

Handbook of Research on Digital Tools for Writing Instruction in K–12 Settings

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Chapter 12

iLiterate: Exploring iPads, Multimodality, and Writing Pedagogy in Secondary English

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ABSTRACT

Digital technologies significantly shape and mediate adolescents' writing practices. Consequently, this chapter investigates the relevance and use of emergent technology in Year 8 English classes in an Australian high school. The importance of this study stems from the introduction of the Australian Government's Digital Education Revolution and the growing prominence of technology in local schools. Building on sociocultural perspectives and new literacies scholarship, this case study critically considers how iPads influence student writing. Moreover, it examines what pedagogical strategies teachers use when implementing iPads in their classes to support student learning outcomes. Findings from this study contribute to our understanding of how digital tools influence students' collaborative learning, multimodal practices, and writing processes.

INTRODUCTION

Writing has always been mediated by available tools. From quill pens to touch screens, tools shape both the production and distribution of the written word. While prior research indicates that technology can support young adults' writing in online spaces (Curwood, Magnifico, & Lammers, 2013), it is important to examine how it can promote student engagement and achieve-

ment in schools (Baker, 2010). The purpose of this chapter is to provide insight into how tablet devices, specifically iPads, are used to support the writing practices of Year 8 English students. Specifically, it offers an Australian perspective on the relationship among literacy, technology, and pedagogy, which is significant at both a national and international level.

In Australia, recent policy initiatives and curriculum changes place an unprecedented im-

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portance on educational technology. This can be linked to the introduction of the Digital Education Revolution in 2008, which included greater investments in infrastructure and school-based support for technology and a 1:1 laptop initiative for students in Years 9-12, the latter of which will cease in 2014. At the same time, the looming implementation of the new national curriculum emphasizes students' development of technology skills and teachers' integration of digital tools and online resources. A three-year formal evaluation of the Digital Education Revolution in the state of New South Wales indicated that teachers report more positive beliefs about technology and more student-centered practices (Howard & Mozejko, 2013).

Despite the move towards increased technology in Australian classrooms, standards and assessment practices do not always reflect this change. For instance, the Australian Curriculum does not recognize the evolving nature of writing production as it continues to prioritize writing that is driven towards high stakes assessment. This is also evident at the state level; in New South Wales, Year 12 students must take the Higher School Certificate English exam, which focuses on extended pieces of both critical and creative writing. The English Teachers Association (2010) believes that "Information and Communication Technology skills are not closely integrated into the content and are not of a sufficiently high order" in the current curriculum (p. 13). This has implications for young adults' writing practices as well as how their content knowledge is formatively and summatively assessed in a digital age. The Digital Education Revolution has the least impact for students in Years 11-12 (Howard & Mozejko, 2013), which may be due to the focus on traditional pen-and-paper assessments in the senior years.

This chapter draws on a sociocultural framework to explore how iPads are implemented in Year 8 English classes. It begins with a literature review of multimodality and English pedagogy

to situate the study. After detailing the research context and methodology, the study offers key findings related to teachers' writing pedagogy and students' writing practices in a digital age. It builds on previous research on iPads to focus specifically on the process of multimodal composition, where students work outside of traditional practices and integrate visual, aural, and kineikonic elements into their work (Curwood & Gibbons, 2009). In particular, this chapter considers:

- How do teachers implement iPads in their classrooms to enhance Year 8 students' multimodal competencies?
- How are young adults' writing practices shaped through the use of iPads in schools?

BACKGROUND

Theoretical Framework

This chapter understands literacy and developing literacy processes through a sociocultural framework. A sociocultural perspective on literacy education entails the belief that the nature of literacy shifts with societal change (Baker, 2000; Daiute, 1993). Here, literacy can be understood as an artifact of culture, which means that literacy education has shifted from being a private possession (Gee, 1991) to a "semiotic, public, and transitory" element (Baker, 2010, p. 16). Freire and Macedo (1987) posit that page-bound and static texts still pervade most classrooms and are divorced from the cultural contexts of students' lived realities. For literacy educators and researchers, a sociocultural perspective offers insight into how societal and technological developments impact educational practices.

New Literacy Studies scholars consider the varying forms of literacy and the impact on the practice of literacy education. According to Gee (1999), the New Literacies Studies seeks to examine literacy, including literacy that is integrated

iLiterate

with “oral language, material settings and distinctively cultural forms of thinking, knowing, valuing and believing” (p. 356). Furthermore, it seeks to inform the pedagogical practices that are implemented into classrooms to benefit and support the development of school-based literacy. Cazden, Cope, Fairclough and Gee (1996) use pedagogy as a way of bridging the teaching and learning relationship of educators and students. Through a sociocultural perspective, the New Literacies Studies demonstrates that “literacy pedagogy must account for the burgeoning variety of text forms associated with information and multimedia technologies” (Cazden et al., 1996, p. 60).

Lankshear and Knobel (2006) propose the term *new literacies* as a way of encompassing literacy that is viewed through a both a technical as well as a social lens. They assert, “literacies are bound up with social, institutional and cultural relationships, and can only be situated within their social, cultural and historical contexts” (p. 12). As a result, new literacies are evident when young adults write fan fiction, engage in role-playing games, and modify wikis (Curwood & Gibbons, 2011). Lankshear and Knobel (2011) add that new literacies present a new approach to thinking about literacy as a social phenomenon, which has profound implications for both teachers’ practices and students’ perceptions towards writing in the classroom.

Literature Review

Technology shapes, and often challenges, pedagogy. For this reason, the introduction of digital tools and mobile devices will influence both how teachers teach and how students learn. This study seeks to investigate how this occurs within secondary English, particularly in relation to iPads, literacy strategies, and learning outcomes. In order to situate the study, existing literature will be reviewed, with an emphasis on multimodal composition and English pedagogy.

iPads

Despite the relative newness of iPads in education, emergent research has been conducted that investigates their impact in a variety of educational contexts. Rossing, Miller, Cecil and Stamper (2012) indicate that the nature of technology-based learning has evolved as new products have been released onto the market, as seen in the proliferation of iPads since their release in 2010. A study conducted by Henderson and Yeow (2012) examined the impact and effectiveness of iPad devices in a primary school in New Zealand. They found that iPads allow students to engage meaningfully with mobile learning as they promote collaboration and “seamless learning” (p. 79) and encourage just-in-time formative feedback. In the United States, Hutchison, Beschorner, and Schmidt-Crawford (2012) posit that iPads allow teachers to meet their print-based literacy goals, including the introduction of specific reading comprehension strategies, while also introducing students to new literacies.

Despite the fact that iPads are increasingly prevalent in schools, there is relatively little research concerned with how they shape and mediate students’ literacy practices. Moreover, research on mobile devices may focus on reading or gaming rather than exploring the impact on students’ writing practices. Henderson and Yeow (2012) suggest that iPads do not encourage students to creatively compose through video and images because of the limitations of the device. However, this chapter challenges this notion and highlights research that indicates that iPads can encourage and support multimodal composition.

Multimodality

New literacies can enhance students’ critical engagement, promote their awareness of audience, and foster their knowledge of multiple modalities (Curwood & Cowell, 2010). Domingo (2012) ar-

gues that images, sounds, and other modes thought to be secondary to written language now offer layering capabilities that show the relationships between and among diverse modes. A position statement from the National Council of Teachers of English (2005) argues that multimodality is an inherent component of secondary English; specifically that, “creating images, sounds, designs, videos and other extra-alphanumeric texts is an aesthetic, self-originated, self-sponsored activity for many writers. Digital technologies have increasing capacity for individuals to adapt the tools for their own information and communication purposes.”

The use of iPad devices in order to enhance student learning supports the notion that literacy is not solely a linguistic accomplishment (Jewitt, 2008). Moreover, the “prolific use of video, mobile devices, computers and other technology devices” demonstrates how ingratiated technology is in everyday life (Domingo, 2012, p. 178). The inclusion of these devices in schools can enhance literacy practices both inside educational settings and those that occur external to traditional classrooms. The introduction of technologically relevant resources and skills also provides students with the opportunity to enhance their literacy practices through a familiar mode of learning (Tierney, Bond & Bresler, 2006). However, unless government institutions provide explicit curriculum support for the use of technology and further promote its use through on-going professional development (Alvermann, 2008), iPads and other multimodal devices may increase the digital divide.

English Pedagogy in Australia

In order to examine how iPads can support multimodal composition, it is important to situate this study within an Australian context. In Australia, a national curriculum has been developed for implementation in 2014; aiming to make education more universal throughout the states and territories, which currently have their own curriculum

frameworks and standardized assessments. The national curriculum shapes English around the strands of language, literacy, and literature. While the Digital Education Revolution and the Australian Curriculum purport to address the gap between technology and pedagogy, the English Teachers Association (2010) has expressed concern that it may not be adequately preparing students for living and working in the 21st century as there is a lack of creativity and flexibility within the document. In addition, digitally mediated skills are ascribed with a low order status (English Teachers Association, 2010). This serves as an indication of the problematic nature of education policies, and may contribute to a lack of socially and technologically relevant pedagogy.

English in New South Wales prioritizes specific forms of academic writing in order to satisfy the leaving exam that all students undertake, the Higher School Certificate. In Australia, particularly in New South Wales, there is a long-standing history of textual variety within the syllabus (NSW Board of Studies, 2003). This has been reflected in textual prescriptions that are issued for students, with many including a focus on film and textual adaptation. Furthermore, the recent prescriptions for Stage 6 English 2015-2020 now include the study of a Website, the Australian War Memorial site (NSW Board of Studies, 2013). However, student learning is still primarily formatively and summatively assessed through written responses. Alvermann (2002) notes that “everyday literacy practices are changing at an unprecedented rate” (p. 198), and these changes can, and will, impact English pedagogy in Australia and abroad.

METHODOLOGY

Research Context

This study was conducted at City High School, a private co-educational secondary school in the greater Sydney area. City High currently has

1000 students enrolled through Years 7-12, and 70 full time teaching staff are employed across year groups and curriculum areas. City High is situated in a middle class neighborhood and has a relatively diverse student body, with approximately 22% of students coming from non-English speaking backgrounds. The school was selected because it has developed a program of implementation for iPads as a school-wide initiative as a response to sociocultural changes and technological shifts. The school implemented 1:1 iPads in Years 8 through 10 in 2012 and has plans to further expand the program to the incoming Year 7 cohort. The school uses iPads across all curriculum areas as well as mainstream and support unit classrooms. In addition, the school also has class sets of iPads and laptops, as well as a combined library and deconstructed learning area, known as the iLearn centre. The teachers involved in this study use their iPads for the purposes of lesson planning and conducting research as well as for administrative tasks such as grading, recording student attendance, and tracking student behaviors.

Students are required to have purchased the iPad prior to commencing study. In addition to the hardware, students are able to purchase PDF and interactive copies of the required textbooks. While issues to access and equality could present in this scenario, the school has tried to address these possibilities by partnering with Apple and implementing payment plans over the duration of the child's study. Furthermore, any student who may not be in a position to purchase the device can seek payment assistance from the school. The program is designed so that students can become familiar with iPad devices, digital textbooks, and apps that are required by the school. This allows students to see their iPad as both a recreational and educational tool for their consumption.

Teacher Participants

There were four focal teacher participants in this study. These participants have varied amounts of teaching experience and the approaches they take towards implementing technology in their classrooms. Glen has been teaching for over 10 years in a variety of different schools both locally and internationally, and he has had a wide exposure to students from diverse backgrounds. He has held numerous administrative positions throughout his career before settling as a coordinator at his current school. Glen teaches English across several year groups at City High including Year 8, Year 10, Year 11 Advanced, Year 11 Extension, and Year 12 Extension and is particularly interested in how the iPad promotes student engagement in his class.

Alice has been teaching for five years and currently teaches across two key learning areas, including English. Her current class load includes English classes for Years 7, 9, 10 and 11. Alice specifically uses iPads in her classroom to develop her students' independent learning skills as well as to enhance the achievement of her students through curriculum differentiation.

Grace is a recent graduate and has been teaching at City High School the past two years. She currently teaches English to Years 7, 8, and 9 as well as a Year 11 Standard class and Year 11 English Fundamentals. Grace also teaches Legal Studies to Year 11. Grace believes that the 1:1 iPad program at City High is particularly effective because the students have autonomy and authority over their devices, which she believes leads to greater student engagement. Four of Grace's lessons were observed throughout the duration of the study.

Megan has been a teacher for the past four years and currently teaches English to Years 8, 9, 10 and 11. Megan has been very enthusiastic about

the implementation of iPads at City High and particularly finds them beneficial for the purposes of applying Bloom's taxonomy and Gardner's theory of multiple intelligences to her classroom. Four of Megan's lessons were also observed.

Student Participants

Forty Year 8 students aged between 12 and 14 took part in the study. These students come from mixed ability levels and diverse linguistic and cultural backgrounds. These 40 students were split across Megan and Grace's classes, 16 from Megan's class and 24 from Grace's. The participants in this study have varying literacy levels. Megan's students represent a mixed ability level; with a mix of both high achieving and lower ability students. In contrast, Grace's students represent a high achieving portion of the student demographic. Students in years 7 and 9 in Australian high schools undergo standardized NAPLAN testing (National Assessment Program – Literacy and Numeracy) to assess their proficiencies in reading, narrative writing, persuasive writing, spelling, grammar and punctuation and numeracy. Recent NAPLAN results indicate that students at City High School are meeting national standards, or are slightly above average when compared to other schools in the state and school of similar demographics in surrounding areas.

Throughout the research process Hannah and Lucas, both 14 years old, were two students who were of particular focus throughout the observations. Hannah came from Grace's class, is self-motivated and directed, and needed little assistance when completing iPad-related tasks. Lucas was in Megan's mixed ability classroom and often was distracted with available iPad applications and social media. Lucas' learning had to be moderated by Megan, and he needed much more direction and structure in order to complete the set tasks. Hannah and Lucas reflect the diverse kinds of learners that were observed during the research process: those who were able to mediate

the multiple uses of the devices and apply their skills and knowledge to educational content and those who struggled to stay on task and adapt the use of their iPad from solely entertainment to an instructional tool.

Data Collection and Analysis

In order to answer the research questions about literacy, multimodality, and technology, the study involved multiple forms of data. This included: 1) surveys distributed to five members of the English teaching staff that ascertained their opinions regarding the implementation of iPads and the impact that the device has on students' literacy and multimodality competencies; 2) surveys distributed to 40 Year 8 students across two classes to understand how students view the device in an educational context and how they rate their own multimodal competency; 3) interviews conducted with four focal English teachers that further explored their attitudes towards the device while also examining their pedagogical practices; and 4) four lesson observations of two separate Year 8 English classes in order to understand the real-life application of the devices in classes for the purposes of supporting student learning.

Through descriptive case analysis (Yin, 2003), we created case studies of teachers and students at the school. Using a thematic analysis framework (Boyatzis, 1998; Saldaña, 2009) to perform repeated rounds of qualitative coding, we examined how teachers engaged with the concepts of multimodality, literacy, engagement and achievement and the associated language that they used to describe the phenomena that they observe in their classrooms.

Our analysis involved gradually consolidating and refining teachers' discussions of their pedagogy in interviews and students' discussions of their literacy practices in surveys into broad patterns. For instance, thematic analysis of Megan's interview revealed that she has a greater focus on building literacy skills for her students with tech-

nology; in contrast, Grace's interview focused on isolating what her students had already developed proficiency in and developing additional writing strategies. Notably, all teacher participants were hesitant to make definitive statements about the benefits of iPads as they largely viewed the success of the program as a being influenced by a number of external factors. Student surveys involved both Likert-scale questions and open-ended questions; in our analysis, we considered the motivation that students had for providing their answers and the potential biases that they may possess, particularly with regard to ranking how they view their technological proficiency. Moreover, interviews, surveys, and observations offered a way to triangulate findings.

FINDINGS

Disrupting the Digital Natives Myth

The concept of the *digital native* and the technological competence of students has been a recurrent theme in both educational research and practice. Hobbs (1998, 2006) states that the digitally native student is defined by a level of technological proficiency that is largely derived from their social interactions with technology. Furthermore, the myth surrounding the digital native assumes that students' saturation with technology, despite often being specific to social media, will inher-

ently allow these tech skills to transfer seamlessly into a classroom environment. Though skills such as movie editing, photo composition, and writing rich with colloquial expression did transfer into the classroom, skills of organizing and synthesizing information, researching and writing extended responses, such as academic essays, were underdeveloped by comparison. This study challenges the problematic nature of the digital native and provides insight to how both students and teachers mediate and develop these necessary skills. Data analysis revealed that students view themselves as being incredibly proficient when engaging with technology, as illustrated in Table 1. However, this was in stark contrast with data collected from lesson observations, teacher surveys, and interviews conducted with the four focal teacher participants.

Surveys and interviews conducted with teacher participants indicated their belief that students work more efficiently and effectively when they are engaging with their iPads as they allow students to access content in a significant and meaningful manner. Glen noted in his interview that the iPads offer a "more tailored and independent learning experience" that is relevant and relatable to the students. Grace also notes that students respond to the device because they feel more competent and empowered when working with technology, as affirmed in the digital native myth. She states, "Students are so literate in some ways and they can use their devices better than I can [in terms

Table 1. Student proficiencies and writing responses

Students' Proficiency Ranking (Out of 10)	Number of Students with this Response	Examples of Student Responses Regarding the iPad and Writing Instruction
9-10	18	"Making posters and mind mapping are my favourite things." "I can display my work in a creative manner." "I use it for schoolwork, it motivates me to work better."
5-8	21	"I think technology is effective because it helps me understand words I don't know." "We used the iPad when we were creating a presentation about a hero." "I use my iPad to access my textbooks, reading and typing up my notes. My parents don't allow games on my iPad."
1-4	1	"[iPads] are too distracting."

of creation].” This is reaffirmed by the responses given by 40 students in Table 1, where students were asked to rank their technological proficiency on a scale of 1 (poor) to 10 (proficient). A fifth of the respondents ranked their proficiency a 10; however, is it reasonable to assume that these respondents view their usage of the iPad in a social context, the remaining participants average out to a ranking of 7.75, which would account for its use in both in-school and out-of-school settings.

Assessment often reveals the disparity between students’ social and academic technological competence. When students are set a task that focuses on creation and multimodality, they excel especially when completing multimodal tasks such as composing different media forms for different audiences, purposes and contexts and recreating or reinterpreting texts. However, the majority of all standardized testing and high stakes testing in Australia assess a single mode of expression, specifically academic essay writing or creative writing. Grace particularly noted the importance of using multimodal apps such as iMovie in the classroom as they enabled students to add different layers of both content and meaning to any composition. She notes, “They love throwing themselves into tasks like iMovie stuff. They love filming themselves. That sort of stuff, that’s really high order. Applying knowledge and creating and they love that stuff. That’s much easier to do than with a pen and paper.” In addition to iMovie, students also make use of apps such as Show Me and Explain Everything, which allow them to mix modes of representation, including visual images, sound effects, written words, and music.

Specific apps allowed students choice in how they represented their knowledge. Grace used the Show Me app and Educreations Website as a way for her students to show their learning processes:

Kids can explain their understanding and their concepts and features and they can annotate things. For example, it might be a stanza of a poem, and they can record themselves talking about their

understanding of it. Any they can annotate it too, ‘this is a simile, this is personification, this is my understanding of this’, and they can send it to me too and I can listen and watch it. So stuff like that where they are actually producing content using their iPad.

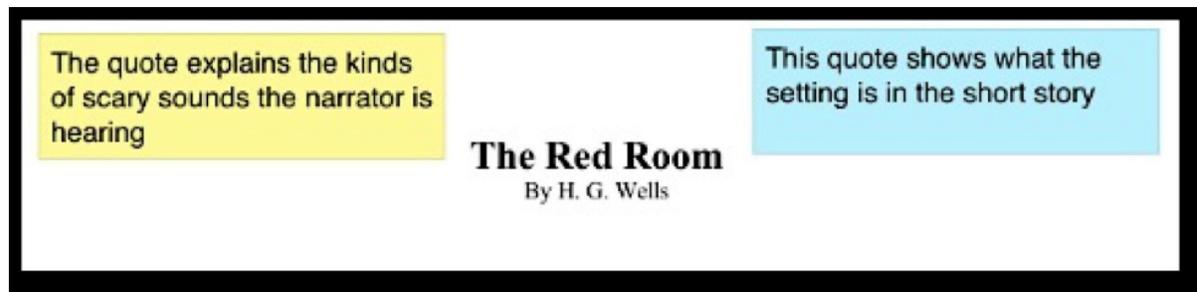
The true disruption to the digital native myth comes when students’ technological proficiency is not evident in conjunction with more traditional writing practices, including essays and language analysis. In lesson observations conducted at City High, Grace and Megan utilized the apps Show Me, Inspirations, uPad and PDF Expert to support their students’ understandings of language forms and features throughout the year groups they teach. Megan asserts, “Year 8s are not quite as tech savvy yet [compared to older students], which I find so surprising because they’ve all got their iPhones and they know how to play the games, yet when it becomes learning oriented, there’s a disparity.” Grace and Megan specifically gear activities such as text annotations towards developing this skill, as demonstrated in Figure 1.

Because of the profound and hugely surprising disparity that exists between the social function of technology and the educational function of technology, educators need to be aware that they are building and extending complex literacy skills that are so easy to incorporate into a classroom with iPads and technology, but that they are not doing so at the expense of print-based literacies. Moreover, the tasks required explicit modeling from teachers to allow students to derive the maximum benefits of the lesson.

Scaffolding Writing Practices and Technology Skills

The introduction of iPads at City High School required careful and considered scaffolding on the part of all teachers involved, in order to ensure appropriateness of learning, assured skill development and relevant technological processes.

Figure 1. Language annotation of *The Red Room* by H. G. Wells completed by Neil in iPad



In English classes specifically, teachers need to consider how they utilized the device to improve the technological competence of students while also developing their writing skills. The inclusion of iPads in English classes at City High shaped student writing by enabling them to develop their academic discourse, further their composition and editing skills, and ensure their understanding of writing forms and purposes. However, the implementation of iPads presented several key issues, specifically regarding language. Most notably, teachers needed to facilitate their students' understanding of appropriate language for writing purposes whilst also mediating the students' desire to blend social and academic discourses.

Socially-based, technology-mediated discourses become problematic when we consider that all high stakes testing within Australian education systems is still completed using pen and pencil. A sound understanding of grammar, spelling, sentence structure, and other language processes are fundamental to successful high stakes testing. We must consider the current preoccupation that education systems have with traditional modes of writing taking precedence in both the classroom and assessment models, as reflected through the strong emphasis placed on standardized testing such as NAPLAN across the country and the Higher School Certificate in New South Wales. Megan indicated this similar preoccupation in her interview, "We are limited in that we always have to get the students to produce a piece of

writing" in English, either for the purpose of summative assessments or standardized exams. This is problematized in the classroom as traditional pedagogic models of print literacy are based on the acquisition and mastery of sets of established practices, conventions and rules (Jewitt, 2008). At the secondary level, students are often expected to be proficient with the related grammar, spelling, and writing structures, but City High School teachers acknowledged that many students are not near this level of proficiency that is required for success in high school, university, and life beyond the classroom.

In many schools, young adults now have unprecedented access to technology in classes. In this study, it was apparent that students were unable or unwilling to separate their social discourse and academic discourse to their respective spheres, which poses issues in the classroom for writing tasks. The inclusion of a social-based discourse may potentially inhibit language development, which could impact students' learning processes throughout schooling. All teacher participants in this study specifically noted that they include both pen and paper tasks and technology tasks in their lessons. The issue regarding students' multiple discourses and writing practices is twofold: first, the stunting of academic literacy development, and second, determining how to structure writing tasks to allow the students to mediate social and academic discourses. Lesson observations revealed that teachers had to explicitly tell stu-

dents not to use text-messaging shorthand in their writing tasks, a practice which Grace found to be quite common in her students' work. Interestingly, when the iPad writing activity was replaced with a pen and workbook activity, students had no problem in maintaining academic discourse. Regardless of the strong academic writing focus that schools encourage, students' socially constructed discourse will filter through, unless they are given strong scaffolding and instruction that allows both discourses to work together symbiotically.

With regard to teacher lesson planning and activity scaffolding, teacher interviews noted that there is a need to bridge informal and formal activities so that students may understand and develop knowledge of traditional writing practices. In lessons observed in both Megan and Grace's classrooms, any writing task that had a strong academic purpose was completed in both workbook and iPad, as it enabled students to practice and reinforce textual skills such as editing, composition, drafting, and publishing, as highlighted in Figure 2 below. This became apparent when students completed tasks solely on their iPads, with Grace and Megan noting that the inclusion of iPads

did to some degree stunt students' grammatical and spelling development, specifically through the inbuilt function of spell check that exists in numerous word-processing based apps. Despite the fact that students identify that they may have made mistakes, they don't register the change that the software makes to the spelling and therefore are not learning correct language processes.

In the study, the iPad was utilized by teachers to make students aware of language processes and techniques that are crucial to assessments undertaken in New South Wales. Grace and Megan both employed apps such as uPad, PDF Expert, and Inspirations to allow students to annotate either their own writing composition or a piece under analysis in the classroom. This also gave students an explicit understanding of writing for purpose and writing for audience. As such, it is imperative that a balance be maintained between both the social and academic functions of both language and technology, as they both must be understood and implemented to their appropriate function to best support students' language development and writing practices for high school and beyond.

Figure 2. Sample of writing from student Ashley which demonstrates creative writing composition completed on her iPad

Today I moved into a new house at Out-With. I didn't even want to move here in the first place! I don't really like the look of it either, it is the exact opposite of what my old house looked like at Berlin!! I can't believe I have to live here!! The new house stands all by itself in an empty, desolate place, and there are no other houses to be seen. There are no families anywhere and there are no children to play with! It's a nightmare! Obviously I am not aloud in fathers office even though we are in a new house. Out Of Bounds At All Times And No Exceptions he always says.

The things that I miss the most about living in Berlin is there is no banister to to slide down, no cubby holes to explore and there are no people wondering around anywhere! Later on in the day I went to unpack all of my things and i went to have a look through the window. I was a bit surprised and shocked at what I saw through the window, but, I won't tell you what I saw until later just to keep you hanging!!

Personalizing Learning through iPads and Multimodal Composition

This study sought to understand how iPads can develop and support students' multimodal competencies. For the purposes of this study, *multimodal competencies* are defined as being competent and proficient in multimodal composition, which extends beyond alphabetic print to include other modes of representation, such as visual, aural and kineikonic (Curwood & Cowell, 2009). Multimodality manifests in diverse ways in an educational setting using 1:1 iPads. Multimodal composition was seen in three distinct ways during the course of research for this project. These included: the opportunity for students to create and represent their knowledge in a variety of multimodal forms through multimodal apps, the ability for students exert autonomy over their learning through the diverse array of options provided to students for learning to take place and finally the individual tailoring of content and lessons to individual student needs by providing various points of content access through technological and multimodal means. Therefore, understanding how multimodal competencies are developed in school-aged students is of the utmost importance in present-day society, especially one which is so heavily pervaded by technology.

The power that a personalized learning experience has on multimodal composition was observed seen in a creation by Anita, who designed an Educreation on Jewish experiences in Krakow, Poland, as a part of her class' unit on "The Boy in the Striped Pyjamas." The use of this medium for her presentation allowed Anita to combine text, images, and an audio recording of her voice, to supplement the text on the screen with her own thoughts on the topic. This provides Anita with the opportunity to represent her knowledge, but also to show her proficiency with higher-order skills such as synthesizing and analyzing information. As illustrated in Table 1, 39 participants ranked their proficiency with the iPad quite highly, with

only one participant commenting that their capabilities weren't sufficient. However, all students indicated in some capacity that they used the iPad to tailor their learning to their strengths, with the device allowing greater flexibility and variety in the types of learning that was able to take place. Students used language in their responses such as, "Our teacher gave us options" and "It gives us freedom in our learning," which illustrates their own understanding of being able to adapt and apply content in ways that are significant and meaningful. Furthermore, lesson observations revealed that any one tasks could be completed in a multitude of ways utilizing a variety of different apps. For instance, when students were working on a brainstorming activity at least three different apps were being used including PDFExpert, uPad and Inspirations. Some students would work with simple text, whilst others would integrate clipart or photos, or a combination of both. This allowed students to derive greater meaning from their work and greater significance to their lives through the inclusion of technology.

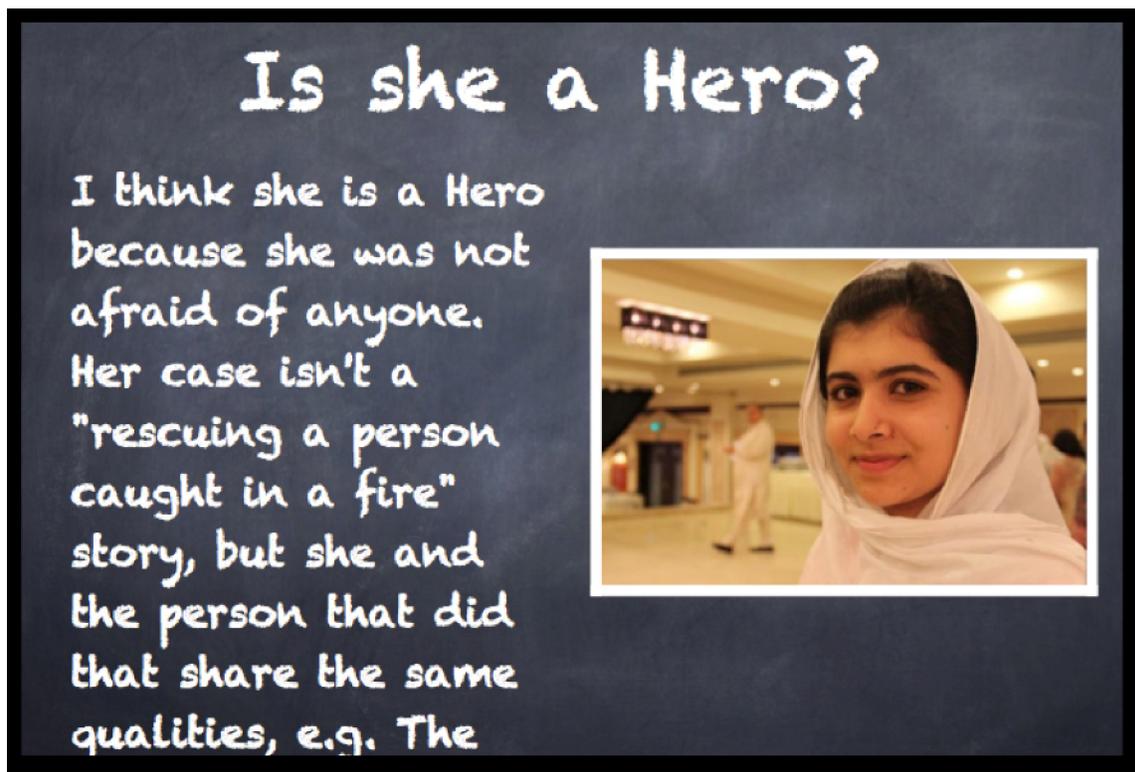
At City High School, differentiated approaches to assessment worked well for students who may have greater strength in their oral communication skills, rather than their written skills. As highlighted by Megan, "There are always going to be variations of the student who can write well versus the student who struggles to write, but at least the student who is struggling to write can access the concepts and explore and express themselves in a variety of ways" as a result of the inclusion of iPads in their classrooms. Alice noted her own use of the Explain Everything app with her students, "They really love the Explain Everything app where I can record videos for them and they can put their headphones in and listen, and they can watch that through as many times as they would like. They are actually using that as a study tool too. They're actually responding really well to that." This reinforces multimodal competencies as students are able to revisit concepts and re-familiarize themselves with them as many times as

is necessary. This also allows teachers to provide different access points to content for students who may need to be extended beyond content and those who may require a simplified version of content. Specifically, Glen stated, “I think it benefits the students who are struggling more so than your high-end achievers, because it does allow them to access different forms of the same information,” which was reflected in the different learning activities that were implemented in the classrooms across the school.

Students in this case study demonstrated an ownership over their device that Grace sees as being fundamental to the success iPad use in her classroom. Not only do students assert their ownership over the physicality of their device through customization of apps, cases, wallpapers, music, and images, ownership is also represented in the types of multimodal productions that they

undertake, such as Keynote presentations, Educreations Web slideshows, iMovie book trailers, and VoiceThreads, ShowMe and Explain Everything app creations. These are examples of multimodal compositions that students can gear towards their own interests or strengths. Student participants also indicated that they preferred to work with an iPad in their classes because they allow students to find their own information for research projects, fostering their autonomy in learning and making them more competent and efficient learners. Alvermann (2008) provides insight to this interest and motivation, noting that “many young people growing up in a digital world will find their own reasons for becoming literate” (p. 16). This offers validity to the theory that students learn to adapt to technology out of necessity based on the social function and impact that it has on their lives.

Figure 3. A Keynote presentation undertaken by Kim on Malala Yousafzai as a form of assessment in a unit on “Heroes”



Multimodal composition has implications for students' engagement and resulting achievement. Megan recounted that sometimes students were visibly frustrated or bored when they were completing an activity traditionally with handouts, their workbooks, and pens. Megan shared that she had observed this frustration with her Year 8 class, but had also viewed the behavior on a larger scale with her Year 10 class, who were almost so frustrated with the traditional tasks that she felt the need to alter the structure of her lesson and revert the task to being completed on the iPad in order to settle, refocus, and engage her students. This is a compelling observation, as it is often assumed that the inclusion of technology leads to students being easily distracted and lacked motivation to complete a specific task. This is supported by Lankshear and Knobel (2006) who assert, "New tools can be used to obtain greater efficiencies in managing and controlling physical space and extending their authority and power within the learning process to physical spaces beyond the classroom" (p. 56). This finding reinforces the belief that technology allows students to build significant links between their education and society, enhancing their understanding of the impact of education and their lives.

Discussion, Recommendations, Reflections

Based on this study's findings, there are three recommendations to ensure the successful implementation of iPads in classrooms. First of all, the approach that teachers take must focus on developing student-centered approaches. Perhaps the most dominant critique of technology in education is the fear that it only serves a superficial purpose and is mainly directed towards teacher instruction rather than developing lessons that function to support student learning. Alice was interviewed regarding her beliefs towards iPads in her classroom; she comments, "They take away from the teacher-centeredness of my class. It can

be more directed by students." This element was particularly important to Alice, as it allowed her to determine that the level of student autonomy in her classroom was not as developed as she has expected. "Kids aren't used to independent learning," she said, adding that students may have difficulty initially engaging with independent or self-directed tasks. However, when appropriate scaffolding is used, the engagement that students have with the iPad encourages them to develop these skills in a familiar manner that has relevance to them that extends beyond the classroom context.

To ensure that iPads are integrated appropriately and successfully to support students writing practices, time must be spent in the lesson teaching discrete writing skills such as drafting, editing, publishing, and analyzing language. Of the 40 students surveyed, every student identified that they used the iPad in classroom for multimodal purposes, highlighting that students are aware of composing, engaging with, and analyzing texts of different modes. In order to adequately support students' writing practices, teachers need to provide explicit criteria and ongoing scaffolding for students when they were using the iPad. Often this took the form of thorough and in-depth instructions posted on the class Edmodo page, modeling examples provided by teachers, and clear language and writing structures. Because of the vast array of educational apps available, it is possible to make learning more collaborative not only between students and other students but also between teachers and students.

The success of implementing iPads in schools also stems from the types of learning opportunities that are made available to students. As has been discussed in this chapter, the opportunities for educational autonomy, collaborative learning, assessment differentiation, and multiple access points to content for different learners are abundant. Interviews with teachers revealed they all observed enhanced multimodal competency in their students as a result of the proliferation and vast array of apps that can be used within an edu-

cational setting. The significance of participants specifying that apps enhanced their students' learning provides credence to Domingo's (2012) claim that contemporary participatory and cultural exchanges of knowledge are no longer possible with only page-bound texts. Students' writing practices are already influenced by social contexts and affinity spaces (Curwood, 2013a); therefore, it is necessary to understand the related educational implications of this context (Jewitt, 2008).

FUTURE RESEARCH DIRECTIONS

Sociocultural theories suggest that technology will only continue to pervade our classroom and therefore must be seen as a necessary element of learning instruction that must be fostered and developed in order to equip students appropriately for life external to the classroom. This chapter contributes to the both existing scholarship regarding multimodality and literacy competencies in school-aged children as a result of technological development. With regard to future scholarship, more longitudinal research should be conducted to foster a more holistic understanding of this topic. Furthermore, action research should be done by educators, including classroom teachers and school librarians, to develop pedagogical models related to the implementation of the iPad and other devices in schools (Curwood, 2013b). This chapter has opened up other areas of research regarding iPads, multimodality, and literacy within the field of secondary English education. However, the focus of iPad-specific research can be extended beyond this point. Specifically, future research topics may include understanding how technological devices work in other content areas, the benefits of student-teacher and teacher-teacher collaborative exercises and specific implementation practices for the purposes of developing students in years which involve high stakes assessments.

CONCLUSION

This chapter evaluates the role that technology plays in an Australian classroom as a response to the Digital Education Revolution and the Australian Curriculum. The importance of this chapter and the relevance it has to an Australian education context also cannot be understated due to a lack of literature in this field within an Australian setting (English Teachers Association, 2010). Consequently, adolescent writing practices are significantly shaped by national policies and local practices. This chapter illustrates both the benefits and limitations of including technology in an educational setting to inform writing pedagogy. From this research, it is important to consider the continued development and evaluation of technology's purpose within the classroom to ensure that the lesson focus remains on using technology appropriately for the purposes of supporting students' learning outcomes. Regardless of the devices that are available in classroom, it is imperative that educators embrace technology to ensure that our students continue to learn in meaningful, interesting, and engaging ways.

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KEY TERMS AND DEFINITIONS

App: An app is a self-contained program that may be downloaded to a mobile device.

Digital Native: A person who grew up in an environment saturated with technology and is (perhaps mistakenly) presumed to possess a certain level of digital proficiency.

Literacy: The ability to read, interpret, analyze, synthesize and respond to a text.

Multimodal Composition: The composition or creation of texts that incorporate multiple modes of representation.

Multimodality: The use of multiple modes of representation that can include, but is not limited to images, sounds, and words.

Pedagogy: The instruction tools or method of practice that are used to design a teaching practice that supports student learning.

Scaffolding: The process of designing learning activities that make use of a series of stages that guide the learning process to ensure optimal meaning making and knowledge construction.