers acknowledged that the librarian had facilitated the majority of professional learning, particularly the logistics and practical use of eBooks. And at School F, teachers described how, after an introductory session, they had shared the knowledge they gained through exploring the eBooks platform.

Teachers at School B noted that they had not been able to find professional learning specifically related to the pedagogical use of eBooks. They also were not aware of any examples of best practice that were available or opportunities to share experiences with other teachers. Sharing practice among teachers, not through formal professional learning, was also recommended by a teacher at School E.

> I know there are forums on our SharePoints and our teams that talk about other activities. Like, I'm on the Minecraft one at the moment… But I don't think there's anything like that about eBooks or things like that. Where you can share what you've done or what's worked well for your class and things like that. (Interview)

Teachers at School D and School E did not provide students with training on how to use eBooks. Teachers from both schools did not consider it to be necessary, describing their students as able to figure out how to use the functionality of eBooks themselves or by talking to peers, as described by a teacher at School E:

> I am no expert, so they're the experts, so they help teach each other. And sometimes if I have teacher aides in the room or support teachers in the room, they'll know more than me. And so, we just have a very collegial atmosphere where we help each other and teach each other things. And some kids are just natural that everything digital, so they become the teacher for me and others, it wouldn't be me out the front teaching

> them anything. It's very much about show me how you did that and then we can show each other how we do things. (Interview)

This approach relies on students having access to technology and the opportunity to explore. This becomes a challenge in schools with shared sets of iPads and students who do not have access to technology at home. Teachers at School C recommended that schools like theirs need to explicitly teach more technology skills.

However, at both School D and School E, training was offered to students by the librarian as part of induction at the beginning of a school year. Both librarians mentioned the creation of bookmarks with eBooks login details. Other information was provided to students about how to use Sora, for example, and how to log in and borrow books. The librarian at School E described some of the training she provided,

> We talk about the different font sizes and types that they can change to that's really will talk about the open Dyslexic font is usually available except for graphic novels, but for the actual normal books. So, I'll show them how to access those features to make sure that they can. Because even for little ones… If each page has too much text, it can be overwhelming, but they can increase the font, not have as much on one page. Doesn't matter how long it takes to get through it, but it looks a little less intimidating. So, we do talk through the how to access those features. (Interview)

Teachers at School E and School F both mentioned development work that could be done with parents to support the use of eBooks. At School E, the focus was on how to engage with young people when reading eBooks,

> I think also it's about awareness [for parents/carers] of what's out there and also helping them to know the types of things that their kids are reading, engaging with their kids when they're reading an eBook. We encourage parents to sit down and read a book with their kids. Well, sit down and read an eBook with your kid as well and just see what is it that they're looking at. (Focus Group)

At School F, the focus was on providing support to parents/carers so they could manage and control their child's use of eBooks. One of these teachers spoke about developing online modules that 'started nearly out of a need for parents to be confident that the kids are doing the right thing' (Interview).

Roles, Responsibilities and Relationships

Significant adults in young people's lives, like parents/carers and teachers, play important roles in the reading lives of children. Investigation of parents'/carers' perspectives also identified siblings, friends, and social media as additional stakeholders. And analysis of teachers' perspectives demonstrated that friends, librarians, eBook champions (such as literacy coordinators), IT support, and school leadership were all key to the successful use of eBooks in school contexts. Finally, the school culture was also identified as necessary for the effective implementation of an eBook program.

The parents/carers who responded to the questionnaire placed a high priority on supporting their child's reading for enjoyment, learning and health and wellbeing. They were willing to provide additional, safe ways for children to access more opportunities to read. These parents/carers made these decisions despite concerns about eBooks (related to screen time, eye health and general physical activity) and varied information provided about eBooks. Parents/carers were also concerned about whether their child was reading (or being distracted) and what their child was reading, because they could not easily see this (as they could with a print-based book). Despite the functionality that has been found to encourage parental involvement (Chiong, 2012), parents/carers did not talk about reading eBooks with their children and tended not to be part of the decision-making with their children regarding eBooks. This finding is supported by other studies that also found reduced parent-

child interaction relative to print book reading (Chiong et al., 2012; Parish-Morris et al., 2013; Strouse & Ganea, 2017). Parents/Carers reported bedtime routines that included an aspect of reading. Amongst primary-aged children, parents were more involved with the reading activities that were provided by the school. While many children read before bed, they did this with limited adult support.

Teachers had a different roles in the reading lives of their students. Like parents/carers, they aimed to promote reading for pleasure and mental health benefits, however, they also had a responsibility to help students use eBooks for specific, curriculum-aligned, learning purposes. Yet, most teachers in this study used eBooks for silent reading aimed at emotional regulation and relaxation and/or as a post-recess classroom routine. Teachers could use the data provided by eBook programs to help connect and celebrate their students, as demonstrated in School D:

> We get a little report that says how many books students have read. Um, so I have emailed students about that in the past, it's just something else to celebrate with them and acknowledge that they're doing a good job on that front. . . Every bit of data we get, which allows us to recognise something students are doing, lets us praise them. So, there's definitely engagement from those students who are reading. (Interview).

There were fewer examples of teachers incorporating eBooks into other teaching and learning experiences. Teachers often spoke of the tensions and complexities of using eBooks for learning and/or students reading eBooks – classes tended not to read the eBooks together, and like parents, teachers were concerned about monitoring students' reading. During observations of silent reading classes at School D, there were differences in how teachers interacted. One teacher did not interact directly with the students, another read simultaneously with the students, and a third marked the roll and set up the classroom activities for that lesson. Similar practices were observed at School F.

Because of the more private nature of eBooks, teachers had to build relationships with students in different ways to ensure students were engaged and not more distracted than they would have been if they were reading print books. The following was described by a teacher at School E:

> …with the books, with hardcovers, a lot of them would just get it and fluff through when want to return it. It was more about the process of going and swapping the book and changing. Whereas with the eBook they will sit there and generally read it for the whole 15 minutes. I mean, obviously they can make those changes there and then, they don't have to get up from their desk. But they do seem to be more focused when they're reading and not as easily distracted than with the paper book. (Interview)

At School D, one teacher described this:

> It's a very it's a small number [of students] who will, if you're not looking over their shoulder, be doing something else, and there's always going be those ones. That small number. It doesn't matter if it's a laptop or an actual book. If it's an actual book, they will just stare at the ceiling, so the diversion doesn't actually change with the device, just with the student. (Interview)

Many teachers explained that they didn't use eBooks more widely because they felt they reduced their control. According to these teachers, this perceived shift in control led to difficulties managing students' behaviour and reading choices. At School A, teachers identified the challenges in their distance education context. As teachers and students interacted primarily in an online space, students did not bring their books into the same physical space as the teachers, and teachers were not able to observe the books that students selected. Teachers at School C discussed their worries about no being able to monitor what was being read,

> I think there's a bit of a worry that the kids will just play games instead of doing schoolwork. We have a program actually where we can actually watch the screens of

> the kid's laptops, but that doesn't transfer to the iPad. If we could do that with the iPads that would be good so that we have peace of mind that you know what they are doing and looking at I suppose. (Interview, School C)

At School F, teachers perceived the possibility of student distraction and "off task" behaviour as a key barrier to using eBooks. Indeed, concerns about control dominated teachers' discussions about barriers. For example, one teacher said that when the students were reading eBooks, she (the teacher) 'can't really see what the kids are doing in class sometimes' (Interview). Another stated that 'Some of these guys here struggle to maintain self-control using the iPads or using the Internet' (Interview). This same teacher added that issues were more common at the start of the year and after holidays when students were likely to still have games loaded. She also thought that 'getting distracted and looking at things they shouldn't… (was) increasing' (Interview). As other teachers explained,

> There's a lot of that time-wasting on a device. With a book, you get straight into it. I'd say, "Eyes on text," and make sure that eyes are down. If they didn't have this (points to iPad), they'd do this with a book (pretending to read a piece of paper). And I remember saying, "Look at the text," and even if they're just staring at the one page, at least they're getting that reading. But with the iPad, they do with this (mimes swiping) and, you know, they're not looking around, but I'm not seeing reading, and I'd have to go in and spy on them, almost. (Interview, School F)

A number of teachers referred to reading behaviour in relation to gender. This was usually in relation to boys needing more encouragement to engage with reading and preferring eBooks. However, this pattern also extended to book choice,

> I think that the boys are more encouraged to read on the device. The boys just seem a little bit more engaged with their laptop than with the paper book. I think it's more that they don't have to remember to bring a book. (Interview, School D)

At School D, a teacher described the way in which the audio functionality of eBooks helped boys in the class engage with the task:

> I've got two low-level boys, and it was great as soon as they found out they could have it read to them. I asked a kid why do you have headphones on, and he said, "I'm listening to my book." And it was great. And then another boy I said, "come over here. He's listening to it" and when the other student was able to do that, he got through the whole thing and finished his essay. (Interview)

Another teacher at School D identified having students choose the book they were reading as a barrier to extending reading skills and levels, stating that they often redirected students from particular books,

> I always have to do that thing of you know, *Diary of a Wimpy Kid*. "No, you're better than that. Get off. Get off that." I'll do a reminder like, "remember, graphic novels and not what we're here for, you know?" So, there's a few of the boys who will just go "I want something easy". (Interview)

At School E, a teacher described the book choices of the boys and girls in the class:

> In prep, I've got a few boys that love dinosaurs, so when we go to the library lesson, they borrow four home readers, two junior fiction books, and a fiction book. And I know definitely the boys, if there is a dinosaur or a monster or anything like that, or superhero, they'll lean towards that. And the girls are quite similar. A lot of girls in my class like the Princesses and Disney kind of stories. So, they do tend to lean towards those types of books. (Interview)

Teachers also said that reading habits were largely influenced by peers and social media (booktok and Netflix). Teachers were observed trying to influence the reading habits of young people. For instance, they encouraged students to read a different book, talked about how they themselves chose what to read, and gave students print books (e.g., School D). eBooks provided access to graphic novels and non-fiction that some libraries did not hold.

Peers, whether siblings or friends, were reported to play a significant role in the choice of eBooks by both parents/carers and teachers. Some teachers mediated this by setting up library corners, book peer reviews, and recommender systems. A teacher described an example of how this worked in a primary setting at School E:

> A lot of my kids also listen to each other's recommendations…I do have some really avid readers. They actually really like listening to recommendations from each other. I've actually read some that they recommended and loved them. That's been a really nice aspect this year, and it's sort of almost grown in popularity as the year has gone on. (Interview)

A peer focus also occurred at School D, where a student book club operated that posted student book reviews in the school library. During an observed lesson at School D, the teacher led a discussion about finding books for the upcoming holidays. Teachers described certain books and genres becoming popular (e.g., graphic novels), sometimes in spite of teachers' best efforts. The influence of social media drove this popularity. During an observed lesson at School D, one student said, 'books and reading have become cool lately. Mostly because of "booktok" on TikTok and authors releasing alternative endings and side stories on Instagram' (Observation, Classroom 3). Despite eBooks being used primarily for silent reading, young people were creating communities around the books they read, perhaps more quickly and efficiently due to eBooks and digital platforms.

Roles within the school beyond the teacher were essential in supporting eBooks programs. Librarians particularly mattered when promoting and encouraging eBooks. In this study, librarians were largely responsible for providing professional development and professional learning for key stakeholders. Similarly, literacy champions are important, and so too were technology champions. Key initiatives undertaken by such champions included: emails about Sora, bookmarks, posters and orientation sessions at the transition year levels (e.g., year 7 and Prep). Not all schools had a librarian; for example, School A, a distance education school, did not have a dedicated librarian, nor did School C, a rural secondary school. Notably, School B did not have an eBooks champion, and this was connected to a lack of enthusiasm among staff to take on the IT portfolio. At School D, when the eBooks program (Sora) was introduced at the school, the librarian ensured access for everyone at the school. As one of the current librarians explained,

> My predecessor was very passionate about the fact that everyone was signed up for [eBooks]. So, it was all the kids, and it was all the staff. I said, "Okay, maybe we should just do like the teaching staff and the teacher aides, maybe not the cleaners," and she said, "no, everyone is going to be signed up." Everybody has access – administration, grounds people, everyone who is on staff, and every student has access. (Interview)

At School E, the librarian was an active champion for eBooks. She helped staff connect eBook content with curriculum materials, special celebrations and year-level needs. Teachers then used these resources for their planning. All the teachers who participated in the interviews and focus groups spoke about the importance of the library and teacher librarian support to the eBook program and the use of eBooks for teaching and learning purposes. Many teachers recalled visiting the school library and described how these visits influenced their students' reading choices and habits. Librarians also facilitated sessions about eBooks for parents/carers and students. For example, the librarian at School E prepared bookmarks for the Prep and Year 1 students,

> …one side is Sora, one side is Story Box Library and includes all the access details, including the child's id, so they can log on easily. I use that in the lesson…at the beginning of each year. Then usually at the end of each term when I'm asking for books and I said, by the way, remember, you still have access to these things. (Interview)

Finally, school and curriculum leadership were essential to supporting the successful implementation of eBooks programs. In a study by Softlink (2021), when asked why eBooks were not offered, budget (58%), no interest from students (28%), no interest from senior leaders (23%) and a lack of clarity about how eBooks work were cited as reasons (23%). Several teachers spoke about the need for such leadership to help drive the positive implementation of eBooks. One teacher at School B spoke about how the school's eBook champion had left and that this departure had created a void, 'we need one deputy who is excited by it and who would run with it because I think no one wants the IT portfolio here' (Focus Group). Several teachers also commented that curriculum heads had varying levels of enthusiasm for eBooks and that a more unified approach was needed. Efforts towards such an approach were evident at School F, in particular. As one of the teachers at School A commented, 'just like anything at a school. You've got to get all the key stakeholders involved and get them to help push what's happening and pushing from home, pushing from school' (Interview). And as one of the teachers from School B concluded,

> I think there has to be a culture within your school that everybody is using it and everybody. So maybe a culture change is necessary as well. And maybe some leadership from someone who's going to make it work and make it easier for the rest of us. Somebody come and save us and make me not have to do it [laughs]. (Interview)

Recommendations

eBooks are entangled in a web of politics (reading wars, new technology, cost and access) and within the ecosystem of technology that influences views of use and appropriateness. This work is important because eBooks provide the Queensland Department of Education with the potential to provide equitable access to reading for pleasure to all students. Based on the findings of this research, the following have been recommended:

(1) *Equitable access to devices, infrastructure and platforms for all students, teachers and members of the school community.*

There is clear evidence of a digital divide between regional and metropolitan schools in terms of access to technology as well as to books and materials for reading. Support for infrastructure surrounding devices, network connectivity, access to eBooks, and continued access while reading is essential. BYOx schools are well positioned to support the classroom and home use of eBooks.

(2) *Clear guidelines for the use of eBook functionality to support all students.*

Reading is valued by many students, teachers and parents/carers for its connections to learning and cognition and mental health. To use eBooks effectively, teachers, parents/carers and students need to learn about how to use the technical and practical aspects of eBooks. The logistics involved in signing in to particular platforms, accessing search features and borrowing eBooks, as well as how to use eBooks functionality, such as audio features or adjusting the font, need to be explicitly taught to teachers, parents/carers and students.

(3) *Infrastructure and procedures to support physical and mental health and wellbeing.*

There is a lack of consistent advice for teachers and parents/carers – particularly advice targeting reading and health and wellbeing. This is a complex space because people use devices for many purposes beyond just reading eBooks. Practices that ensure eBooks are being used to protect or promote readers' health and wellbeing, such as adjusting the brightness or the display and/or taking breaks from looking at a screen, need to be evidence-based and communicated to stakeholders.

(4) *Support and professional learning for teachers to expand current practices related to eBooks in a variety of teaching and learning contexts.*

There is an assumption that convenience and access to more books will result in changes in reading habits for children and young people. Teachers' personal beliefs inform current classroom teaching and learning practice with respect to eBooks about print-based books and eBooks and their assumptions about their students' reading practices. Supporting teachers to share practice beyond silent reading would provide a sound foundation for professional learning on how to incorporate eBooks into classroom teaching and learning.

(5) *Support and recognition for eBook champions within the school.*

Roles within the school beyond the teacher are essential in supporting eBooks programs. Librarians, literacy champions, technology champions and school leadership provide teachers and parents/carers with the resources needed to nurture students' reading. eBook champions provide schools with accessible content for professional learning, the establishment of processes for access in terms of books or devices, and inspiration for teacher practice.

(6) *Recognition of the important role that reading communities play in students' adoption and use of eBooks*

Young people create a reading community that plays a significant role in the choice of eBooks. Connections with parents/carers, teachers, siblings, friends and social media play a role in nurturing reading for pleasure. This support may take the form of parents/carers as well as within the school environment in the classroom and library.

References

Acedo, S., & Leverkus, C. (2014). Updates on ebooks: Challenges and changes. *Knowledge Quest, 43*(1), 44-52.

Alper, M. (2013). Developmentally appropriate New Media Literacies: Supporting cultural competencies and social skills in early childhood education. *Journal of Early Childhood Literacy, 13*(2), 175-196.

Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research? *Educational researcher*, *41*(1), 16-25.

Ashcroft, L. (2011). Ebooks in libraries: An overview of the current situation. *Library Management, 32*(6/7), 398-407.

Barnyak, N., & McNelly, T. (2016). The literacy skills and motivation to read of children enrolled in Title I: A comparison of electronic and print nonfiction books. *Early Childhood Education Journal, 44*(5), 527-536.

Bagdasarov, Z., Luo, Y., & Wu, W. (2017). The influence of tablet-based technology on the development of communication and critical thinking skills: An interdisciplinary study. *Journal of Research on Technology in Education*, *49*(1-2), 1-18.

Benedetto, S., Drai-Zerbib, V., Pedrotti, M., Tissier, G., & Baccino, T. (2013). E-readers and visual fatigue. *PLoS ONE, 8*(12), e83676.

Bhati, P., & Kumar, I. (2020). Role of library professionals in a pandemic situation like COVID-19. *International Journal of Library and Information Studies*, *10*(2), 33-48.

Brown, S. (2015). Young learners' transactions with interactive digital texts using e-readers. *Journal of Research in Childhood Education, 30*(1), 42-56.

Bus, A., Takacs, Z., & Kegel, C. (2015). Affordances and limitations of electronic storybooks for young children's emergent literacy. *Developmental Review, 35*, 79-97.

Cassidy, E., Martinez, M., & Shen, L. (2012). Not in love, or not in the know? Graduate student and faculty use (and non-use) of e-books. *The Journal of Academic Librarianship 38*(6), 326-332.

Chambers, D., Jones, P., McGhie-Richmond, D., Riley, M., May-Poole, S., Orlando, A., …Wilcox, C. (2018). An exploration of teacher's use of iPads for students with learning support needs. *Journal of Research in Special Educational Needs, 18*(2), 73-82.

Ciampa, K. (2012a). Electronic storybooks: A constructivist approach to improving reading motivation in grade 1 students. *Canadian Journal of Education, 35*(4), 92-136.

Ciampa, K. (2012b). Reading in the digital age: using electronic books as a teaching tool for beginning readers. *Canadian Journal of Learning and Technology, 38*(2), 1-26.

Croft, R., & Davis, C. (2010). E-books revisited: Surveying student e-book usage in a distributed learning academic library 6 years later. *Journal of Library Administration, 50*(5/6), 543-569.

Chiong, C., Ree, J., Takeuch, L., & Erickson, I. (2012). *Quick report: Print books vs. e-books* (quick report). The Joan Ganz Cooney Centre. Retrieved from: https://joanganzcooneycenter.org/wp-content/uploads/2012/07/jgcc_ebooks_quickreport.pdf

Cybart-Persenaire, A., & Literat, I. (2018). Writing stories, rewriting identities: Using journalism education and mobile technologies to empower marginalized high school students. *Learning, Media and Technology, 43*(2), 1-16.

Dennerlein, J. (2015). The state of ergonomics for mobile computing technology. *Work, 52*(2), 269-277.

Department of Education. (2019). *Why one-to-one*. Retrieved from: https://education.qld.gov.au/parents-and-carers/school-information/student-ict-device-programs/why-one-to-one

Delgado, P., Vargas, C., Ackerman, R., & Salmerón, L. (2018). Don't throw away your printed books: A meta-analysis on the effects of reading media on reading comprehension. *Educational Research Review*, *25*, 23-38.

Danaei, D., Jamali, H. R., Mansourian, Y., & Rastegarpour, H. (2020). Comparing reading comprehension between children reading augmented reality and print storybooks. *Computers & Education*, *153*, 103900.

Dobler, E. (2015). E-textbooks. *Journal of Adolescent & Adult Literacy, 58*(6), 482-491.

Doty, K. (2015). *Designing for Interactive eBooks: An evaluation of effective interaction elements in children's eBooks* (Master's thesis). Retrieved from ProQuest Dissertations and Theses database. (ProQuest Number: 1601833)

Engel-Unruh, M. (2010, November/December). Rekindling an interest in reading with at-risk students. *Library Media Connection*, 54-56.

Evans, M., Nowak, S., Burek, B., & Willoughby, D. (2017). The effect of alphabet eBooks and paper books on preschoolers' behavior: An analysis over repeated readings. *Early Childhood Research Quarterly*, *40*, 1-12.

Felvégi, E., & Matthew, K. (2012). eBooks and literacy in K–12 schools. *Computers in the Schools 29(1/2)*, 40-52.

Foote, C. (2014, March/April). Dissecting ebooks and libraries, *internetatschools.com*, 12-13.

Genuneit, J., Brockmann, P., Schlarb, A., & Rothenbacher, D. (2018). Media consumption and sleep quality in early childhood: Results from the Ulm SPATZ Health Study. *Sleep Medicine, 45*, 7-10.

Guernsey, L. (2011, June). Are ebooks any good? *School Library Journal,* 28-32.

Gibbons, S. (2001). Ebooks: Some concerns and surprises. *portal: Libraries and the Academy, 1*(1), 71-75.

Goodyear, P., & Carvalho, L. (2014). Framing the analysis of learning network architectures. In TK (Eds.), *The architecture of productive learning networks* (pp. 66-88). New York, NY: Routledge.

Gray, R., & Howard, V. (2017). Young adult use of ebooks: An analysis of public library services and resources. *Public Library Quarterly*, *36*(3), 199-212.

Gueval, J., Tarnow, K., & Kumm, S. (2015). Implementing e-books: Faculty and student experiences. *Teaching and Learning in Nursing, 10*(4), 181-185.

Henderson, K., Gibson, C., & Gibb, F. (2013). The impact of tablet computers on students with disabilities in a Higher Education setting. *Technology and Disability 25*(2), 61-76.

Hoseth, A., & McLure, M. (2012). Perspectives on e-books from instructors and students in the social sciences. *Reference and User Services Quarterly, 51*(3), 278-288.

Hovious, A. (2014). Inanimate Alice "Born Digital." *Teacher Librarian, 42*(2), 42-26.

Howard, V., & Wallace, M. (2016, Spring). Today's tech literacy tools. *Children and Libraries,* 3-9.

Hoffman, J., & Paciga, K. (2014). Click, swipe, and read: Sharing e-Books with toddlers and preschoolers. *Early Childhood Education Journal 42*(6), 379-388.

Hsieh, Y., & Huang, S. (2020). Using an e-Book in the secondary English classroom: Effects on EFL reading and listening. *Education and Information Technologies*, *25*(2), 1285-1301.

Jenkins, H., Purushotma, R., Clinton, K., Weigel, M., & Robison, A. (2006). *Confronting the challenges of participatory culture: Media educations for the 21st Century*. Retrieved from: www.digitallearning.macfound.org

Ji, S., Michaels, S., &Waterman, D. (2014). Print vs. electronic readings in college courses: Cost-efficiency and perceived learning. *The Internet and Higher Education, 21*, 17-24.

Karemaker, A., Jelley, F., Clancy, C., & Sylva, K. (2017). The effects on children's literacy skills of reading e-books with different features: Are 'bells and whistles' over-rated? *International Journal of Child-Computer Interaction, 12*, 30-36.

Kim, J., Min, S., Subramaniyam, M., & Cho, Y. (2014). Legibility difference between e-books and paper books by using an eye tracker. *Ergonomics, 57*(7), 1102-1108.

Klamm, J., & Tarnow, K. (2015). Computer vision syndrome: A review of literature. *Medsurg Nursing 24*(2), 89-93.

Klimova, B., & Zamborova, K. (2020). Use of mobile applications in developing reading comprehension in second language acquisition—A review study. *Education Sciences*, *10*(12), 391.

Köpper, M., Mayr, S., & Buchner, A. (2016). Reading from computer screen versus reading from paper: Does it still make a difference? *Ergonomics, 59*(5), 615-632.

Kucirkova, N., Littleton, K., & Cremin, T. (2017). Young children's reading for pleasure with digital books: Six key facets of engagement. *Cambridge Journal of Education, 47*(1), 1-18.

Lai, C. (2016). Integrating e-books into science teaching by preservice elementary school teachers. *Journal of Education in Science, Environment and Health, 2*(1), 57-66.

Laidlaw, L., & O'Mara, J. (2015). Rethinking difference in the iWorld: Possibilities, challenges and 'unexpected consequences' of digital tools in literacy education. *Language and Literacy, 17*(2), 59-74.

Lamb, A., & Johnson, L. (2010). Divergent convergence part 2: Teaching and learning in a transmedia world. *Teacher Librarian, 38*(1), 64-69.

Larson, L. (2012). It's time to turn the digital page: Preservice teachers explore e-book reading. *Journal of Adolescent & Adult Literacy, 56*(4), 280-290.

Lemola, S., Perkinson-Gloor, N., Brand, S., Dewald-Kaufmann, J., & Grob, A. (2015). Adolescents' electronic media use at night, sleep disturbance, and depressive symptoms in the smartphone age. *Journal of Youth and Adolescence, 44*(2), 405-418.

Lewellen, R., Bischof, S., & Plum, T. (2016). EBL ebook use compared to the use of equivalent print books and other eresources. *Performance Measurement and Metrics*, *17*(2), 150–164.

Lindqvist, M. H. (2019). Talking about digital textbooks: The teacher perspective. *The International Journal of Information and Learning Technology*, *36*(3), 254-265.

Liaw, S., & Huang, H. (2014). Investigating learner attitudes toward e-books as learning tools: Based on the activity theory approach. *Interactive Learning Environments, 24*(3), 625-643.

Lin, H., Wu, F., & Cheng, Y. (2013). Legibility and visual fatigue affected by text direction, screen size and character size on color LCD e-reader. *Displays, 34*(1), 49-58.

Loh, C. E., & Sun, B. (2019). "I'd still prefer to read the hard copy": Adolescents' print and digital reading habits. *Journal of Adolescent & Adult Literacy*, *62*(6), 663-672.

Lowery, L.D. (2017). *Effects of reading eggs on reading proficiency levels* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (ProQuest Number: 10265638)

Marrone, A. (2015). *The effects of enhanced e-books vs. traditional print books on reader motivation, comprehension, and fluency in an elementary classroom* (Master's Thesis). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 1583026)

Maynard, S. (2010). The impact of e-books on young children's reading habits. *Publishing Research Quarterly, 26*(4), 236-248.

McClanahan, B., Williams, K., Kennedy, E., & Tate, S. (2012). A breakthrough for Josh: How use of an iPad facilitated reading improvement. *TechTrends, 56*(3), 20-28.

McGeown, S., Osborne, C., Warhurst, A., Norgate, R., & Duncan, L. (2016). Understanding children's reading activities: Reading motivation, skill and child characteristics as predictors. *Journal of Research in Reading, 39*(1), 109-125.

McNelly, T. (2018). Selecting 'just right' electronic books for the early childhood classroom. *Kappa Delta Pi Record, 54*(1), 23-29.

McVicker, C. (2017). Last child in the library? A survey of use of e-books versus traditional books. *Children and Libraries, 15*(4), 4-7.

Merga, M. (2015a). Access to books in the home and adolescent engagement in recreational book reading: Considerations for secondary school educators. *English in Education, 49*(3), 197-214.

Merga, M. (2015b). 'Bring your own device': Considering potential risks to student health. *Health Education Journal, 75*(4), 464-473.

Merga, M., & Roni, S. (2017). The influence of access to eReaders, computers and mobile phones on children's book reading frequency. *Computers & Education, 109*, 187-196.

Miller, B., & Martin, C. (2016, January). Digital notebooks for digital natives. *Science and Children,* 84-89.

Miller, E., & Warschauer, M. (2013). Young children and e-reading: Research to date and questions for the future learning. *Media and Technology, 39*(3), 283-305.

Min, M. (2017). Teachers who initiate changes with an ebook-integrated curriculum: Revisiting the developmental assumptions of stages of concerns in the concerns-based adoption model. *Alberta Journal of Educational Research, 63*(1), 21-42.

Morgan, L., Kesari, S., & Davis, D. (2014). Why children absorb more microwave radiation than adults: The consequences. *Journal of Microscopy and Ultrastructure, 2(*4), 197-204.

Morrice, E., Johnson, A., Marinier, J., & Wittich, W. (2017). Assessment of the Apple iPad as a low-vision reading aid. *Eye, 31*(6), 865-871.

Mol, A. (2008). *The logic of care: Health and the problem of patient choice*. New York, NY: Routledge.

Muir, L., & Hawes, G. (2013). The case for e-Book literacy: Undergraduate students' experience with e-Books for course work. *The Journal of Academic Librarianship, 39*(3), 260-274.

Myrberg, C., & Wiberg, N. (2015). Screen vs. paper: What is the difference for reading and learning? *Insights, 28*(2), 49-54.

Myrberg, C. (2017). Why doesn't everyone love reading e-books? *Insights, 30*(3), 115-125.

Nelson, M. (2008). E-books in Higher Education: nearing the end of the era of hype? *Educause, 43*(1), 40-56.

Newhouse, C. P. (2014). Learning with portable digital devices in Australian schools: 20 years on! *The Australian Educational Researcher*, *41*(4), 471-483.

National Health and Medical Research Council, Australian Research Council, & Universities Australia. (2018). *National statement on ethical conduct in human research 2007 (Updated 2018)*. Retrieved from: https://www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018

O'Bannon, B., Skolits, G., Lubke, J. (2017). The influence of digital interactive textbook instruction on student learning preferences, outcomes, and motivation. *Journal of Research on Technology in Education, 49*(3-4), 1-14.

O'Neill, M. M. (2013). The State of Queensland (Department of Education, Training and Employment) BYOx research project 2013. Retrieved from: https://acuresearchbank.acu.edu.au/download/592931fa608fc25053a7dcda3aa904e4632f6218f0a2b9c44b20c36701e726b4/1164374/OA_DETT_2013_BYOx_research_project.pdf

Olaniran, S., Duma, M., & Nzima, D. (2017). Assessing the utilization level of e-learning resources among ODL based pre-service teacher trainees. *The Electronic Journal of e-Learning, 15*(5), 385-395.

Parish-Morris, J., Mahajan, N., Hirsh-Pasek, K., Golinkoff, R., & Collins, M. (2013). Once upon a time: Parent–child dialogue and storybook reading in the electronic era. *Mind, Brain, and Education, 7*(3), 200-211.

Pegrum, M., Oakley, G., & Faulkner, R. (2013). Schools going mobile: A study of the adoption of mobile handheld technologies in Western Australian independent schools. *Australasian Journal of Educational Technology, 29*(1), 66-81.

Ratnayake, K., Payton, J., Lakmal, O., & Karunarathne, A. (2018). Blue light excited retinal intercepts cellular signalling. *Scientific Reports, 8*, 10207.

Richter, A., & Courage, M. (2017). Comparing electronic and paper storybooks for preschoolers: Attention, engagement, and recall. *Journal of Applied Developmental Psychology, 48*, 92-102.

Roskos, K., Brueck, J., & Lenhart, L. (2017). An analysis of e-book learning platforms: Affordances, architecture, functionality and analytics. *International Journal of Child-Computer Interaction, 12*, 37-45.

Roskos, K., Burstein, K., Shang, Y., & Gray, E. (2014). Young children's engagement with e-books at school. *SAGE Open 4*(1), 1-9.

Roskos, K., Burnstein, K., & You, B. (2012). A typology for observing children's engagement with ebooks at preschool. *Journal of Interactive Online Learning, 11*(2), 47-66.

Rothman, A. (2017). E-books in public school libraries: Are we there yet? *Knowledge Quest ,45(*5), 30-37.

Reich, S. M., Yau, J. C., Xu, Y., Muskat, T., Uvalle, J., & Cannata, D. (2019). Digital or print? A comparison of preschoolers' comprehension, vocabulary, and engagement from a print book and an e-book. *AERA Open*, *5*(3), https://doi.org/10.1177/2332858419878389

Rutherford, L., Singleton, A., Derr, L. A. & Merga, M. K. (2018). Do digital devices enhance teenagers' recreational reading engagement? Issues for library policy from a recent study in two Australian states. *Public Library Quarterly*, *37*(3), 318-340.

Salmon, L. (2014). Factors that affect emergent literacy development when engaging with electronic books. *Early Childhood Education Journal, 42*(2), 85-92.

Schneps, M., Thomson, J., Chen, C., Sonnet, G., & Pomplun, M. (2013). E-readers are more effective than paper for some with dyslexia. *PLoS One, 8*(9), 1-14.

Schugar, H., Smith, C., & Schugar, J. (2013). Teaching with interactive picture e-books in Grades K-6. *The Reading Teacher, 66*(8), 615-624.

Seomun, G., Kim, H., Lee, J., Kim, E., Kim, E., & Noh, W. (2018). The comparison of dry eye syndrome between digital textbook users and paper textbook users in elementary school. *Information, 21*(2), 805-819.

Seomun, G., Lee, J., Kim, E., Im, M., Kim, M., Park, S., & Lee, Y. (2013). Health effects of digital textbooks on school-age children. *Western Journal of Nursing Research, 35*(9), 1184-1204.

Seomun, G., Pyun, S., Lee, J., Kim, E., & Noh, W. (2016). A comparison of carpal tunnel syndrome between digital and paper textbook users in elementary schools. *Work, 53*(4), 909-915.

Seomun, G., Kim, Y., Lee, J., Jeong, K., Park, S., Kim, M., & Noh, W. (2014). Descriptive study of electromagnetic wave distribution for various seating positions. *The Journal of School Nursing, 30*(2), 123-128.

Serafini, F., Kachorsky, D., & Aguilera, E. (2016). Picture books in the digital age. *The Reading Teacher, 69*(5), 509-512.

Shin, S. (2014). E-book Usability in educational technology classes: Teachers and teacher candidates' perception toward e-book for teaching and learning. *International Journal of Distance Education Technologies, 12*(3), 62-74.

Shen, I., Shieh, K., Chao, C., & Lee, D. (2009). Lighting, font style, and polarity on visual performance and visual fatigue with electronic paper displays. *Displays, 30*(2), 53-58.

Siegenthaler, E., Bochud, Y., Bergamin, P., & Wurtz, P. (2012). Reading on LCD vs e-ink displays: Effects on fatigue and visual strain. *Ophthalmic and Physiological Optics, 32*(5), 367-374.

Softlink. (2021). *Australian School Library Survey Report 2021*. Retrieved from: https://www.softlinkint.com/downloads/2021_Softlink_School_Library_Survey_-_Australian_Report.pdf

Stake, R. E. (1995). *The art of case study research*. London, United Kingdom: Sage.

Stake, R. E. (2000). Case studies. In N. K. Denzin & Y. S Lincoln (Eds.), *Handbook of qualitative research* (pp. 435-454). London, United Kingdom: Sage.

Suyatna, A., Maulina, H., Rakhmawati, I., & Khasanah, R. A. N. (2018). Electronic versus printed book: A comparison study on the effectivity of senior high school physics book. *Jurnal Pendidikan IPA Indonesia*, *7*(4), 391-398.

Strouse, G., & Ganea, P. (2017). A print book preference: Caregivers report higher child enjoyment and more adult–child interactions when reading print than electronic books. *International Journal of Child-Computer Interaction, 12*, 8-15.

Taylor, M. (2012). Digital reading: A look at a second grade class. *School Library Monthly, 29*(2), 11-14.

Thompson, K., Gouvea, J. S., & Habron, G. (2016). A design approach to understanding the activity of learners in interdisciplinary settings: Environment and diversity. In C. K. Looi, J. L. Polman, U. Cress, & P. Reimann (Eds.), *Transforming learning, empowering learners: The International Conference of the Learning Sciences (ICLS) 2016*, (Vol. 2). Singapore: International Society of the Learning Sciences.

Thompson, K., Danielson, A., Gosselin, D., Knight, S., Martinez-Maldonado, R., Parnell, R., … Wheeler, P. (2017). Designing the EMBeRS Summer School: Connecting stakeholders in learning, teaching and research. In W. Chen, J.-C. Yang, A. F. Mohd Ayub, S. L. Wong, & A. Mitrovic (Eds.), *Proceedings of the 25th International Conference on Computers in Education* (pp. 210-215). New Zealand: Asia-Pacific Society for Computers in Education.

Thompson, K., Alhadad, S., Buckingham Shum, S., Howard, S. K., Knight, S., Martinez-Maldonado, R., & Pardo, A. (2018). Connecting expert knowledge in the design of classroom learning experiences. In J. Lodge, J. Cooney Horvath, & L. Corrin (Eds.), *Learning analytics in the classroom: Translating research for teachers* (pp. 111-128). New York, NY: Routledge.

Wang, S., & Bai, X. (2016). University students' awareness, usage and attitude towards e-books: Experience from China. *The Journal of Academic Librarianship, 42*(3), 247-258.

Wauters, L., & Dirks, E. (2017). Interactive reading with young deaf and hard-of-hearing children in ebooks versus print books. *The Journal of Deaf Studies and Deaf Education, 22*(2), 243-252.

Weedon, A., Miller, D., Franco, C., Moorhead, D., & Pearce, S. (2014). Crossing media boundaries. *Convergence, 20*(1), 108-124.

Wetschler, E. (2011). Going out of print. *District Administration*. *47*(2), 22-24

White, J. A. (2014). *Tablet procurement within K12 educational environments: An analysis of the political influences, perceived device advantages, and hardware preferences*. (Doctoral dissertation, Ball State University). Retrieved from: https://cardinalscholar.bsu.edu/bitstream/handle/123456789/198105/WhiteJ_2014-2_BODY.pdf?sequence=1

Willoughby, D., Evans, M., & Nowak, S. (2015). Do ABC eBooks boost engagement and learning in preschoolers? An experimental study comparing eBooks with paper ABC and storybook controls. *Computers & Education, 82*, 107-117.

Yalman, M. (2015). Preservice teachers' views about e-book and their levels of use of e-books. *Procedia - Social and Behavioral Sciences, 176*, 255-262.

Yokota, J., & Teale, W. (2014). Picture books and the digital world. *The Reading Teacher, 67*(8), 577-585.

Zucker, T., Moody, A., & McKenna, M. (2009). The effects of electronic books on Pre-Kindergarten-to-Grade 5 students' literacy and language outcomes: A research synthesis. *Journal of Educational Computing Research, 40*(1), 47-87.

Appendix A: Literature Review Themes, Terms and Categorisation

Theme	Key terms	Articles
Health and Wellbeing	Eye health	Benedetto, Drai-Zerbib, Pedrotti, Tissier, & Baccino, 2013; Dennerlein, 2015; Kim, Min, Subramaniyam, & Cho, 2014; Köpper, Mayr, & Buchner, 2016; Lin, Wu, & Cheng, 2013; Morrice, Johnson, Marinier, & Wittich, 2017; Siegenthaler, Bochud, Bergamin, & Wurtz, 2012; Ratnayake, Payton, Lakmal, & Karunarathne, 2018; Seomun, Kim, Lee, Kim, Kim, & Noh, 2018; Shen, Shieh, Chao, & Lee, 2009.
	Movement, posture biomechanics and electromagnetic waves	Dennerlein, 2015; Morgan, Kesari, & Davis, 2014; Roskos, Burstein, Shang, & Gray, 2014; Seomun, Pyun, Lee, Kim, & Noh, 2016; Seomun, Kim, Lee, Jeong, Park, Kim, & Noh, 2014; Taylor, 2012.
	Sleep and recovery	Genuneit, Brockmann, Schlarb, & Rothenbacher, 2018; Klamm & Tarnow, 2015; Lemola, Perkinson-Gloor, Brand, Dewald-Kaufmann, & Grob, 2015; Seomun, Lee, Kim, Im, Kim, Park, & Lee, 2013.
eBooks and Education	Literacy development	Bus, Takacs, & Kegel, 2015; Ciampa, 2012a; Evans, Nowak, Burek, & Willoughby, 2017; Foote, 2014; Guernsey, 2011; Hoffman & Paciga, 2013; Marrone, 2015; McVicker, 2017; Merga & Roni, 2017; Miller & Warschauer 2013; Pegrum, Oakley, & Faulkner, 2013; Rothman, 2017; Schugar, Smith, & Schugar, 2013; Willoughby, Evans, & Nowak, 2015; Zucker, Moody, & McKenna 2009.
	Motivation to read	Barnyak & McNelly, 2016; Ciampa, 2012a; Ciampa, 2012b; Felvegi & Matthew, 2012; Maynard, 2010; Parish-Morris, Mahajan, Hirsh-Pasek, Golinkoff, & Collins, 2013; Roskos, Burnstein, & You, 2012; Salmon, 2014; Schugar, Smith, & Schugar, 2013;

		Taylor, 2012; Zucker, Moody, & McKenna, 2009.
	Transmedia skills	Doty, 2015; Hovious, 2014; Jenkins, Purushotma, Clinton, Weigel, & Robison 2006; Lamb & Johnson, 2010; Weedon, Miller, Franco, Moorhead, & Pearce, 2014.
	Reading for interest or pleasure	Kucirkova, Littleton, & Cremin, 2017; Maynard, 2010; McGeown, 2015; Merga & Roni, 2017.
Stakeholder Engagement with eBooks	Libraries	Ashcroft, 2011; Engel-Unruh, 2010; Foote, 2014; Gibbons, 2001; Softlink, 2016; Wetschler, 2011.
	Teachers	Alper, 2012; Brown, 2015; Cybart-Persenaire & Literat, 2018; Lai, 2016; Laidlaw, & O'Mara, 2015; Larson, 2012; Lowery, 2017; McNelly, 2018; Miller & Martin, 2016; Olaniran, Duma, & Nzima, 2017; Schugar, Smith & Schugar, 2013; Serafini, Kachorsky, & Aguilera, 2016; Yalman, 2015; Yokota & Teale, 2014.
	Parents/Carers	Chiong, Ree, Takeuch, Erickson, 2012; Howard & Wallace, 2016; Parish-Morris, Mahajan, Hirsh-Pasek, Golinkoff, & Collins, 2013; Strouse & Ganea, 2017.
	Students	Acedo & Leverkus, 2014; Bagdasarov, Luo & Wu, 2017; Brown, 2015; Cassidy, 2012; Croft & Davis, 2010; Dobler, 2015; Engel-Unruh, 2010; Gueval, Tarnow, & Kumm, 2015; Hoseth & McLure, 2012; Ji, Michaels &Waterman, 2014; Liaw & Huang 2014; McVicker, 2017; Muir & Hawes, 2013; Myrberg, 2017;

		Myrberg & Wiberg, 2015; O'Bannon, Skolits, & Lubke, 2017; Richter & Courage, 2017; Roskos, Brueck, Lenhart, 2017; Seomun et al., 2013; Shin, 2014; Wang & Bai, 2016.
Affordances and Accessibilities		Chambers et al., 2018; Henderson, Gibson & Gibb, 2013; Morrice, Johnson, Marinier & Wittich, 2017; McClanahan, Williams, Kennedy & Tate, 2012; Muir & Hawes, 2013; Pegrum, Oakley & Faulkner, 2013; Schneps, Thomson, Chen, Sonnet & Pomplun, 2013; Wauters & Dirks, 2017.

Appendix B: Parents/Carers Questionnaire (Primary)

This set of questions relates to the background of your child:

1. What is your child's age?
    a. 4
    b. 5
    c. 6
    d. 7
    e. 8
    f. 9
    g. 10
    h. 11
    i. 12
    j. 13
2. What year level is your child in?
    a. 2
    b. 4
    c. 6
3. Does your child have any siblings?
    a. Yes
        i. Younger siblings only
        ii. Older siblings only
        iii. Both younger and older siblings
    b. No
4. Is your child of Aboriginal and/or Torres Strait Islander decent?
    a. Yes
    b. No
5. What gender does your child identify as?
    a. Male
    b. Female
    c. Other
6. Does your child currently have an Educational Adjustment Program (EAP)?
    a. No
    b. Yes
        i. *(If yes is chosen)* In what specific impairment areas does your child require significant education adjustments: (choose as many as relevant)
            1. autism spectrum disorder
            2. hearing impairment
            3. intellectual disability
            4. physical impairment
            5. speech-language impairment
            6. vision impairment.
7. Has your child completed any part of their primary schooling in a different country?
    a. No
    b. Yes

i. *(If yes is chosen)* To date, how many years of schooling has your child completed in Australian schools?
    1. 0-1 years
    2. 2-3 years
    3. 4-5 years

For the purposes of this survey, eBooks refers to an electronic book that can be read on a computer screen, an eBook reader, or device where students read for interest, enjoyment, or school related reading (it does not include digital-based textbooks).

This set of questions relates to your reading habits:

8. Which of the following best describes your reading habits?
    a. I don't read books
    b. I only read paper-based books
    c. I only read eBooks
    d. I read a mixture of eBooks and paper-based books
        i. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the amount you read?
            1. Reading eBooks has increased the amount I read
            2. Reading eBooks has decreased the amount I read
            3. Reading eBooks has not changed the amount I read
        ii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the genre/type of book you read?
            1. Reading eBooks has diversified the genre/types of books I read
            2. Reading eBooks has narrowed the genre/types of books I read
            3. Reading eBooks has not changed the genre/types of books I read
        iii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the places/location you read?
            1. I read in more places/locations when I read eBooks
            2. I read in fewer places/locations when I read eBooks
            3. Reading eBooks has not changed the places/location of where I read
        iv. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on your motivation to read?
            1. I feel more motived to read when reading eBooks
            2. I feel less motived to read when reading eBooks
            3. Reading eBooks has not changed my motivation to read
9. How long have you been reading eBooks?
    a. 0-1 years
    b. 2-3 years
    c. 4-5 years
    d. 6-7 years
    e. 8-9 years
    f. 10+ years
10. What device do you use to access eBooks? (choose as many devices as relevant)
    a. Desktop computer
    b. Laptop

c. Ereader e.g., Kindle or Kobo
d. Tablet e.g., iPad or Samsung Tablet
e. Mobile phone
f. Other _____

11. On a typical week how many days of the week do you read (either paper-based or eBooks) for interest or enjoyment (not work or study related)?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6
    h. 7
12. On average how many minutes per day do you read (either paper-based or eBooks)?
    a. Less than 30 min
    b. More than 30 min

This set of questions relates to your child's health and wellbeing:

These questions are about sport, exercise or active play activities that raise your children's heart rate, cause them to sweat or huff and puff.

13. On about how many days during the school week does your child usually do physical activity outside of school hours?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
14. On a typical weekday, about how many hours does your child usually do physical activity?
    a. Less than 30 minutes
    b. 30 minutes to 1 hour
    c. More than 1 hour
15. On about how many weekend days does your child usually do physical activity?
    a. 1
    b. 2
16. On a typical weekend day, about how many hours does your child usually do physical activity? Less than 30 minutes
    a. 30 minutes to 1 hour
    b. More than 1 hour
17. Does your child's typical bedtime routine involve reading books (paper-based or eBooks) or listening to audio books?
    a. No
    b. Yes
        i. (if yes is chosen) At bedtime does your child (choose as many as relevant)
            1. Read paper-based books assigned by the school independently

2. Read paper-based books assigned by the school with adult support
3. Read eBooks assigned by the school independently
4. Read eBooks assigned by the school with adult support
5. Read eBooks independently
6. Read eBooks with adult support
7. Listen to audio books independently
8. Listen to audio books with adult help
9. Read only paper-based books independently
10. Read only paper-based books with adult support
11. Read a mix of eBooks and paper-based books independently
12. Read a mix of eBooks and paper-based books with adult support

18. How, if at all, does reading benefit your child's wellbeing?
19. What concerns, if any, do you have about your child's wellbeing when they read?
20. How, if at all, does reading benefit your child's health?
21. What concerns, if any, do you have about your child's health when they read?

This set of questions relates to your child's reading habits and eBook use:

22. How long has your child been using eBooks?
    a. 0-1 years
    b. 2-3 years
    c. 4-5 years
    d. 6-7 years
    e. 8-9 years
    f. 10+ years
23. What device does your child use to access eBooks? (choose as many devices as relevant)
    a. Desktop computer
    b. Laptop
    c. Ereader such as Kindle or Kobo
    d. Tablet e.g., iPad or Samsung Tablet
    e. Mobile phone
    f. Other _____
24. Which of the following best describes your child's reading habits?
    g. My child doesn't read books
    h. My child only reads paper-based books
    i. My child only reads eBooks
    j. My child reads a mixture of eBooks and paper-based books
        i. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the amount your child reads?
            1. Reading eBooks has Increased the amount my child reads
            2. Reading eBooks has decreased the amount my child reads
            3. Reading eBooks has not changed the amount my child reads
        ii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the genre/type of book your child reads?
            1. Reading eBooks has diversified the genre/types of books my child reads

2. Reading eBooks has narrowed the genre/types of books my child reads
3. Reading eBooks has not changed the genre/types of books my child reads

iii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the places/location your child reads?
1. My child reads in more places/locations when they read eBooks
2. My child reads in fewer places/locations when they read eBooks
3. Reading eBooks has not changed the places/locations of where my child reads

iv. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on your child's motivation to read?
1. My child feels more motived to read eBooks
2. My child feels less motived to read eBooks
3. Reading eBooks has not changed my child's motivation to read

25. On a typical week how many days of the week does your child read for interest or enjoyment (not study related)?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6
    h. 7
26. On average how many minutes per day does your child read for interest or enjoyment?
    a. Less than 30 min
    b. More than 30 min
27. Are you involved in the decision-making process of what your child reads on their eBook?
    a. Never
    b. Only if my child asks my opinion
    c. Sometimes
    d. Always
28. Who has the greatest influence on the choice of eBook your child reads. Order from most influential to least influential:
    a. Parents/Carers
    b. Siblings
    c. Friends
    d. Teacher
    e. Librarian
    f. Social media
    g. Recommendations from software
    h. Other_____
29. Does your child use any of the following functions when reading eBooks? (choose as many as relevant)

a. Adjusts the font size
b. Adjusts the back lighting
c. Uses hyperlinks to connect to the internet
d. Dictionary look up of words or meanings
e. Search inside the eBook
f. Print parts of the eBook
g. Enlarges images or graphs
h. Adds notes, highlights or comments
i. Other _____

30. What communication or information from the school or Department of Education have you received about eBooks? (choose as many as relevant)
    a. Health information related to eBooks
    b. Wellbeing information related to eBooks
    c. Communication on how to access and navigate the eBook software
    d. eBook recommendations for your child
    e. Recommended reading times and reading strategies for eBooks
    f. Recommended reading times and reading strategies generally
    g. Other_____
31. As a parent/carer, which of the following activities would count towards the allocated screen time for your child (choose as many as relevant):
    a. Watching a TV show or movie
    b. Watching YouTube
    c. Watching a documentary
    d. Playing a game on a device
    e. Playing an educational game on a device
    f. Reading an eBook for interest or enjoyment
    g. Reading an eBook for homework
    h. Listening to an audio book
    i. Creating music, art or films on a device
    j. Coding activities on a device
    k. Completing homework on a device
    l. Online shopping
    m. Engaging with social media e.g., snap chat, Facebook, Instagram
    n. Skype/facetime/other online video conferencing with friends
    o. Skype/facetime/other online video conferencing with family
    p. Other_____
32. What, if any, do you think are some of the benefits of reading eBooks for your child?
33. What, if any, do you think are some of the challenges of reading eBooks for your child?

Appendix C: Parents/Carers Questionnaire (Secondary)

This set of questions relates to the background of your young adult/child:

1. What is your child's age?
    a. 11
    b. 12
    c. 13
    d. 14
    e. 15
    f. 16
    g. 17
    h. 18
2. What year level is your child in at this school?
    a. 8
    b. 10
    c. 12
3. Does your child have any siblings?
    a. Yes
        i. Younger siblings only
        ii. Older siblings only
        iii. Both younger and older siblings
    b. No
4. Is your child of Aboriginal and/or Torres Strait Islander decent?
    a. Yes
    b. No
5. What gender does your child identify as?
    a. Male
    b. Female
    c. Other
6. Does your child currently have an Educational Adjustment Program (EAP)?
    a. No
    b. Yes
        i. *(If yes is chosen)* In what specific impairment areas does your child require significant education adjustments: (choose as many as relevant)
            1. autism spectrum disorder
            2. hearing impairment
            3. intellectual disability
            4. physical impairment
            5. speech-language impairment
            6. vision impairment.
7. Has your child completed any part of their schooling in a different country?
    a. No
    b. Yes
        i. *(If yes is chosen)* To date, how many years of schooling has your child completed in Australian schools?

1. 0-1 years
2. 2-3 years
3. 4-5 years
4. 6-7 years
5. 8-9 years
6. 10+ years

For the purposes of this survey, eBooks refers to an electronic book that can be read on a computer screen, an eBook reader, or device where students read for interest, enjoyment, or school related reading (it does not include access to digital-based textbooks).

This set of questions relates to your reading habits:

8. Which of the following best describes your reading habits?
    a. I don't read books
    b. I only read paper-based books
    c. I only read eBooks
    d. I read a mixture of eBooks and paper-based books
        i. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the amount you read?
            1. Reading eBooks has increased the amount I read
            2. Reading eBooks has decreased the amount I read
            3. Reading eBooks has not changed the amount I read
        ii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the genre/type of book you read?
            1. Reading eBooks has diversified the genre/types of books I read
            2. Reading eBooks has narrowed the genre/types of books I read
            3. Reading eBooks has not changed the genre/types of books I read
        iii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the places/location you read?
            1. I read in more places/locations when I read eBooks
            2. I read in fewer places/locations when I read eBooks
            3. Reading eBooks has not changed the places/location of where I read
        iv. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on your motivation to read?
            1. I feel more motived to read when reading eBooks
            2. I feel less motived to read when reading eBooks
            3. Reading eBooks has not changed my motivation to read
9. How long have you been reading eBooks?
    a. 0-1 years
    b. 2-3 years
    c. 4-5 years
    d. 6-7 years
    e. 8-9 years
    f. 10+ years
10. What device do you use to access eBooks? (choose as many devices as relevant)
    a. Desktop computer

b. Laptop
c. Ereader e.g., Kindle or Kobo
d. Tablet e.g., iPad or Samsung Tablet
e. Mobile phone
f. Other _____

11. On a typical week how many days of the week do you read (either paper-based or eBooks) for interest or enjoyment (not work or study related)?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6
    h. 7
12. On average how many minutes per day do you read (either paper-based or eBooks)?
    a. Less than 30 min
    b. More than 30 min

This set of questions relates to your young adult/child's health and wellbeing:

These questions are about sport, exercise or active play activities that raise your children's heart rate, cause them to sweat or huff and puff.

13. On about how many days during the school week does your child usually do physical activity outside of school hours?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
14. On a typical weekday, about how many hours does your child usually do physical activity?
    a. Less than 30 minutes
    b. 30 minutes to 1 hour
    c. More than 1 hour
15. On about how many weekend days does your child usually do physical activity?
    c. 1
    d. 2
16. On a typical weekend day, about how many hours does your child usually do physical activity? Less than 30 minutes
    a. 30 minutes to 1 hour
    b. More than 1 hour
17. Does your child's typical bedtime routine involve reading books (paper-based or eBooks) or listening to audio books?
    a. No
    b. Yes
        i. (if yes is chosen) At bedtime does your child (choose as many as relevant)

1. Read paper-based books assigned by the school
2. Read eBooks assigned by the school
3. Read eBooks for interest or enjoyment
4. Listen to audio books
5. Read only paper-based books
6. Read a mix of eBooks and paper-based books

18. How, if at all, does reading benefit your child's wellbeing?
19. What concerns, if any, do you have about your child's wellbeing when they read?
20. How, if at all, does reading benefit your child's health?
21. What concerns, if any, do you have about your child's health when they read?

This set of questions relates to your young adult/child's reading habits and eBook use:

22. How long has your child been using eBooks?
    a. 0-1 years
    b. 2-3 years
    c. 4-5 years
    d. 6-7 years
    e. 8-9 years
    f. 10+ years
23. What device does your child use to access eBooks? (choose as many devices as relevant)
    k. Desktop computer
    l. Laptop
    m. Ereader such as Kindle or Kobo
    n. Tablet e.g., iPad or Samsung Tablet
    o. Mobile phone
    p. Other _____
24. Which of the following best describes your child's reading habits?
    q. My child doesn't read books
    r. My child only reads paper-based books
    s. My child only reads eBooks
    t. My child reads a mixture of eBooks and paper-based books
        i. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the amount your child reads?
            1. Reading eBooks has Increased the amount my child reads
            2. Reading eBooks has decreased the amount my child reads
            3. Reading eBooks has not changed the amount my child reads
        ii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the genre/type of book your child reads?
            1. Reading eBooks has diversified the genre/types of books my child reads
            2. Reading eBooks has narrowed the genre/types of books my child reads
            3. Reading eBooks has not changed the genre/types of books my child reads

iii. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on the places/location your child reads?
    1. My child reads in more places/locations when they read eBooks
    2. My child reads in fewer places/locations when they read eBooks
    3. Reading eBooks has not changed the places/locations of where my child reads

iv. *(if C or D is chosen)* Since beginning to read eBooks what impact, if any, has access to eBooks had on your child's motivation to read?
    1. My child feels more motived to read eBooks
    2. My child feels less motived to read eBooks
    3. Reading eBooks has not changed my child's motivation to read

25. On a typical week how many days of the week does your child read for interest or enjoyment (not study related)?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6
    h. 7
26. On average how many minutes per day does your child read for interest or enjoyment?
    a. Less than 30 min
    b. More than 30 min
27. Are you involved in the decision-making process of what your child reads on their eBook?
    a. Never
    b. Only if my child asks my opinion
    c. Sometimes
    d. Always
28. Who has the greatest influence on the choice of eBook your child reads. Order from most influential to least influential:
    a. Parents/Carers
    b. Siblings
    c. Friends
    d. Teacher
    e. Librarian
    f. Social media
    g. Recommendations from software
    h. Other_____
29. Does your child use any of the following functions when reading eBooks? (choose as many as relevant)
    a. Adjusts the font size
    b. Adjusts the back lighting
    c. Uses hyperlinks to connect to the internet
    d. Dictionary look up of words or meanings

e. Search inside the eBook
f. Print parts of the eBook
g. Enlarges images or graphs
h. Adds notes, highlights or comments
i. Other _____

30. What communication or information from the school or Department of Education have you received about eBooks? (choose as many as relevant)
    a. Health information related to eBooks
    b. Wellbeing information related to eBooks
    c. Communication on how to access and navigate the eBook software
    d. eBook recommendations for your child
    e. Recommended reading times and reading strategies for eBooks
    f. Recommended reading times and reading strategies generally
    g. Other_____
31. Do you allocate a certain amount of screen time for your child? How much?
32. As a parent/carer, which of the following activities would count towards the allocated screen time for your child (choose as many as relevant):
    a. Watching a TV show or movie
    b. Watching YouTube
    c. Watching a documentary
    d. Playing a game on a device
    e. Playing an educational game on a device
    f. Reading an eBook for interest or enjoyment
    g. Reading an eBook for homework
    h. Listening to an audio book
    i. Creating music, art or films on a device
    j. Coding activities on a device
    k. Completing homework on a device
    l. Online shopping
    m. Engaging with social media e.g., snap chat, Facebook, Instagram
    n. Skype/facetime/other online video conferencing with friends
    o. Skype/facetime/other online video conferencing with family
    p. Other_____
33. What, if any, do you think are some of the benefits of reading eBooks for your child?
34. What, if any, do you think are some of the challenges of reading eBooks for your child?

Appendix D: First Interview Questions for Teachers

1. Theme 1: Reading and eBooks habits, sample questions:
    a. Describes your reading habits in relation to eBooks and paper-based book?
    b. Did you receive any professional development in the use of eBooks? How have you learned about new eBooks?
    c. Do you think eBooks will be used more/less or the same in the next 5-10 years?
    d. Do you think paper books will be used more, less or the same in the next 5-10 years?
    e. How has the use of eBooks changed interaction with the librarians?

2. Theme 2: Reading habits of their students, sample questions:
    a. What influences your student's selection of books and eBooks specifically?
    b. Have you noticed a change in reading habits in your students since the introduction of eBooks?
    c. What devices do your students use to access eBooks?
    d. Do you give your students any tips for coping strategies when using eBooks related to eye health or posture?

3. Theme 3: Use of eBooks in their classroom practice, sample questions:
    a. How do you use eBooks in your classroom practice?
    b. Can you describe one lesson in which eBooks are a key feature?
    c. Have you incorporated the development of transmedia skills for your students?
    d. What support, training and information have you provided to students related to eBooks?
    e. What support, training and information have you provided to parents/carers related to eBooks?
    f. What do you see as the barriers and enablers to the use of eBooks?
    g. How do you use the affordances of eBooks to address students with special needs or differentiate learning?

Appendix E: Second Interview Questions for Teachers

The purpose of the interview is to debrief with the teacher on what was observed and to better understand the benefits and barriers of eBooks.

1. What was your goal/outcome for this activity?
2. What impact did eBooks have on the activity (positive or negative)?
3. How are these benefits/challenges different to if you had used hard copy books?
4. Did the activity unfold as intended? If not, why?
5. If you were to do this activity again, would you make any changes?
6. What impact did eBooks have on the activity (positive or negative)?

Appendix F: Classroom Observation

Please take notes for each of these and document with photos/videos to support observations

1. What devices are being used?
    a. Class set? BYOD?
    b. Tablets/laptops/phones/other
2. How did students access the devices?
    a. Sign in/out
    b. Class set
    c. Own devices
3. What subject area is the focus of the task that requires eBooks
4. What texts have been used
5. Are students using the eBooks as individuals or in groups?
6. What type of activity is expected of the students when using eBooks?
    a. Research
    b. Reading
    c. Worksheets
7. What interaction is happening with the eBooks?
    a. Reading
    b. Annotating
    c. Copy/pasting
    d. Other
8. What is the teacher doing while students are interacting with the eBooks?
9. Are there any obvious barriers to eBooks being effectively used?
10. Are there expectations for students to continue this outside school?
11. Other notes

Appendix G: Teacher Focus Group

Teacher Focus Group Questions

1. What benefits and challenges have you found when using eBooks on different types of devices (tablets/laptops/phones/other)?
2. What influences your decision to use an eBook or a hard copy book during class?
3. Are there particular activities or interactions that are more effective with eBooks (e.g., activities: research/reading/worksheets interactions: reading/annotating/copying and pasting)?
4. What benefits have you experiences in using eBooks?
5. What barriers have you experienced in using eBooks effectively?
6. What impact (if any) have eBooks had on student learning?
7. Based on your experiences, what recommendations do you have, if any, for how eBooks could be better used in schools (e.g., to teachers, school leaders, system leaders, etc.)?