The affordances and potentials of mobile digital devices to teach English:

A South African Case Study

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: Signed by candidate Date: 15/08/2018

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Abstract

In this paper I attempt to explore the complexities involved in using digital technologies to teach English as home language in a South African private school. For a period of 2 months I conducted ethnographic research at an elite school to best understand the social forces which underlie pedagogic practices and perceptions in such a mainstream educational institution. I recorded my observations with field notes, video data and by collecting several resources produced by students, and focussed on learning interactions which are shaped by technology in some way, most commonly by mobile tablet devices. This project is situated within the research of the New Literacy Studies (Street 1997); it is influenced by the notion social literacies (Gee 1990) and a multimodal approach to learning and teaching (Kress 2005); it understands digital literacy practices in South Africa as unequal and as 'situated' (Prinsloo 2005, 2014); finally, it acknowledges technology as a tool within Vygotsky's activity theory (Jewitt 2007) and as a tool which is used differently by students and teachers (Sefton-Green and Nixon 2009; Merchant, 2007; Rowsell and Marsh, 2011). I aimed to investigate the different ways in which technology is 'taken up' by this particular demographic of students, and discuss in what ways these new classroom interactions could contribute to meaningful learning practices. I anticipated that social forces from the top-down and the bottom-up (Sefton-Green and Nixon 2009) would shape and effect digital learning in ways which would either bolster or detract from the curriculum content being imparted. I focus on two main sets of data; the digital productions of a Grade 7 English class, created in class using personal tablet devices; and video data of Grade 7 English class wherein tablet devices are used as a tool for investigating visuals alongside paper-based writing activities. I conduct an in-depth, multimodal analysis of the data to illuminate the complex social – and learning – work taking place as students and teachers interact with each other and digital technologies. In relation to the data analysis I argue that collaborative, creative learning activities shaped around mobile devices are better able to transform English pedagogies rather than learning tasks which switch freely between genres, media and type of activities. I argue that when mobile devices are used during a lesson alongside multiple modes and learning tasks it distracts students and can diverge from the language aims of the lesson. When the teacher gives students freedom to create a personalised, multimodal response to an English text with their mobile devices I argue that digital learning is transformed into a new, fun and meaningful way for students to respond to and personalise curriculum content.

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Chapter 1. Introduction

1.1 Background of the study

This research undertakes an in-depth multimodal analysis of communications technology in use in a well-resourced profit-motivated private school in the Western Cape, South Africa. The study focuses on a learning environment which has been designed around the integration of communications technology and learning and studies the ways in which students engage in such classrooms, to understand the affordances of and constraints upon the use of new technologies for students learning 'English as a First Language' in this setting. To this end, the research aims to pays attention to all aspects of learning interaction, including the classroom as a physical space, pedagogic design and teacher intention, language, writing, body language and gesture in classroom interaction and design and use of visual artefacts. The lens on learning and literacy in this study is that of socially-situated practices which are embedded in context and situationally variable.

With regards to the literature, research into the complexities involved in how children acquire language was influenced by the ethnographic research of Heath (1982), who spent time with children in the USA in and outside of school to better understand how children from diverse backgrounds developed socially-situated ways with language at home that had consequences for their success and failure at school. Related research by the first generation of New Literacy Studies (NLS) researchers (Scribner and Cole, 1981; Street 1984; Gee 1990) developed a notion of social literacies with focus in classrooms and in everyday life. They asserted that mainstream schooling characteristically applies a socially-constructed form of literacy which inherently favours certain ways with language. As research continued in classrooms, multimodal approaches to learning and teaching were developed which paid attention to all of the other social semiotic resources along with language that were used by class participants (Kress *et al* 2005; Stein and Newfield 2006). This multimodal approach drew more attention towards the 'tools', the things which mediate conversations in classrooms and which shape learning in contextually-specific ways (Jewitt 2006). As more schools around the world started to incorporate digital technology in their classrooms researchers, often using an adaptation of Vygotsky's 'activity theory', observed interactions wherein children used technology which shaped learning in new and complex ways (Jewitt 2006; Prinsloo 2005; Stein 2008) Research has also focused on 'hypermodality' (Lemke 2012) – new webs of interrelated, multimodal texts – and the implications of contextualised digital literacies and what they mean to whom (Sefton-Green 2009). Furthermore, longitudinal observations of mobile devices in use (Rowsell and Marsh 2011; Merchant 2009) have shown that the ways in which young people use technology outside of school is distinctly different from how teaching practices have attempted to adapt it. Lankshear and Knobel (2006) offer a useful set of principles for how mobile devices and the internet can be best absorbed into pedagogy.

While by no means widespread across the country, digital technology has found its way into South African classrooms with varied results. Interactive White Boards (IWBs) have been placed in schools around the Western Cape (Prinsloo and Sasman, 2015) and other technologies, like tablets and personal computers, have been adopted by schools which have the means to afford and maintain such technology.

1.2 Motivation

The motivation for this study on digital literacy practices in a well-resourced school came in part from studies of the complex ways South African youths use technology outside of the classroom (Prinsloo 2005; Lemphane and Prinsloo 2014). These studies showed how learners' early literacy practices are influenced by digital technology at home like mobile phones and game consoles, which shape their communicative repertoires and interests. Lemphane and Prinsloo showed how children in middle class households used the internet to create imagined identities to communicate with people all over the world using creative variations of English language resources. Digital literacy practices in working class households were largely different, however, and were shaped and determined by external social factors like battery life and device availability. These studies argued that practices around digital technologies are socially-situated and their capacity to enhance or improve early childhood literacy should not be generalised. This study aims to locate and analyse a specific social space in which digital technology has travelled, transformed and been taken up, by students as well as teachers, in unique ways. In this study learning interactions are discussed and analysed in detail to expand upon research taking place in mainstream schools representing different socioeconomic environments around the country.

Learning and teaching in English (and other subject) classrooms is becoming increasingly multimodal (Kress *et al* 2005), which has prompted researchers to expand their analytical lens to incorporate all communicative modes used to teach English – images, sounds, body language and gestures, to name a few, understood as social semiotic modes which play a role in message delivery and classroom interactions. This study is thus also motivated by observations that English as a subject taught to English-language speakers is not taught and learnt just through spoken and written language. Multimodal teaching in South African settings has been shown to promote positive outcomes in literacy learning, as this approach can allow students to choose their preferred semiotic modes with which to respond to curriculum content, thus strengthening their communicative repertoires (Stein 2008; Newfield 2011). This study aims to examine digitally-afforded multimodal literacy practices to consider their potential to bolster the effectiveness of English learning in schools around the country.

This study is motivated by the need for further research which focuses on digital devices in use in classrooms. As previously mentioned, IWBs have been supplied to and are being used by certain schools and have been observed in-use during lessons. In Prinsloo and Sasman's (2015) research, teachers read

stories aloud with their class and visuals were presented on the IWB. In some instances students were tasked with coming up to the board and spelling a word. These practices, while fun, colourful and novel were not observed to reshape classroom interactions in meaningful ways. The IWB became what the research described as a 'big book' and simply took the place of a traditional white or blackboard, albeit in a more exciting form. Research undertaken in the United Kingdom and Australia (Rowsell and Marsh 2011, Merchant 2007; 2009) has focussed on mobile devices and how learning activities shaped around such technologies have indicated that collaborative tasks which reflect young peoples' social practices with the internet and their mobile devices have more potential to transform English pedagogy. I am concerned in this research to examine whether digital technology, specifically mobile devices, is, or can be used in ways which increase student engagement and reshape the teacher-student dynamic in the classroom.

1.3 Research question

The study asks the questions: How is digital technology used to teach English home language in a well-equipped South African classroom setting; and does this use of new technologies lead to changes in student participation in lessons and, if so, with what kinds of effects on learning?

Sub-questions

What are the digital literacy practices that students and teachers in this context share and value and are they in common or distinct?

What role does digital technology – specifically, tablet devices – play in learning interactions? And, conversely, what roles do traditional, paper and pen methods play?

1.4 Importance of the study

The significance of the study lies in its analyses of new digital technology in-use in a South African school, and interpretations of how it has been taken-up and transformed by teachers and students. It aids to illuminate the potentials of and constraints upon digital technologies, specifically tablet devices, as learning resources and how such novel tools might contribute to learning in the English classroom.

1.5 Outline of the study

The next chapter is a review of the theoretical framework which informed this study. The chapter begins with a review of Literacy Studies and ethnographic-style approaches to literacy research and the notion of multimodality and digital literacies research, finally discussing instances of preceding research on digital literacy in South Africa and other research focussing on mobile devices in the UK. In chapter three I discuss the nature of my research design and methodology for conducting the study

and collecting data. Chapter four is the first part of my argument, which asserts that mobile digital activities conducted alongside traditional writing practices in a lesson can have a negative impact on learning. In chapter 5 I present the next part of my argument, which is that mobile devices used collaboratively by students to recreate curricular content, without switching freely between other media or modes, can have a positive impact on digital language learning. In the final chapter, I examine the implications of these digital literacy practices in relation to school English pedagogical development to conclude the study.

Chapter 2. Technology and new literacies: a literature review

2.1 Theoretical approach

The research in this study was shaped by interconnected and interrelated approaches to literacy and digital media. These approaches build upon each other and overlap in a number of ways:

- The New Literacy Studies (NLS) (Gee 1990; Street 1984) which challenged the understanding of literacy as a set of autonomous skills but rather a sociocultural practice which is variable and situated. Studies in the NLS adopted an ethnographic approach to research.
- Social literacies (Street, 1997) which refers to diverse literacy practices across different contexts.
- Multimodality and the notion that communication involves all social semiotic modes, such as visuals, body language and sound (Kress 2005; 2011)
- Digital literacy studies which expands upon these frameworks to include technology (Sefton-Green, 2009; Lemke 2002; Prinsloo, 2005)
- Activity theory which is an analytical framework based on Vygotsky's work on the social dimensions of cognition and that positions technology as a tool within a social activity system (Jewitt 2007).
- Roswell and Marsh's (2011) observations of young peoples' interactions with mobile devices both inside and outside of school.
- Merchant's (2007; 2009; 2012) discussions of mobile digital literacy pedagogies and spaces for production and engagement in the classroom.
- Lankshear and Knobel's (2006) principles towards sound pedagogical design involving technology.

2.2 New Literacy Studies

The New Literacy Studies (Gee, 1990; Street, 1997) is a theoretical approach to language acquisition wherein literacy practices are understood not as autonomous sets of skills but as socially embedded and variable. Language and literacy practices are seen as socially shaped rather than simply the product of individuals and their innate cognitive capacities. This stance challenges the conception that written language is simply a set of technical skills which are learned in early formal education (Street, 1997). Influenced in part by renewed interest in the writings of Leo Vygotsky (1962), who saw language as shaped and created by social relations, the research undertaken by scholars in the New Literacy Studies aims to show how "[l]anguage functions as a tool for shaping, controlling, and interacting with one's social and physical environment." (Mills 2010) This literature inspired a renewed focus on the situated literacy practices of social groups, particularly of children and how they come to use language and written language in the context of their surroundings (Heath, 1982; 1983).

Ethnographic observations of children growing up in different socioeconomic communities revealed that orientations to written language are acquired through a complex interplay of social relations, and are shaped by the parents' profession and aspirations for their family; the family's choice and valuation of reading material; the power structures in the community; and, of course, the family's understanding and valuation of school. The capacity for language of the individual brain, it would seem, is but one part of an individual's acquisition of language and the 'ways with words' they practice. Similarly, a systemic or autonomous view of language and literacy is largely problematic in an increasingly multilingual, globalised world, where languages have been observed to shift and change over time and space.

2.3 Social literacies and ideology

This research led to a notion of written language usage defined by Street as 'social literacies' (1997); this refers to the plurality of literacy practices which exist around the world, and how they are constructed through social interaction. The written language practices of mainstream schooling are thus but one social construction of written language. This observation is important to this thesis as "[it] leads to quite new ways of understanding and defining what counts as literacy and has profound implications for how we teach reading and writing." (Street, 1997) The social literacies of school children in South Africa are particularly diverse, and are often indicative of their socioeconomic backgrounds. Acknowledging that literacy is a socially situated practice can allow educators to make room for the diverse home language practices which South African children bring into the classroom. In this thesis the language practices observed will be treated as such; as socially constructed practices which are not intrinsically better or worse than each other in some kind of decontextualised way, despite the differing social valuations that attach to them at certain sites, such as in schooling.

The language and literacy which is valued in the classroom are not only social constructions, but, as Street argues further, are ideological ones (1984, 1997). An ideological model of literacy asserts that every instance of language use is shaped by power relations. When people communicate they express their historical positioning and present location within particular power relations. Language simultaneously also gives expression to an individual's values and beliefs along with their communicative intent. In terms of mainstream schooling, the language used within the classroom "always involves contests over meanings, definitions and boundaries and struggles for control of the literacy agenda." (Street, 1997) The notion of a 'literacy agenda' plays a role in this thesis as I observed a South African English classroom, and as Kress describes, "English [as opposed to other subjects] is the subject in which ethics, questions of social, public morality are constantly at issue" (2005) The South African English classroom can thus be understood as a political space where ideological, or cultural, values related to curricular objects like 'character' in literature and 'genre' in relation to literature are mediated by teachers and sometimes contested by students.

2.4 Multimodality

Studies of multimodal meaning-making in classrooms have led to an even more complex, and revealing, way of understanding language use as just one modality of meaning-making in communication (Kress *et al*, 2005). Research on multimodal teaching and learning claims that speech and writing are but two modes of communication in the classroom: "attention is given to all the culturally shaped resources that are available for meaning-making" (Kress *et al* 2005; 2) A multimodal approach does not consider speaking and writing as any less important in the meaning-making process, but rather affords equal weighting to all of the practices observed in a classroom. Modes which have been observed to play a role in the meaning-making activities of an urban (i.e. multilingual) English classroom include the teacher's body language, gestures, the layout of the classroom and the display on the walls. An English classroom is different from a science classroom, for instance, as the English teacher "always and simultaneously creates both a content for English, and a way of positioning students *differentially* in relation to that content." (Kress *et al* 2005; 83) That is, an English teacher inevitably has more freedom to shape and influence the meaning of a literary text, and the ways they teach a literary text will ultimately create what this text is 'about' for students in the class. English teachers also have the freedom to choose the resources - the modes - with which to teach a literary text. Stein & Newfield (2006) phrase the multimodal approach to learning in the classroom rather concisely:

> The modes of speech and writing in school English are accompanied, amongst others, by image, gesture, gaze, movement and posture. All of these modes shape the production of curriculum knowledge and pedagogic practices that lead to learning. Each mode provides teachers and students with a range of semiotic resources from which to choose, and the choice from these available resources is made on the basis of the sign-maker's interests.

2.5 Multimodality in South African schools

A number of teachers around South Africa have been observed to use multimodality in ways which challenge the deficit model of literacy (Newfield, 2011). The literature on multimodal teaching practices in selected South African schools claims that positive educational outcomes are achieved when teachers encourage children to draw on and share their home practices, and then integrate this knowledge with the curriculum. Alongside improving children's academic performance multimodal teaching practices in South Africa have been observed to assist in "developing and strengthening [the students'] representational and communicative repertoires." (Newfield, 2011) To illustrate the nature of multimodal teaching practices in South Africa I will provide a few examples from the research literature: a teacher let students tell a story either orally or in writing, which allowed one student to use her preferred 'semiotic mode' of performance (Stein, 2008); a group of students were allowed to

bring valuable cultural resources – local handmade dolls – into the classroom to stand in for characters of a book (Stein, 2008); and a multilingual class could 'respond' to written poetry using a non-linguistic mode of their choice (Newfield, 2011). It's important to note that these are instances where a multimodal approach was used in a way beneficial to the students, largely because the teachers allowed children to use their preferred semiotic resources to engage with curricular content. The teachers in these cases acknowledge the multilingual reality of the students' home environment and expand learning into non-linguistic modes which assists with conceptual understanding. The bridging of home and school knowledge appears to be an important aspect of successful multimodal teaching and learning.

2.6 Activity theory

Expanding the concept of multimodal learning into the digital age, literature on technology in the classroom states that, whatever the available technology, using digital modes in the classroom changes the 'communicational landscape'. (Jewitt, 2006; 2009) Although the differences of this new landscape are subtle, observations of technology being used in the classroom have revealed that it changes how a teacher uses classroom space; it redirects the collective gaze of the class away from the teacher; it de-centres written text as the focus of the lesson; and it shifts traditional student-teacher power relations into a more 'democratised' structure (Jewitt, 2009). Jewitt (2009) argues further that "English, because of its inclusion of language, literature, film and other media, is most sensitive to changes in the communicational landscape." In order to best analyse the use of technology in a classroom Jewitt uses a version of Vygotsky's 'activity theory', which is concerned with how people's consciousness is shaped by their activity with tools, to include the technology as a 'tool of mediation' within the classroom conversation (2007). The use of technology is, of course, shaped by the social context of its use, and research has shown that children use technology at home in a very different way to how it is used at school (Jewitt, 2007; Snyder & Prinsloo, 2007; Lemphane & Prinsloo, 2014) In addition, the impact of technology in the South African classroom has in some instances been diminished by the teacher's loyalty to traditional teaching methods (Prinsloo & Sasman, 2015) This implies that the work technology does in a classroom may, in fact, have very little impact on the childrens' learning experiences. For my project. I must assume that digital technology in the classroom has no inherent value, but is a tool which can be used to introduce new modes of meaning-making in teaching and learning into the class discussion.

2.7 Digital technology in South African classrooms

The 21st century has seen technological developments, such as Interactive White Boards (IWB) and computers, make their way into South African classrooms. The distribution of technology into classrooms across the country has been slow and uneven – far different from the technological rollout in the UK as well as other wealthier Northern countries, but in 2001 the Western Cape Education Department embarked on an initiative to supply every classroom in the province with an IWB and in 2006 stated they were "fast approaching their target" (Prinsloo & Sasman, 2015) IWBs are by no means the only technology that South African classrooms have access to; many schools have computers or an Information Technology (IT) facility, and some elite schools have introduced tablets and laptops into the classroom. New technology does not, however, simply enter a classroom and immediately enrich learning activities: digital technology is a tool which is "assembled and adapted in distinctive ways" by classrooms, and their functions cannot be generalised across different social contexts (Prinsloo & Sasman, 2015). In South Africa, where peoples' experiences with technology are highly varied, it is problematic to assume that technology-based skills have a "general applicability" (Snyder & Prinsloo, 2007). What is a useful skill to some, such as knowing how to use email effectively, may have little significance in the life of another.

2.8 New digital learning

The school in which I conducted my observation is a modern, private institution which strives to incorporate and facilitate the use of technology for learning. Not only does each classroom come equipped with an interactive projector and speakers but the students and teacher have access to personal digital devices and Wi-Fi internet access. The complex interplay of modes afforded by these digital resources requires a discussion of digital literacies and hypermodality. Whereas older print media and the literacy practices associated with it are largely language based, digital literacies incorporate audiovisual and hypertextual modalities which can shape – and even change - the meaning of the text. Lemke claims that salient features on a page of digital text, such as a striking image or attractive font, will draw the reader's eye and alter their reading trajectory, and thus the meaning of the text (Lemke 2012: 301). With regards to the digital resources used and produced by students at the school at which I conducted my project; the teachers' instructions, projected in front of the class and accessed by students on their iPads, combined text and visual modes. It is important to note that, while these literacy practices are widespread, not every social setting uses technology in the same way or for the same reasons. Where I may use the internet to check emails. an individual from another community with a different socio-economic background or in a different social domain, , may use it for news, or mainly to listen to music.

2.9 The shift from page to screen

Research suggests that reading and the processes of meaning making change when the student's focus is shifted from the page to the screen. When reading and writing shift from page to screen notable changes take place in both the creation and the ways it is constructed: creators (in this case, the students and teachers) usually have an online presence (via social networks) and position themselves in terms of a social or political affiliation. Creators use multiple resources to convey meaning, combining features of written, oral and audiovisual communication with network based resources (Prinsloo 2005: 88); other users are able to interact and collaborate, through comments, responses and new, updated content; and finally a 'hypermodal' network of information – a web of pages of texts - is established with which a reader can engage in their own terms (Lemke 2012). With regards to the resources accessed online by the students: the digital resources created by the teachers; and the digital resources created by the students themselves, they are all the result of a complex interplay of social affiliations which are representative of the users' home environments.

2.10 Access to technology

Observations of inequity in access to digital technology are framed by the socially-situated view of digital literacies and literacy skills. What 'digital literacy' actually means in terms of the skills required has been debated since the early 1990s, when computer manufacturers first started to market PCs to homes and schools (Sefton-Green *et al* 2009). In 1994 PC marketing to families in Australia focussed on the image of the 'successful computer literate' child who is able to 'get ahead' both socially and in terms of their education. Having a computer at home was believed to improve the child's chances of success at school and out in the world. This image of the PC started interweaving the discourses of computer-related digital literacy, educational success and competitive preparation for employment. It became the responsibility of schools and offices to equip themselves with the latest technological advantages in order to 'keep up'. This image is still largely pervasive but since schools have started practically incorporating technology into classrooms the question has arisen as to what skills count as digital literacy, and to whom. Research in Norway has shown that "young people gain most of their experiences and knowledge in relating to digital technologies outside the formal institutions of knowledge building." (Sefton-Green *et al* 2009) Early attempts at digitising the curriculum were met with criticism in Norwegian schools as they were enforced from the 'top-down': technology came into schools along with a policy which defines and restricts what is considered 'digital competence'. Teachers were supplied with a list of requisite skills – using software, searching for information and making critical and creative use of ICT – and had to find ways to incorporate these skills into lessons.

2.11 The integrative and interactive affordances of screens

Research on digital literacy practices in classrooms in Australia (Rowsell and Marsh, 2011) highlight the changes which take place when reading and writing shift from the page to the screen with reference to the development of the Web 2.0 and social media, which is becoming a big part of young students' home lives. These include the increasing "intertextual and hybridized quality of students' personal digital writing", such texts' 'non-linearity' and the requirement of a "meta-awareness of these texts as promoting or silencing particular views" (2011) Through longitudinal observations of digital technologies in use in a Grade 4 classroom, Rowsell and Marsh argue that "when [teachers] applied aspects of social networking students became more collaborative. There was more problem-solving occurring as students investigated a topic and then negotiated the way they would create and construct a product to demonstrate their learning." (2011) Such inquiry-based learning practices allow students to design digital resources in ways which 'reconstruct' and 'renegotiate' identities; a process of meaning-making implicit in multililiteracies research (New London Group, 1996) and multimodality (Kress, 1997) This argument runs counter to concerns that "without an active teacher presence in the dialogue, students' learning is not pushed forward very effectively" (Rowsell and Marsh, 2011) The potentials of digital technologies in education are thus shaped by the consideration "that the mastery of the tool itself is not the outcome but how we use it." (Rowsell and Marsh, 2011) Different types of activities around technology impact what is learned, some pedagogical practices more effective than others to "engage students in learning." (Rowsell and Marsh, 2011)

2.12 Writing with screens in the classroom

Research of new, digital literacy practices in classrooms – including exploration of virtual 3D worlds and the creation of blogs - has indicated that a lack of confidence in educators with using the technology in the classroom (Merchant, 2007) and oversight in terms of how to practically implement related pedagogy (Merchant, 2009) has hindered progress in exploring the transformative new ways that young people read and write outside of school, and bringing them into the classroom. Digital technologies used to read and write involve new ways of text production and how to physically organise and facilitate a language lesson (Merchant, 2007). Young peoples' new literacy practices, which include 'asynchronous', co-constructed texts such as discussion boards and blogs demonstrate the need for a reconceptualization of writing which is interactive, democratic, and reaches outside of the class to students' home environments (Merchant, 2007). Similarly, convergence – "multiple media from a single source [and] portability" (Merchant, 2007) – suggests that digital technologies will continue to become interconnected with daily life and so future literacy practice will involve technology in some way (Merchant, 2007) Furthermore, student exploration of digital technologies to "work collaboratively to construct their own narratives" disrupts, in ways, the "fragile ecology" of "instructional routines, powerfully structured by curriculum" which shapes learning activities valued in the classroom. (Merchant, 2009). If destabilisation is necessary to transform pedagogy, then

collaborative inquiry-based types of literacy activities demonstrate a potential to contribute to new ways of reading and writing in schools. Merchant also discusses several 'pitfalls' in policy innovation, one being the common perception that "digital literacy is simply another option and that we freely choose between page or screen to represent and communicate our ideas." (2007) When reading and writing shift to the screen "processes, surfaces and spaces of production and consumption are different." (Merchant, 2007) Even the physical act and posture for writing on the page is different to that of the screen, which requires an upright, screen-centred gaze which does not suit "'face the front' classroom geography" (Merchant, 2007)

2.13 Mobile devices and literacy pedagogy

Further research has focussed on how mobile digital technology has been - and potentially should be - used to teach literacy in classrooms, specifically looking at the potentials of devices such as smartphones and tablets (Merchant 2012). In accordance with the social practices theory Merchant argues that, with regards to new mobile digital devices, "people and the material things they use are inextricably bound together" (2012). In this way interactions with and around digital technology should be the focal point of research, Merchant suggests, as it can lead to the "emergence of new routines [which] helps us to account for the ways new technologies become integrated into existing social practices, in turn developing them, as they are taken up and absorbed into daily life." (2012) Observed social practices of young people using mobile technology outside of school include 'lightweight' messaging with friends and family, sharing short film clips and photos and accessing a range of web-based resources usually on a whim or 'just in time.' (Merchant, 2012) The established rules and expectations of schools as formal social sites with accepted curriculum discourses, and many teachers' resistance to mobile devices during lessons is because "new digital practices can have a destabilizing effect...[opening up] different kinds of interaction and different genres and communicative purposes." (Merchant, 2012) However, the necessity for integrating mobile digital devices into schools is not without its critics: some argue it suggests 'ownership', which is a glaring socioeconomic issue particularly in the South African context, and also 'familiarity' in that these mobile practices may be "limited and repetitive." (Merchant, 2012) Either way, mobile technology has reshaped the social landscape and the question remains as to "how schools and other educational institutions relate to these changes" (Merchant, 2012). Finally, some learning practices which have been observed to 'absorb' technology in a more efficient way "involve mobile subjects in multiple connections, engaged in lightweight contact, in navigating, reporting and coordinating their movements", however these are still early indications and questions about how these activities fit in to the "location-based and predominantly sedentary" educational landscape remain (Merchant, 2012).

2.14 Towards a pedagogy in relation to the mobile internet

It's clear that technology has struggled to find its place in the classroom environment, partly because of factors related to curriculum structure and expectations of learning practices. These classroom norms have "wasted the potential of new technologies to provide bridges to new forms of social and cultural practice", argue Lankshear and Knobel (2006). To support this argument a set of four "educationally appropriate principles and criteria on which to base judgements and decisions concerning curriculum and pedagogy in relation to the mobile internet" has been outlined (Lankshear and Knobel, 2006). While these principles are broad and are by no means clear-cut solutions to the 'pitfalls' of practices around technology in classrooms, they are shaped by a "sociocultural perspective" and so offer a basic framework with which to guide this thesis in terms of analysing observed literacy practices for their potentially transformative nature (Lankshear and Knobel, 2006). Firstly, the principle of 'efficacy' asserts that learning activities should allow students to "enact or recognize a particular social identity or way of doing and being in the world…they are 'authentic' rather than 'pretend' versions of social practices in question." (Lankshear and Knobel, 2006) Thus, pedagogy should connect in some ways with the students' home environments and practices around technology. Secondly, the principle of 'integrated' learning suggests pedagogical activities should not "clash with who and what we are and do in the other discursive dimensions of our lives…to strengthen learning by putting cultural, personal, technological and epistemological aspects in sync." (Lankshear and Knobel, 2006) The third proposed principle is 'productive appropriation and extension in learning' which proposes that "discursive roles and tasks that can be legitimately carried over into new discursive spaces…can be used to advantage to enable learning and proficiency in a new area." (Lankshear and Knoble, 2006) Essentially this principle ensures there is no "clash between cultures of use" and that students are able to use digital devices for the same reasons and in the same ways they would choose to at home (Lankshear and Knobel, 2006). Finally, the principle of 'critical' learning relates to Gee's concerns that learning 'inside' various Discourses can make people "less critically reflective" and can risk learning practices becoming more "indoctrinatory" (Lankshear and Knobel, 2006). A critical approach to learning around technology can potentially "help prepare learners to understand the limitations and constitutive nature of each and every Discourse, and to be committed to and capable of playing active roles in trying to shape social practices in progressive and expansive ways on the basis of what they believe and value." (Lankshear and Knobel, 2006) To reiterate, these principles are not prescriptive or even proven, but in terms of this thesis they provide useful criteria from which to sharpen analyses of digitally-centred lessons in practice.

In this chapter I have outline the theoretical approaches which inform this thesis, notably the NLS, the concept of social literacies, the social semiotic theory of multimodality, conceptions of digital literacies and Jewitt's adaptation of activity theory. I then discussed literature which places these theories in educational contexts in South African homes and schools which provide a background of

local multimodal literacy practices, some including digital technology. From this review, it is clear literacy practices vary across socioeconomic contexts and cannot be generalised. Language is multimodal and socially-embedded, which is far more complex than traditional learning models of print literacy suggest. Social semiotic forces from the top-down – through teacher training and school policy - and the bottom-up come into the classroom and shape communication in ways that do not always favour the learning potentials of new modes. With regards to South African schools, multimodal teaching and learning practices have been observed and some schools have adopted technology such as IWBs. Other research on young peoples' interactions with new mobile devices is also important for this project, as well as guidelines for designing and implementing a new digital curriculum.

Chapter 3. Research design and methodology

In this chapter I discuss the methodological approach, methods and research design that were used in this study. This study employed an ethnographic-style case study (Heath; Street 1995:1997:2016) of technology in use in a privileged South African school setting. This research method was chosen to best understand the socially-situated nature of literacies and how this varies across contexts and cannot be generalised. The research setting was chosen due to its focus on paperless learning, hi-tech classrooms and its insistence that every student has their own personal tablet device with which to learn in class. As few schools in the country can undertake such a dedicated technology-centric approach to learning and teaching, the research setting was selected to demonstrate a range of new and different digital learning practices.

3.1 An ethnographic approach

Street (1995;1998) and other proponents of the ethnographic approach to literacy research (Heath 1983; Gee 1990; Prinsloo 2005) discuss how such a methodology "can be helpful in addressing the local uses and meanings of literacy - what people are actually doing with reading and or writing in specific social contexts." (Street, 2016) This approach draws on anthropological traditions of research which involved immersion in sociocultural practices as they occur naturally between participants. Ethnographic studies aim to provide insight into situated literacy practices and include multimodal critical analyses of literacy events, which are "observable behaviours around literacy". In addition to observed literacy events, the ethnographic approach must also acknowledge literacy practices; the "cultural practices with which uses of reading and or writing are associated in given contexts." (Street, 1997, 50) Thus ethnographic research pays attention to all social semiotic modes taking place when participants interact and communicate. In this way the ethnographic approach is most suitable for this study as it explores the complex, socially-situated literacy practices around technology of a particular cultural group of South African learners.

Ethnography: Principles in Practise (Hammersly and Atkinson 1983) distinguishes between two paradigms within the ethnographic discipline: positivism and naturalism. While the positivist paradigm employs a "certain conception of scientific method…[and] the testing of theories" (1983 pg 5); naturalism on the other hand insists researchers enter the culture and learn from it. The naturalistic task is one of "cultural description" (1983 pg 9) in which the researcher takes on the role of participant observer and does not impose a set of standardised procedures or universal laws. This study adopts the naturalist paradigm. It describes the world of Grade 7 learners at a well-resourced private school in South Africa as I, the researcher, encountered and observed it over a period of two months.

3.2 Research setting

For my project, I undertook an ethnographic study of Grade 7 English lessons – and the students who attend the school - in a Western Cape classroom. I selected a school which has access to digital technology and I spent most of my time observing teachers who regularly made use of it when teaching English as a subject. The institution is a private secondary school situated in Cape Town, established in 2008. The design and layout of the institution itself places technology at the core of learning practices; this means that the classrooms are designed to facilitate e-learning hardware. Each classroom is fitted with a modern projector, large speaker systems and Wi-Fi access for both teacher and students.

All students at the school speak English and, other than in language classes, English is the only medium of instruction during lessons. English is not, however, the home language of the entire student body. I found out that many students alternate between English and Afrikaans at home and the international students – of which there are many, notably from Angola but also diplomat's families of various origins – return home to their own unique sociocultural environments. Most students live near the school: it is a mixed-income area with a recent growth of affordable gated housing communities which have proven attractive to families with young children. Due to the high cost of attending the school its students come from upper-to-upper-middle class families. International students who attend the school come from similarly higher-earning families.

In this respect, the students I observed have grown up with technology in their homes. Most have a smartphone in addition to the mandatory iPad, and many told me they have other tablets and laptops at home, not to mention TVs or game consoles. Some of the activities and tasks completed by the Grade 7 class used popular iPad applications which students admitted to using at home and with their friends. In many ways, the students appeared more comfortable with the technology in the classroom than their teacher. The teachers I closely observed were attracted to the school by the school's emphasis on e-learning. The English teacher I observed is not a South African and has more teaching experience in international settings. This teacher achieved an 'Apple Teacher' award for their work with Apple technology in the classroom, and is vocal about the benefits and fun of using technology in their class.

The faculty are encouraged to be fully committed to the digital 'revolution' of the school. In fact, it seemed to be one of the requirements of working there. Staff undertake weekly 'Professional Development' seminars where they are encouraged to present and speak about the technology-focussed learning they have been using in their classrooms. These seminars demonstrated how teachers in even the Accounting and Music departments of the school use technology on a weekly basis. I did not see technology-based lessons occurring every day in classes, however, and a significant portion of the lessons I observed were traditional in terms of teacher-student interaction.

The teacher would set up the tasks for the lesson at the front of the class using the board – in these cases a projector – to present the instructions, and students would work either alone or in pairs with momentary monitoring and clarification by the teacher.

The school's commitment to e-learning has seen more recent innovations such as Apple iPads and later iMacs becoming mandatory for each student – in Grade 7 and Grade 9 respectively. The school has become associated with the Apple brand and has been titled an official 'Apple School'. This means that staff members frequently interact with the tech company in workshops and seminars, and Apple staff members visit the school to observe teacher-student interactions which involve their products. In addition, the school is also involved with 'Google for Education', a platform for equipping and training the staff and students with the tools and skills to use Google applications and programs in the classroom. A few notable features Google promotes for use in the classroom are paperless assignment submissions, easy classroom organisation and seamless communication with students.

3.2 Style of observation

During my time at the school I attended English lessons and observed usually from a seat close to the teacher's desk. On several occasions, I recorded literacy events with a digital camera. I used an audio recorder to capture other moments, such as background noises or chatting in the classroom. I operated the camera from a tripod and chose which moments to film and focus on; however, I usually left it filming the whole class statically as I moved closer to and focussed in on certain interactions. Whatever the camera was unable to catch I supplemented with field notes.

I was granted access to three separate groups of English learners over the period of two months at the start of the school year in 2016: one Grade 9 and two Grade 7 classes. My primary method of data collection was extended observation and field notes. There were two fundamental reasons for this method: firstly, it took a longer period than expected for students to return signed parental consent forms; secondly, I intended to make my presence feel as 'natural' as possible before introducing the camera so as to allow me to observe (mostly) undistorted classroom practices. However, I still consider my presence as a participant in observed learning practices. In this regard, my observations are shaped to reflect my situatedness as an 'outsider' in the classroom conversation; they are not intended to be reflections of events 'as they are'. I spent time in the staff rooms and school grounds speaking to different teachers about technology in their classrooms to better understand the social environment of the school; I attended the weekly Professional Development sessions which involve the entire faculty sharing ideas about technology in the classroom; and I spoke with and observed students outside of the classroom to get a clearer picture of their relationship with technology in their free time.

Video recorded observation comes with its own concerns and limitations. I chose to use a small digital camera attached to a light tripod, placed in front of myself in the back corner of the classroom. A reason for this was purely spatial and to avoid getting in the way of student traffic, but also because with a digital camera "there is no frenzy" in comparison with a high quality - or larger - VHS camera which is often associated with television and has proven to be distracting to students during similar research (Jewitt, 2006). I operated the camera during the lessons by turning it on as the lesson started and sitting behind the tripod, occasionally standing up to check on the recording and the direction of the lens. On a few occasions, I adjusted the position of the camera to capture more closely activities happening in an area of the classroom. I didn't intend to 'capture it all' but decided what data would be most relevant to my research question. Similarly, a static camera left unattended can only capture so many of the interactions taking place in the classroom, and so I supplement the video analysis with field notes.

Finally, I collected additional artefacts from the classroom; namely, texts that were produced and circulated by students and the teacher. There was a wide range of both traditional or paper-based (for example, story books and handwritten notes) texts and digital texts (including applications, powerpoint presentations and student-created visual texts) circulating in the classrooms I observed. The reason I collected this data is that observations and video recordings are incomplete representations of learning events and should be analysed in conjunction with the other texts which feature in the classroom. Due to the variety of semiotic work occurring at any given moment during an English lesson, it was logical – and beneficial to this project– to collect texts created by both the teachers and students and which circulated during, and after, the observed lesson. The examples of texts which are used in this project's data analysis includes digital texts created with iPads by students; the apps students used to create such texts; powerpoint presentations created by the teacher and used during lessons; the written data shared by students and teachers (both handwritten notes and typed digital documents were circulated); and finally the short messages written and posted in a student forum.

3.3 Research ethics

As I use video recordings of student-teacher interaction for my data it is important to consider questions of anonymity: how am I going to make sure the school and the individuals are not easily recognisable? The school remains nameless; only reference to its socioeconomic 'make-up' and proximal physical environment is mentioned. In addition to this I gained permission from the school to conduct my research under the conditions that they be allowed access to the finished product should this be requested by any faculty members. I signed a form drawn up by the administration giving them permission to view the video recordings should they want to. This document also

requested I not publish any material which is misrepresentative of the school in question and does not bring the institution into disrepute.

The footage was seen only by myself, and this fact is outlined in the consent forms which were taken home and signed by both students and their parents, as well as verbally by myself when I introduced myself to the classes. When I make specific reference to spoken – or otherwise – interactions in the lessons used in this projects then participants will be given pseudonyms.

I submitted an outline of my proposed research for ethical review and obtained approval for the research from the University of Cape Town's Faculty of Humanities' Research Ethics Committee.

3.4 Overview of research findings

In the classroom, Grade 7 students accessed and completed activities on their iPads, which were later submitted to the teacher. Students also used these devices to create multimodal responses to written text during lessons. The teacher could see the name and time of submission for each student, and so could keep quite a close eye on students' progress. During classes, the teacher controlled the projector with their iPad and included additional media in the lesson via their iPad and the class speakers. The class made frequent use of Google Classroom, which lets students submit individual work, collaborate on group projects and complete quizzes online; the teacher was able to monitor and communicate with the students in real time as the 'admin' of a Google Classroom group. The Grade 7 students made frequent use of visual and kinaesthetic orientated tasks with their iPads. Students moved around the classroom, compared resources on their devices, and created a range of multimodal resources in response to various English texts.

3.5 Method of analysis

In this section I describe in more detail the framework for analysis of the collected data sets. The analysis focuses on the following modes observed in the classrooms and subsequently discusses them in terms of multimodality and Jewitt's 'activity theory': image, speech and sound, movement and gesture, and gaze. These are the social semiotic modes that anchor my analytical focus as participants in a classroom make use of signs which are not purely linguistic and bear equal weight in the transmission of meaning. This case study is a multimodal analysis and so all social semiotic modes available in classroom discourse are considered when critically analysing the meaning-making processes taking place.

3.5.1 Image

Image is a term used to classify the broad range of visual resources available in a classroom. In this thesis I analyse images in terms of Kress and Van Leeuwen's (2006) grammar of visual design and Jewitt's (2006) elaboration of these guidelines. Careful analysis of visual modes is necessary for certain aims of this project, as participants create representations of their world and social identity, which carry inherent values that play a part in learning practices. There are several visual modes which were present in the lessons I observed: students' digital creations, the teachers' visual resources and presentation slides, and pictures on the classroom walls. Images can be analysed for meaning by focussing on two relationships which frequently feature in images; narrative representations and conceptual patterns (Jewitt, 2006). Narrative relationships, simply, refers to how the different visual elements in a text tell the reader what they are 'doing': who or what are the actors in the text and what elements are being acted upon, and what the goal of these actions could possibly be, are important considerations of an image's narrative representation. Visual texts can also have conceptual patterns which represent the visual participants as 'being something': images belong to certain socially-defined categories and have particular characteristics which link them to static concepts out there in the world.

3.5.3 Movement and gesture

I describe the lessons in detail to shed light on the patterns of movement and gesture used by the teacher and students in the classroom: the literature asserts that movements are resource for sign-making and demonstrate enough consistent and related elements to be read and analysed for meaning. What this means is that pedagogy is instantiated simultaneously by the curriculum content – the *ideational* shaping of knowledge – and by the social relations of the classroom: the *textual* realisation of *interpersonal* meaning (Jewitt, 2006). The physical semiotic modes of movement and gesture observed in the classroom can shape and impact the teacher's pedagogic design and so should be carefully examined to determine their role, if any, in the meaning-making activities in the classroom. In addition to physical actions the physical space of the classroom shapes the movement of participating members, which enforces and strengthens accepted roles of interaction between teacher and students.

An analysis of the modes of movement and gesture begins with a discussion of the arrangement of the observed classroom as a physical space; that is, an examination of the layout of the desks and proximity of the teacher to the students, and what role this could have had in the classroom interactions and activities observed in this class. I discuss the movement and gestures of the teacher and how these patterns of interaction contributed to the meaning-making processes taking place in the classroom. Kress and Van Leeuwen (2006) describe how aspects of these processes of action, which

include speed, force and degrees of deliberation, can signify an actor's confidence or, on the other hand, their indifference to the semiotic modes involved in the classroom discussion. I conduct an analysis of the interpersonal movements and gestures of the teacher and students, which refers to aspects such as the distance and angle between people during interactions, and how this realises certain social relations and signifies degrees of engagement with the semiotic modes in the classroom.

3.5.4 Metafunction

These semiotic modes do not work as discrete bearers of meaning in the classroom conversation; they interact and overlap in complex ways which, when analysed, can provide for a clearer understanding of how such modes are used and valued in the classroom. The literature classifies the modes in a classroom as realising either ideational, interpersonal and textual meaning via metafunctions (Kress and Van Leeuwen, 2006). The term metafunction refers to how social practices shape how resources are used by people to make meaning. The metafunctions of modes within classroom discourse are the selection, arrangement and interplay of social semiotic resources in the classroom environment, and how these are taken up by participants to realise different kinds of meanings (Jewitt, 2006). The analytical term metafunctions refers to how each learning outcome is the result of a complex interaction of modes (speech, movement, image etc.), learning activities (speaking, standing, drawing etc.) and sociocultural norms (language, body language, cultural capital) There are three levels of metafunction discussed which are relevant to my project: the textual metafunction, which refers to how the meaning of a text is shaped by the author's positioning of design elements (e.g. what is drawn bigger? Which element is centered? What is the purpose/ directionality of the text?); the ideational metafunction, which refers to how all modes – image, movement, gesture and gaze - construct a 'narrative' or 'concept' about the world (e.g. who are what is shown to be active? Who are what occupies less space?); and the interpersonal metafunction, which refers to how each participant in multimodal learning is placed in a particular position to the resources on offer (e.g. how 'realistic' are the images in relation to the viewer's interests and experiences? How familiar would the viewer be with the resources on display?)

3.6 Conclusion

In this chapter I have outlined the research design and methodology employed to collect data for my study. My analyses of data focuses on how a variety of modes are used by the teacher and students. I identify the metafunctions of the modes, using the framework of multimodality activity theory and focusing on digital technology as a 'tool of mediation' in classroom interactions. This analytic process will be most effective in revealing what technology does in this English classroom, and how this co-constructs the meaning of a literary text. It can also illuminate the nature of the social practices happening in the classroom and how it relates to the environment outside of the school. In the next chapter, I argue with reference to the above methodology for analysis that an English pedagogy which

switches freely between pen and paper and mobile devices can have a negative impact on classroom learning.

Chapter 4. The effect of mobile devices used alongside pen, paper and other traditional classroom activities

4.1 Introduction

In this chapter I argue that when mobile digital technology enters a private English classroom it impacts learning not only with its diverse affordances and potentials – applications, a camera and access to fast internet - but also through the types of pedagogic activities shaped around it. I make the case that teacher centred lessons which alternate the use of pen and paper alongside screen-based learning practices do not maximise the language learning potentials in mobile devices, as practices around the two vary and frequently conflict with each other during lesson time. In terms of the related literature, the argument is concerned with Sefton-Green and Nixon's (2009) claim that schools have largely struggled to absorb technology due to limitations imposed by curricular demands, and teachers' inability to successfully accept and adapt out-of-school based digital practices. The argument is similarly guided by literature related to the use of mobile devices in classrooms, namely Merchant's (2007; 2012) studies on digital writing practices and mobile practices in the everyday life of young people, noting how collaborative student-led learning practices in the classroom are more suited to the social practices which surround new technology. Furthermore, and more relevant to this chapter, this research claimed that when mobile digital devices are used interchangeably with other language learning activities in the classroom the differing social practices associated with these can conflict and have a negative impact on learning. I refer to Rowsell and Marsh's (2011) observations that a teacher's active involvement in a technology-based lesson will not necessarily have a positive impact on learning practices, and that when teachers were observed to apply aspects of their students at-home digital literacy practices, students were more collaborative and engaged more deeply with problem-solving activities. In addition, I acknowledge Lankshear and Knobel's (2006) principles of efficacious and integrated digital learning; pedagogy should engage with authentic social identities and integrate these practices into the classroom.

4.2 Overview of data analysis

With reference to video data and field notes I show how certain activities with students' tablet devices were not observed to interact in synchronicity with traditional classroom learning practices. This was largely evidenced when the teacher had to introduce the language the students were to have accessed on their tablet devices and around the classroom, and transform this information into written notes; students were supposed to identify this information themselves on their devices, and this guided discovery was not observed to take place. Searching the classroom for evidence with devices as 'detectives' was a time-consuming process which ultimately positioned students as passive receivers of knowledge. With regards to learning English grammar, digital devices as a tool for receiving and accessing information were not observed to transform classroom practices in any (visible) meaningful

way. Using music and other visuals is an innovative way of incorporating technology into a lesson, but I argue it distracted students from fully engaging with the literacy learning outcomes and, occasionally, caused the teacher to lose the attention of the students.

Technology was intended to play a key role in allowing the students to discover grammatical knowledge with little intervention from the teacher. In addition to the slides projected at the front of the class and controlled by the teacher's tablet device, students could access and photograph resources with their devices (even though they were instructed to write notes, they were also told to take a photo of information presented at the front of the class). Learning was to be student-centred and to take place among pairs of students via their tablets. In contrast to this the arrangement of the classroom was organised as a 'panoptic' physical space, which directed students' attention towards the front of the classroom and positioned the teacher – and their device –as the focal point of authority in the lesson. During the several feedback sessions, the teacher from the front of the class attempted to elicit – but ultimately provided - the grammatical rules for direct and reported speech; the rules for which were intended to be discovered by students with minimal assistance. The use of technology and multimedia, the photographic 'evidence', and mobile devices did not appear to guide students efficiently and meaningfully, as the teacher intended, towards the English content of the lesson.

The teacher intervened to offer suggestions and hints to pull the students towards focusing on the details of the text included in their created visual resources; in addition to this the students accessed a staged panoramic photograph of their classroom with important language written on the board. Most of the students missed the grammatical clues in the visual evidence (despite being told the topic of the lesson at the start); the students as detectives focused largely on the physical and kinaesthetic pieces of evidence in the image of the classroom and the classroom itself, which seemed to diverge from the language-based task at hand. It took almost 20 minutes for students to be introduced to the learning point for the lesson, which detracted from the potential time for controlled and freer practice important to internalising such a language-based concept. This demonstrates, within the scope of this project, a disjuncture perceived by students and teachers between traditional learning activities and the potentials of new digital technologies. Whereas the tablet devices were comfortably and adeptly handled by the students the meaning-making occurring during these interactions appeared to be of a different kind to that involved in pen and paper note taking; on very few instances did the devices interact fluidly and in synergy with the paper-based English content this class.

4.3 How the simultaneous use of digital technologies among other classroom practices impacts learning

In this section I argue that a multitude of digital modes incorporated into a learning task can overstimulate students and distract them: ambience (background music), physical evidence placed around a class and placed details in a visual creation didn't guide students towards conceptual work in

my research. To support this argument, I will focus on potential 'pitfalls' that can occur when a classroom is 'switching freely' (Merchant 2007) between learning practices shaped around mobile devices and other classroom practices. The first issue related to the simultaneous use of digital and non-digital learning activities in the classroom I discuss is the incorporation of music, among other modes, into the learning task which was observed to distract students at the start of the lesson as they were settling down and attempting to make sense of the teacher's expectations. I then discuss how the inclusion of visuals and text in one single resource – photographic 'evidence' – did not efficiently guide students towards the language content as the teacher had intended. Both instances, I argue, show how treating technology as "simply another option" (Merchant, 2007, p. 119) to be used during a lesson does not successfully open the transformative learning potentials of learning with mobile devices.

4.3.1 The effect of music to create atmosphere

There were several digital media and modes interacting in the classroom which contributed to, and shaped, the unfolding social relations and pedagogic design of the lesson; in addition to the use of tablet devices, there was audio, teacher-created visual evidence and slides which contained text and visual elements. At the start of the lesson the teacher selected some 'spooky' music to play quite loudly over the speaker system to establish the sinister atmosphere of a murder, which was the theme. The lights were also dimmed, which created a sense of urgency and excitement among the students as they entered the classroom:

1 Teacher (loud): *10, 9, 8, 7, 6, 5, 4, 3, 2, 1...OK.*

2 Students hurry to sit down. Class volume decreases during the countdown.

3 Teacher: *You need to have...*(gesturing to the student at the back) *you're very behind madam you need to have your exam pad* (teacher uses his fingers to count) *iPad and your pen, now.*

4 Teacher walks behind the desk. He is looking for the remote control to lower the volume of the background music. Class volume immediately rises as he turns their back to the class.

5 Teacher turns to face the class with his finger on his lips.

6 Teacher: *[Student's name] put that away on the back of your chair*

7 Student: *Sorry, sir.*

8 Teacher: *Ok.*

9 Teacher has returned to their desk and is still trying to lower the volume of the background music, which is very loud at this point.

In the above exchange, it's clear to see how starting the lesson with the instructions that students must have "*exam pad, iPad and pen'* (line 3) which is almost drowned out by background music, is possibly too many different tasks and social practices with which to engage and focus students for language learning. As the music volume increased so too did the volume of students' chatter, and the

teacher had to once again regain control of the classroom. The teacher had performed a loud countdown as the students found their seats (line 1) to establish authority and control, and in this case the inclusion of background music worked against their intentions to captivate the students. Similarly, as students retrieve and prepare the three required tools for the learning activity (paper, pen and a mobile device) the teacher has to repeatedly manage and guide students, which was not aided by the music (line 6-7).

In some ways, the use of music differentiated the class from a typical English lesson, decentring the learning focus from written text and curricular knowledge to visuals and audio. This movement away from a traditional lesson – one focussing on text, pen and paper – via the use of digital media was an attempt by the teacher to engage with the students home-based digital interests, and signalled to the students that the lesson would focus on technology and the physical space of the room; atypical in an English classroom, which traditionally centres on linguistic modes like stories and poetry. The inclusion of music initially appeared to captivate the learners, but this engagement was unfortunately lost at stages during the lesson as the volume of the music kept increasing, drowning out the voice of the teacher and causing a bit of a distraction and some laughter as the teacher fiddled with their tablet, attempting to regain control of the class. The teacher had some trouble keeping the volume of the music at a level which did not interfere with their instructions, and this distracted students on several occasions; the music was particularly loud at the start of the lesson as the teacher attempted to introduce the topic. I argue that the above extract from filmed observations demonstrates how easy it can be for teacher to lose the class's attention when incorporating music into a language lesson.

4.3.2 Fake blood and umbrellas to guide students towards language content

The teacher shaped pedagogical practices around the students' tablet devices to optimise their learning of the rules for direct and indirect speech. The main digital task was for students to examine a photograph of a 'murder scene' as detectives by zooming in on placed evidence. The visual resource was designed by the teacher to guide students to writing on the board, which demonstrated incorrect English grammar. However, other traditionally non-literacy learning related practices slowed down the discovery process. There were several instances when the class got close to discussing the grammar content but were then distracted or diverted by visual elements and detective-like speculation. One such instance is below:

1 Teacher: *Ok guys let's settle down...Can I get some feedback of your suspicions, and all that.*

A student at the front of the class raises their hand. Teacher points to them, gesturing for them to speak.

2 Student: *There was one person.*

3 Teacher: *One person...uh, ok.* (points to student at the back of the class) *Yes?*

4 Student: *I'm not sure...there was too much blood on the floor. And the marker was lying on the floor. The black marker.*

5 Teacher: *Was it black or...*

Some students murmur "blue, blue"

6 Teacher (hands out in quizzical expression): *Who thinks it's black?*

7 Student: *It's blue.*

8 Student: *She made errors in...his name, while writing on the board.*

9 Teacher (from behind their desk, loudly): *That's very interesting.*

10 Student (from back of the class): *I think she killed herself.*

This interaction is notable not only because of how *close* the class gets towards focussing on the intended language concepts written on the board (as seen in line 8) but also how quickly the group reverts to detective work and murder-solving tropes even though the teacher loudly indicated that the students were on the right track (line 9-10). The interaction continued with students avoiding the text, which indicates that multiple modes incorporated into a single learning task, such as photographs and teacher-designed artefacts, used in conjunction with mobile devices do not always complement each other and can lead to confusion and distraction as students try to navigate a surplus of different social and learning practices.

The 'evidence' which they were to access and examine is a panoramic photograph of the classroom featuring a staged 'murder' and strategically placed artefacts. Examples in the evidence which were intended to guide students toward the grammatical aims of the lesson included an umbrella, the body of the victim holding a coloured board marker, some blood spatter and, most importantly, two sentences written on the board which had been constructed to demonstrate errors in use of direct and reported speech. For 10 minutes students worked together examining the evidence while the teacher walked around, monitoring and offering help, repeatedly reminding students to "*write down"* their ideas in their notebooks. This pedagogic practice did not effectively guide students towards language concepts, which is evidenced by their distraction with the blood and the colours of the markers clutched by the victim in the image.

In the above interactions, students focussed on visual and physical objects which were disconnected from the English content the teacher wanted them to identify. These modes were introduced to the students via the tool of digital technology and this made the learning task take a lot of time; for example, if the teacher had simply written two sentences on the board and asked students to discuss

the differences, the task of identifying the intended grammar rules would arguably have been a faster process. In this lesson mobile devices did not effectively help students achieve this classroom learning task, and in some ways students were confused as to what information they should pay attention to.

I argue that, in accordance with Merchant's (2007) observations that switching freely between digitally-based and more traditional classroom practices will not optimise learning; different learning activities are associated with different social practices and can conflict with each other. This part of the argument also speaks to Rowsell and Marsh's (2011) consideration that observed learning practices around technology do not always benefit from the teacher's input and guidance. Finally, this argument is related to Sefton-Green's (2007) noted curricular restraints and traditions embodied by the teacher which surround emerging digital pedagogies.

A similar interaction pattern within this pedagogic design repeated itself the following day with the same teacher and a different group of Grade 7 students. The teacher tries and fails to focus the students on the sentences in the image and the grammatical concepts represented. Once again, I argue these interactions demonstrate how teacher participation can negatively impact students' digital literacy learning (Rowsell and Marsh, 2009) and how jumping across various digital and other activities in the classroom to represent or communicate ideas is a 'pitfall' (Merchant, 2007) in pedagogic innovation. In the following interaction, the students were not distracted by the colour of the board markers, but by the blood and the umbrella nearby in the photograph.

1 Teacher: *Right. Now that's very interesting. What was wrong with that, if you do think there was something wrong with that?*

2 A few students drop their hands.

3 Student: *There wasn't a capital 'I'...*

4 Teacher: *Right, good. There was a mistake there. What else was wrong with that....*

5 Student start to talk over each other. Teacher quietens them with a finger over their mouth and invites another student to offer an idea.

6 Teacher: *Ok hang on everybody, one at a time.* (pointing to student) *yes?*

7 Student (pointing to the wall below the white board): *There's also blood on the wall.*

8 Teacher: *There is blood on the wall.*

9 Students (quietly): *Where?*

10 Student who offered this idea busy high-fiving their group members.

11 Teacher (motioning to the over side of the class): *Well noted, yes.*

12 A student offers a response which is inaudible amid the class chatting.

13 Teacher (loudly across the classroom): *Ah, did you hear that...at the end...excuse me...at the end of the direct speech there's no quotation at the end* (motioning quotation marks with two fingers) *there is at the beginning so there are errors on the board. These could be clues.*

14 Teacher points to another student at the back of the class.

15 Teacher: *Yes madam?*

16 Student: *The umbrella.*

17 Teacher: *The umbrella, what about the umbrella?*

18 Student: *It wasn't open.*

As with the previous group of students this class came close, but failed, to pick up the language concept demonstrated by the sentences in the photograph not once but twice. A student proposes that something was "*wrong*" with one of the sentences (line 3) and was encouraged by the teacher to describe this "*mistake*" in more detail (line 4). Another student subsequently redirects the discussion to the blood on the wall (line 8), which causes quite a bit of excitement as students chatter amongst themselves. This chatting and momentary loss of focus makes one individual's appropriate response to the punctuation in the sentences inaudible (lines 12-13). The teacher attempts to direct the class towards the student's relevant contribution by repeating what had been said after regaining the classes' attention; it's also stated clearly that "*there are errors on the board. These could be clues*." (line 13) However, this intervention and guidance is not successful as attention then turns to the unopened umbrella by the wall (line 16 – 18), and the group of students once again moves away from the intended language work of the lesson.

4.4 The effect of switching between pages and screens

In this section I argue that a pedagogical design which switches freely between the use of paper and mobile devices can have a negative impact on learning practices. Switching between activities and genres to identify and work with a language concept can cause confusion as participants need time to navigate the tools, and the social practices, with which to engage to successfully complete each task. As effective digital literacy pedagogies are still emerging, robust guidelines as to which practices to use and when are still unclear for learning in the classroom. Observed English lessons demonstrated that, unless the roles and appropriacy of each tool or mode is clearly defined in a classroom, switching between traditional learning tasks and new digital ones can become confusing for both the teacher and the students in ways which negatively impact learning. Similarly, the expected outcomes of each activity, and which is more important for language learning must be defined and understood by class participants if they are to complement each other. Specifically, I argue that alternating between photographing and recording information with a pen can obscure the teacher's and students' expectations as to what learning practices are needed for each task; furthermore, switching from

tablet-centred exploration and discovery to handwriting does not optimise the learning potentials of either classroom practice, rather it obfuscates the learning process. With regards to Merchant's (2007) and Rowsell and Marsh's (2011) observations that alternating between new and traditional learning activities should be done thoughtfully rather than freely, and that teacher intervention may not improve learning practices, respectively, I demonstrate in this section the ways in which multiple digital and non-digital learning practices can create confusion in the classroom and negatively impact learning processes. Additionally, I argue, with respect to Sefton-Green and Nixon's (2009) concern that curricular demands can limit the transformative potentials of technology in the classroom, that the traditional pedagogical practice of handwriting information in a notebook detracts from students' engagement with mobile technology as a tool for learning.

4.4.1 Whether to use a camera or handwriting

Traditionally, learning in English classrooms has largely entailed the use of books and related activities involving print literacy, and pens or pencils with which to record important language concepts. In modern classrooms well-equipped with digital technology, and students with mobile devices, practices of recording information have changed to adapt to the potentials of new media: specifically, information can be recorded instantly with a camera, typed into a digital document or handwritten. In this subsection, I demonstrate how learners at such a school make complex decisions regarding when to write information in their notebook, and what information is considered important and necessary for their school learning; especially with regards to a lesson's 'warm-up' activity, the question of which method to record information to use was not made clear enough and this had a negative impact on later, related tasks. After starting the lesson recording instructions with their device cameras, students are frequently reminded to write things down, and the teacher was not always successful in convincing every student; however, as the grammar rules are displayed by the projector towards the end of the lesson, students dutifully wrote down the information and 'concluded' the formality of the lesson (this will be discussed further on in this chapter). Digital technology introduced new learning tasks to be navigated by students and the teacher, which required complex decisions as to which modes to pay attention to. Here I argue that this complex interplay between new media and traditional learning activities in the classroom can make instructions, and learning expectations, confusing for both the teacher and the students, which was first evident in the following exchange:

1 Teacher: *Are you ready? Please have a look.*

2 Teacher clicks to reveal 3 new bullet points on the slide. The slide also contains a small icon of a camera, indicating that the students need to take a picture of slide with their tablets.

3 Teacher: *These are the three things that you need to be aware of and that you need to write notes on in your books.*

4 Teacher: *So, I would like you to take a photo of this from where you are sitting.*

5 Students start to pick up their iPads. Class volume rises.

6 Teacher: *I'll tell you again* (pointing at the board) *you've got to write your notes in your book...any clues you think you spot. Now look...carefully.*

This interaction is significant in that it occurred at the beginning of the lesson and contributed to instances of uncertainty related to the purposes of different activities throughout the lesson. As the lesson progressed students were evidently unsure of when to take photographs and when to write information down, and the teacher had to intervene and redirect the group on several occasions, which slowed down their discovery of the language concept and caused visible frustration in the teacher (this will be expanded upon further on in this chapter). The teacher does not make clear which tasks the students should engage with: firstly, they are told they are going to write the information in their books (line 3), which is contradicted by the instruction to take a photograph of the information (line 4). The interaction demonstrates that the expectations and parameters of the task, and associated learning practices, were not clearly defined, and in this way the learning benefits of technology were not optimised. Furthermore, it is clear that the expectations of handwritten notes come into conflict with the transformative potentials of new practices and genres shaped around mobile devices in the classroom.

The interaction is also notable in that it demonstrates Merchant's (2007, 2012) concern that new digital media requires different postures and 'spaces' for production and consumption than traditional pen and paper-orientated practices, and that these largely different practices may not complement each other in the classroom setting. In the above interaction, the movements and gestures of the students changed when they were instructed to use their devices. Some students held their devices up from where they are sitting, others stood up and walked a little bit closer towards the board to frame their photograph. Many students stood up and took a picture before the teacher had instructed the class to do so. Photographing information requires the students to face forward and stand up, which is visible in the following frame of video data. This contrasts with the students' postures and gestures when engaged in handwriting (which will be discussed further on in this chapter) in a way which reinforces Merchant's claims regarding the different spaces for consumption in traditional and digital learning practices.

Figure 1: Students start the lesson by recording the instructions via their device cameras.

In the image above students can be seen standing up and holding their devices in front of them. Mobile devices require different movements, gestures and practices which should be taken into consideration by educators when choosing pedagogical practices for the classroom. Another group of students demonstrated the same practices, which further suggests that the varying spaces for production and consumption of mobile devices and pens and paper may not complement each other in the classroom.

Figure 2: Students walk around the classroom with their devices and share ideas

As visible above, mobile devices are used by students in ways which differ greatly from literacy practices based around handwriting. I argue that the use of mobile devices alongside pens and paper can cause confusion among students with regards to which learning practices to engage with.

4.4.2 Switching between paper and mobile devices

In this section I argue that structuring the first half of a lesson around mobile devices and the second half around pen and paper notetaking does not reshape classroom learning in a beneficial way. Furthermore, the different spaces of production and consumption do not interact in a complementary manner. In observed lessons students investigated and were analysing several visual elements with classmates at various stages throughout the lesson. They discussed and shared ideas as they moved around the class but were repeatedly reminded by the teacher to write these ideas down on paper. Not only did this decision interrupt student learning interactions and slow down student discovery, it drove students back to sit at their desks quietly and write on their own. An interaction demonstrating this is below:

1 Teacher: *I'll tell you again* (pointing at the board) *you've got to write your notes in your book...any clues you think you spot. Now look...carefully.*

2 Field notes: Most students are still not writing in their notebooks, despite the teachers' insistence. A group of 4 has asked if they can stand up and have a look around the room, which the teacher has allowed them to do. Other students across the classroom follow suit and start walking around the class

with their devices. They pick up their devices and proceed to circle the classroom, looking carefully at details on the walls. In a few seconds most of the class has stood up, are chatting as they 'search' the classroom for evidence. One student is holding their notebook and a pen as they walk around, opposed to the devices which every other student is using.

3 Teacher (in response to a student's question): *You've got to find evidence. Look at the three questions that you took a photo of. You've got to justify everything. Write it down. Discuss with your partners.*

As visible in the interaction above, at the start of the observed lesson students had the freedom to make use of their tablet devices for an extended period and did so in an engaged and excited manner. The class picked up their devices and left their desks. The teacher turned the music back on as the students either photographed the instructions from their seats, stood up and captured it from behind their desk, or walked up to the board. There was a lot of noise and chatting among students as they located potential group members and re-settled into new positions in the classroom. For 10 minutes students worked together examining the evidence while the teacher walked around, monitoring and offering help, repeatedly reminding students to "*write down"* their ideas in their notebooks. Not only does this progression from mobile devices to handwriting demonstrate how more traditional activities for learning and teaching English are still dominant even in a well-equipped classroom, but it also suggests that technology may still be commonly perceived as a fun addition to language learning in classrooms but not intrinsically important; content must still be recorded into notebooks by the end of the lesson. This is an illustration of how the practices which surround traditional learning tasks and new digital media can conflict in an unhelpful way.

In this interaction students are uncertain about using their notebooks to write down information as, up until this point, they have been instructed to record evidence with their mobile devices. It is notable as it demonstrates how switching from new practices shaped around technology to more traditional classroom practices is not a straightforward process and can have a negative impact on learning: the transition from using tablet devices to their notebooks is not a smooth, nor visibly intuitive, transition for this group of learners. Although the teacher repeatedly insists that students write information down, very few students do this. The teacher struggles to direct attention back to the notebooks, and print literacy practices, after starting with an activity involving mobile devices and visual modes. This shows how switching from digital media to a more traditional classroom activity can create confusion and slow down a group's progress during a language lesson.

The teacher's decision to choose 'freely between page and screen' demonstrates a 'pitfall' (Merchant, 2007, 2012) in digital literacy practices to teach reading and writing. Furthermore, curricular expectations of handwriting (Sefton-Green and Nixon, 2007) move students away from collaborative discovery and back to solitary note taking practices, which had little to do with discoveries made with

their mobile devices. Rowsell and Marsh (2011) claim that collaborative learning practices can result in "deeper analysis" (57), and I argue here that the teacher's pedagogic decision to revert to handwriting in the second half of the lesson detracted from achieving this potential critical engagement. Finally, with reference to Lankshear and Knobel's (2006) principles of teaching and learning with mobile devices, switching from the screen to pen and paper halfway through the lesson demonstrated a 'clash in cultures of use', which has been problematic in existing digital pedagogies.

After a few minutes, most students are no closer to identifying the language work placed by the teacher in the evidence and in the classroom. The important 'evidence' were the two sentences displayed on the board in the image and thus students, at this stage of the lesson, started becoming distracted by the variety of media and modes involved in the task. Students were afforded more flexibility by their digital devices with regards to their meaning-making choices and freedom to share ideas with their classmates, but these interactions were still carefully and closely guided by the teacher, who frequently reminded students to use their notebooks to write and reaffirm what they have learnt with their devices. The teacher seems to realise the disconnect between the mobile-assisted discovery and the grammatical concepts of the lesson, and eventually stops the students and directs them to the language work projected on the board. In the following interaction, it becomes clear that mobile devices did not effectively guide students towards discovering a language concept:

4 Student: *Sir, you were the murderer! You killed her!*

5 Teacher: *You think? Fine. Ok. You can have your suspicions that's good write them down in your notes and then you can think 'why?' The first thing* [holding out two fingers]*...what do you look for in a murder case*.

6 Teacher: *Please look at these two sentences. You are going to find out who did it if you listen very carefully...I mean, you're very good you've got some great stuff. But there is more. Within 3 minutes* (holds out three fingers) *3 minutes...I would like you....to discuss...and note down in bullet points only...all the differences between that* (pointing at first sentence) *sentence and that one* (pointing at second sentence). *Ok go. 3 minutes.*

…

7 Teacher: *Anything else?* (quiet) *oh you guys are slowing down.* (to a student) *Meneer, put your iPad down. We're working.* (hand in front, palm forcefully moved downwards) *Ipad down.*

8 Teacher (slowly): *Right. Now that...all of this stuff* (wiggling fingers as moves hand above the students) *you are picking up really good stuff. What I'm going to do is tell you something.* (noise levels rise) *Hang on. Take these last two points...and I want everyone listening, I don't want anyone looking at their device at this moment.*

It is clear above that students continue to be distracted by visuals (line 4) as the teacher repeatedly reminds them to write their ideas down rather than share them verbally (line 5). The teacher relents and projects the sentences, which were supposed to be discovered by students with minimal teacher

intervention, on the board at the front of the class (line 6). The teacher then gives explicit instructions to pay attention to the differences between the two sentences, essentially shifting the lesson from mobile device-assisted discovery to a more traditional pedagogical design of recording curricular content into notebooks (line 7). Perhaps related to a top-down semiotic force – traditional teacher training and expectations of exam preparation – the teacher has unintentionally devalued new technology as a less important platform for language learning than pen and paper in this classroom. This devaluation of such technology in the classroom is even made explicit by the teacher as he directs a student to put their device away as they're "*working"* now, and thus students should not be engaging with their devices (line 8). In this regard, new technologies is backgrounded by the teacher in favour of more traditional learning practices.

This shift in pedagogy also displayed a dramatic shift in students' posture as they stopped collaborating with each other, and their tablets, and quietly wrote notes in their books. The ways students used mobile devices did not physically complement the practices involved in writing.

Figure 3 Students have their heads down and most devices are put away as they write.

The different posture and spaces for production and consumption of knowledge is emphasised with reference to the above image of students writing in their books. The learning practices are physically different from those which came before, and in this way transitioning from mobile devices to handwriting may not be the most physically congruent means of transforming literacy pedagogy. This observation relates to Merchant's discussion of the clash of cultures of learning practices in the classroom, as the spaces for production associated with mobile devices are very different from handwriting. I argue that this pedagogical decision does not make effective use of the learning potentials of mobile digital technology: shifting from mobile devices to paper during the lesson did

not allow for new, innovative methods of language learning and instead shaped the lesson into a more traditional pedagogic space of the teacher as source of authority and pen and paper as the preferred method for learning and teaching English.

The students are no longer using their devices and collaborating as they write down the projected information, as instructed by the teacher. The learning practices taking place are more traditional, in that they require a face the teacher classroom geography as opposed to a group centred exploration of the classroom and visual resources; furthermore, students write with pens in their notebook, and mobile devices are moved aside as students work. The shift from screen to page does not maximise the transformative potentials of mobile devices to teach literacy, as the practices require vastly different spaces for engagement, places for production and body positioning. While the mobile devices entertained students in the first half of the lesson, notetaking becomes the dominant method for language learning towards the end of the lesson and devices are put away.

4.5 The effect of mobile devices on the pace of the lesson

Related to the previous section, which argues that combining mobile devices and paper-based tasks can create confusion during a lesson, is the final argument in this chapter: the combination of activities shaped around paper and tablets can slow the learning process down. I argue this as, in my research, students did not discover the grammar content as efficiently as intended by the teacher, and these 'rules' for constructing direct and indirect sentences were largely provided by the teacher rather than elicited from the class. In addition, the students were told at the start of the lesson that they are going to learn 'a language principle' but instead they focus on the speculative visual imagery based around this language content and presented via digital technologies. Furthermore, as the rules are introduced the class are asked if they had done direct and indirect speech before and the class vocally affirmed, which suggests for this project that using mobile devices – in combination with paper – is not a set of practices and tools best suited to transform learning for effectively and efficiently conceptualising a grammatical rule. With relation to Lankshear and Knobel's (2006) emphasis on effective mobile digital learning being 'critical' – that is, learning practices should encourage students to engage with social discourses and practices – I show how the pedagogy chosen by the teacher failed to use new digital technologies in a critical way: devices were used as a fun, visual addition to the 'important' learning practices of writing information provided by the teacher. In addition, with regards to Merchant's (2012) claim that mobile devices necessitate 'new routines' in the classroom, I argue that a largely traditional, teacher-centred approach to language learning can easily overtake and detract from the transformative potentials of such technology in use in classrooms. Furthermore, this argument refers to Rowsell and Marsh's (2011) observations that, contrary to common assumptions about language learning with technology, teacher guidance does not necessarily benefit the learning practices taking place.

4.5.1 Mobile device learning practices and English grammar

In this section I show how learning activities which combine mobile digital devices with pen and paper can impede students' identification of and progress towards successfully working with an English language concept – specifically the grammar of direct and indirect speech. This section will tie together the preceding observations with the overarching learning task in the lesson, which was not successfully achieved by most students; the ungrammatical sentences visible in the panoramic evidence to draw students' attention to rules of direct and indirect speech. The teacher incorporated mobile devices into the lesson as a tool for students to self-discover and identify elements of English that they were familiar with at school. The learning tasks shaped around tablets in this lesson were not observed to effectively guide students to this knowledge and hindered the student's progress towards engaging with the grammatical task of the lesson. This was apparent when it came to the stage where the teacher elicited and students were to produce the grammatical knowledge that had been represented visually and in the classroom; this stage took place about two-thirds into the lesson and continued for 15 minutes until the end of the period. To demonstrate how the inclusion of mobile devices in this language lesson slowed down the students' discovery of the grammatical information, I first show how the teacher starts the lesson with instructions that the class is going to be taught a "*language principle...something very, very straightforward, direct and reported speech."* (lines 1- 3 above) The students also take a photograph of the projected slide which contains this information. The intended outcomes of the lesson are made explicit by the teacher and recorded by students with their devices.

1 Teacher: *Now listen carefully. Let me explain to you. This is what happened. You are being taught a language principle based on a murder. Now everything...I'm going to say to you could be a clue for finding out who died...as you will find out. Why they died, and who killed them. So you are, as from this moment, police inspectors.*

2 Teacher changes the slide with a remote. The new slide has blood splatter and a spooky font. The slide reads "Direct and Indirect Speech"

3 Teacher: *This is what we're covering today. It is a very interesting way of teaching something very very straightforward, direct and reported speech.*

During this final stage of the lesson students are looking at the sentences now projected by the teacher at the front of the class, students chat among themselves and after a few minutes a pair offers a motive for the murder: *"bad English!"* The teacher is visibly excited at this, the first response which refers to a language concept, and begins the process of eliciting the differences between the two sentences. The students are guided by the teacher to first identify the use of inverted commas, the change of tense,

and finally the change of pronouns. Even during this stage, the inclusion of visuals and detective-style investigation still distracts some students from the language content being discussed. The teacher reminds students to concentrate and put their iPads away; he was visibly frustrated with the learners' engagement with their devices as opposed to the curricular content. It became apparent that this group of students have in fact covered this content before, which in some ways could account for their disinterest and lack of progress at this stage, and their searching for visual clues – as opposed to print literacy practices – when they were tasked with using their devices.

4 Teacher (pointing at board): *Ok so we've got two sentences guys. One is direct* (points at the top one) *and one is indirect* (points at the bottom one)*. Now you have to tell me what's the difference between the two.*

5 A student offers a vague answer that the words have '*changed*'.

6 Teacher (standing in front of the door, holding out 1 finger, sombrely): *You've found one difference...in those two sentences...*

7 Quiet. One student hesitates and then raises their hand.

8 Student: *Um the first one has quotation marks, and the second doesn't...*

9 Teacher speaks over the student. Teacher (loudly, slightly annoyed, pointing at the whole class): *That's the third time...in a row you have said that. Listen to each other!*

As mentioned earlier in this chapter, the teacher continues to point students towards this information throughout the lesson. However, in the twenty-minute period of time leading up to the above interactions, and while students were using their mobile devices to explore visual content, only the minority of the class were able to provide the teacher with the requisite information. This observation supports my argument that using mobile devices alongside pens and paper, and transitioning from the screen to the page roughly halfway through a lesson, can hinder students' progress towards successfully working with a language concept. In the above interaction, the teacher becomes frustrated with the class as they repeat previously mentioned ideas, are hesitant to offer their ideas and ultimately show signs of losing interest in the task.

The interaction has become visibly quite frustrating for the teacher. He has moved his position to in front of the classroom door, and his hand gestures have become more forceful and frantic. His voice has also been raised and he is exhibiting signs of irritation. As seen above he repeatedly guides students back to the sentences on the board and asks for the differences between them (line 4), but the class is unable to offer new, relevant ideas; instead producing vague generalisations of how the words have "*changed"* (line 5) or repeating another students ideas (line 9) Although most of the students have been engaged with the lesson so far, some alternating between screen device and paper – but

mostly mingling and speaking, while looking at the visual evidence on their tablet - they don't seem to show a full understanding of what the task requires from them. This supports the argument that mobile devices can impede students' ability and willingness to work with curricular content.

Similar interactions occurred with another group of students at the same school observed at a different time. As seen below, the teacher guides the students towards the differences visible in the two sentences, and once again most students hesitate or offer vague, in this case confusing, explanations.

1 Teacher: *Well if you think one is direct and one indirect, which is which? The top one.. is? Direct and the bottom...indirect. good. So now we know which is which. Anymore...can we tell more about the differences.*

2 Student: *Uhh questions...become an answer.*

3 Teacher: (hand open in front, pointing at student) *In what way?*

4 Student: *Like, um. I don't really know how to explain it.*

5 Teacher (smiling): *Can you just try? No?* (pointing back to the board quickly) *So if I asked...*(pointing closely at the question displayed on the board) *"Are you guilty?"...how would you change that into reported speech? The answer is here* (pointing at the bottom line of text) *What's the difference between this one and this one* (moves hand up to top line of text, and back down again)

6 Teacher: *Uh, good. So it's more...it goes from a question* (pointing up) *to a statement* (pointing down, and then towards previous student) *so she wasn't wrong at all that's absolutely right.* (looking to back corner of room) *What else happens? What changes?*

7 Student: *Like when...miss had asked something...she uh...even though it was direct speech...she never asked, like, whether she is guilty.* (hesitates) *It's direct, but "Are you guilty?" and when you change it to indirect speech you get...whether she is guilty or not.*

8 Teacher: *Right ok good.* (walks back to the board) *Ok let me just*..(laughs a little, some students chuckle quietly) *Good, now that is your fourth* (holding out 4 fingers) *and final rule.*

The above interaction once again supports my argument that switching freely between mobile devices and print literacy practices may slow down students' progress during a language lesson. This group of students had spent over 25 minutes working on their devices to discover this content with minimal help from the teacher, and were not observed to do this successfully. In this interaction, the teacher eventually provides students with the 'rules' for direct and indirect speech (line 8) after multiple vague or confusing responses from students (line 2, line 7). Mobile devices did not provide these students with the potentials to identify this information on their own, and so I argue the pedagogical practices which revolved around mobile devices – notably, switching from the screen to page halfway through a lesson - were not conducive towards language learning in this case.

4.6 Conclusion

In this chapter I have argued that switching freely between activities shaped by mobile devices and others representative of more traditional English learning tasks can have a negative impact on language learning. Specifically, I have shown how blending digital and other genres and activities in the English classroom can create confusion, as it's not clear to students which learning practices to engage with to successfully complete each task. Switching freely between learning tasks on screen and those on paper slowed down learning in observed groups of students, as investigative, detective work with mobile devices became more interesting to students and the written English content of the lesson was largely ignored. In the next chapter, I present an argument for a digital pedagogy which can potentially avoid the pitfalls described here: a design that, rather than alternating between practices throughout the lesson, makes a clear distinction between learning activities shaped around new media and those around more traditional school practices. In the next chapter, I show how separating a related paper-based reading lesson from a collaborative, digital creative activity, can transform school English in positive ways.

Chapter 5. Using mobile devices collaboratively to reconstruct short stories

5.1 Introduction

In this chapter I argue that a literacy pedagogy which constructs collaborative and creative practices around mobile devices, with clearly defined tasks and activities shaped around digital and other learning practices, can positively transform learning practices in a South African English classroom. Specifically, I argue that mobile devices used by groups of students to construct retellings or reconstructions, of curricular content, both at home and in the classroom, can shape language learning at schools into a more authentic (that is, more closely linked to at-home social identities), more student-driven (or, shaped from the bottom-up) and more critical (in that the learning is more reflective). With regards to relevant literature, this argument is influenced by Lankshear and Knobel's (2006) principles of educationally appropriate practices for learning with mobile devices in the classroom; these four principles aim to ensure that learning practices are socio-culturally reflective, and that technology is used in ways which relate to and allow the interplay of students' social identities in the classroom to maximise learning potential. These concepts are supported by observed home practices around mobile digital technologies by young people, and arguments of how they need to be absorbed into pedagogical decisions, which are described as dominated by short casual messaging with friends, sharing photos and videos, and impulsively accessing the internet to access information (Merchant, 2007, 2012). With regards to difficulties adapting such out of school practices into the classroom, Merchant points out that the transformative potentials of mobile technologies are often downplayed by classroom traditions such as facing the front and problematic pedagogies which switch freely between new and older modes (Merchant, 2007). To further support my argument, I draw upon Rowsell and Marsh's (2011) extended observations of technology in use in classrooms, and subsequent claims that digital learning practices which favour collaboration and reconstruction of knowledge demonstrated more problem-solving and critical thinking in students. Finally, I refer to Sefton-Green and Nixon's (2009) concerns that top-down social semiotic forces in schools can shape learning practices with technology in ways which do not maximise technology's potentials and ignore the bottom-up practices that students value and engage with outside the classroom.

5.2 Overview of data analysis

For this chapter I focus on a sequence of Grade 7 English lessons wherein student groups were tasked with visually reproducing a short story using a comic-book maker application on mobile tablet devices. This pedagogical design, I argue, demonstrated a transformative 'take' on English and language learning; English was allowed to be multimodal and not restricted to textual elements. Students were now 'creators' of language texts and could subvert English narrative elements in a variety of digitally-afforded ways. Mobile devices afforded students the freedom to become more involved in the production of English, and they were thus positioned as having agency within the English classroom conversation. The teacher shaped this element of student agency in a few notable ways. The teacher chose a task which he believed would be deeply engaging for the students and in some ways connected to their out of school practices around mobile devices. By choosing software which was familiar to the learners, and possibly used at home by them on their devices, the teacher attempted to bolster the meaningfulness of the task by drawing upon the learner's home experiences and interests with technology. This pedagogic decision gave student groups the affordances to create a dynamic range of individualised multimodal productions in relation to a short story, most of which represented elements of Western storytelling practices – such as fairytales, comics and the bedtime story – but some even incorporated photographic visual modes from the internet, more specifically social media. These digital productions drew upon the social values and interests shared by this particular group of students, and this opened up the task to potentially be more personal. Overall, this pedagogic design represents a more transformative approach to language learning in the classroom.

The data that I discuss below also supports my argument that using mobile devices in such a way can improve learning by allowing for a more useful interplay of curricular content and digital modes. The teacher set and staged the task to meet the formal requirements of the classroom, which was enacted through an interplay of modes including movement, text and a visual diagram. Before students work together to create their visual reconstructions the class reads through the stories together to ensure comprehension. The reading lesson was conducted in a fairly traditional manner, as the teacher directed students to read through a story, and occasionally asked the group questions about the meaning or narrative. During the production stage of the task the teacher was far less dominating, allowing the learners to work in their groups (using the script they created together on Google Docs the afternoon before) and only offering advice or ideas when asked. The teacher gave students the freedom to experiment with the technology and visual resources available, and students worked efficiently with their devices which was a clear demonstration of their familiarity and past experiences with them. There was a shared understanding in this group of what was expected, and this is possibly the result of having completed similar English projects in this class. Student groups each created something totally different: some use WordArt, clipart and cartoons, while others used personal photographs or real images sourced from the web. Students had the freedom to shape a reading of the

text from the bottom-up and, by giving them time to work at home and in groups, the teacher provided an opportunity for students to personalise their learning. With reference to these learning practices, I make the claim that such collaborative and creative practices around mobile devices can transform English learning at schools in ways which make the subject more authentic, productive and enjoyable.

5.3 Collaborating with mobile devices inside and out of the classroom

In this section I argue that when students can work in groups and communicate and collaborate to create a multimodal digital reconstruction of curricular content with mobile devices, at school and at home, that digital technology used in this way can encourage student-centred discovery, communication and creativity. In the observed sequence of lessons students read short stories aloud together, were tasked with working in a group at home – via Google Classrooms – and in the class as they collaborated on their re-telling of read English stories. Collaborative activities around digital devices shaped the reading and writing practices of the lesson into authentic, flexible, and entertaining activities. I show how students used digital technology as a tool to reimagine, and even subvert, the short story text which was assigned to them by the teacher. I argue that tablet devices used in such a way gives students the potential to learn and engage with English texts in new and interesting ways by allowing them to access the internet and freedom to search through a plethora of visual and textual modes with which to re-tell a story. The first part of this argument discusses the physical layout of the class and how it contributed positively to learning practices around mobile devices. I then show how the type of software chosen by the teacher, and frequently used by the students in class and at home, provides an effective mobile platform with which groups of students can construct personalised reinterpretations of curricula content via the internet. Next, I show how the teacher's pedagogical decision to provide students with visual instructions to access on their devices transformed classroom English into a multimodal interaction of new and older language learning practices. Finally, with reference to a group-created artefact, I show how the combination of mobile devices, software and pedagogical design contributed to student engagement and creativity.

5.3.1 The physical space of the classroom and its role in language learning

When mobile devices are used in a classroom to teach English it is important that the physical space for learning be adapted to best suit the different postures and movements necessitated by the technology and by collaborative learning practices. If this is done effectively then mobile devices can be 'absorbed' into classroom learning practices in ways which maximise their transformative potentials. The layout of this particular classroom contributed positively to the students' engagement with English content and interactions with their tablets and other students. The importance of the layout of the classroom also relates to Merchant's discussion of how mobile devices can destabilise classroom roles and transform language learning, in ways which require different classroom geographies (2009). Furthermore, I argue that, in relation to Lankshear and Knobel's principle of efficacy (2006), a physical layout of a classroom which allows students to move around and face each other rather than the front of the classroom gives them room to enact social identities and out of school practices with mobile technology.

The observed pedagogic design consisted of a lesson wherein the class read a short story aloud together, and a follow-up lesson in which groups of students moved around the classroom and worked together with the mobile devices. For both lessons the classroom was organised so that the teacher and their desk occupied the front side of the classroom, next to the whiteboard and projection screen. The desks were arranged in a horseshoe with an 'island' in the middle consisting of four desks; space for six students. This arrangement of the school furniture indicated two things: that the teacher intended to be the position of authority, and focus of attention, throughout the reading lesson; and that the small island space in the centre of the classroom suggested a possibility for group discussion and potential debate (which was not allowed until the end of the lesson once the texts had been read and the groups assigned, and in the creation lesson the next day). This classroom was not purely traditional in a face the front type of way, however, due to the placement of the island, which indicates room for debate and collaboration. The inclusion of such a space shifted the students' focus from the teacher, and the front of the class, to group members and their mobile devices. The layout the classroom is demonstrated below:

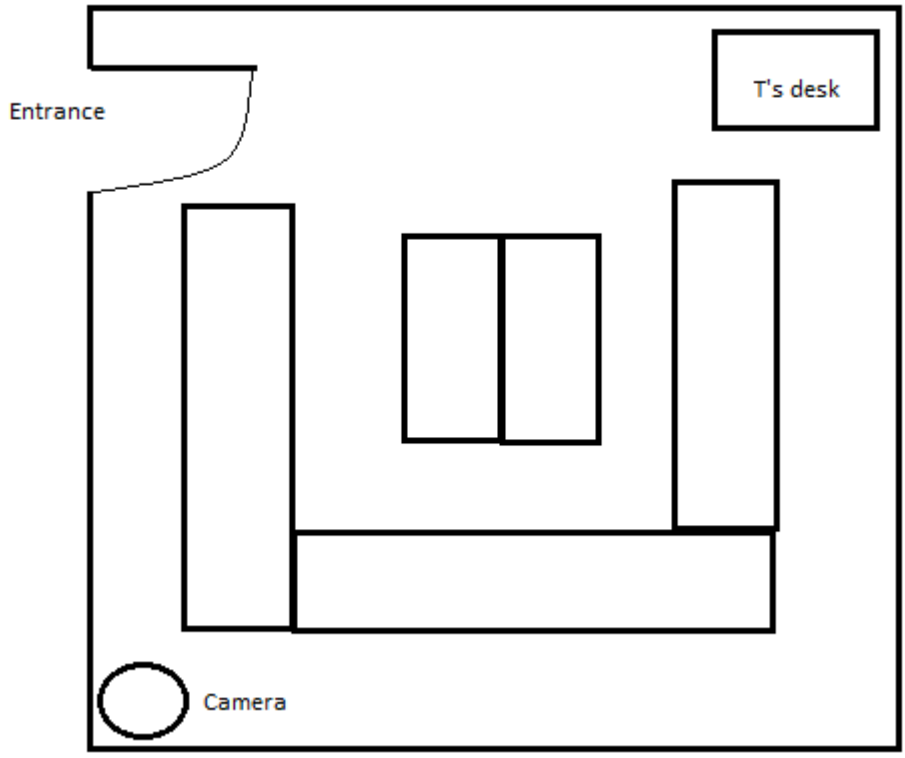


Figure 4: The arrangement of desks in this English classroom.

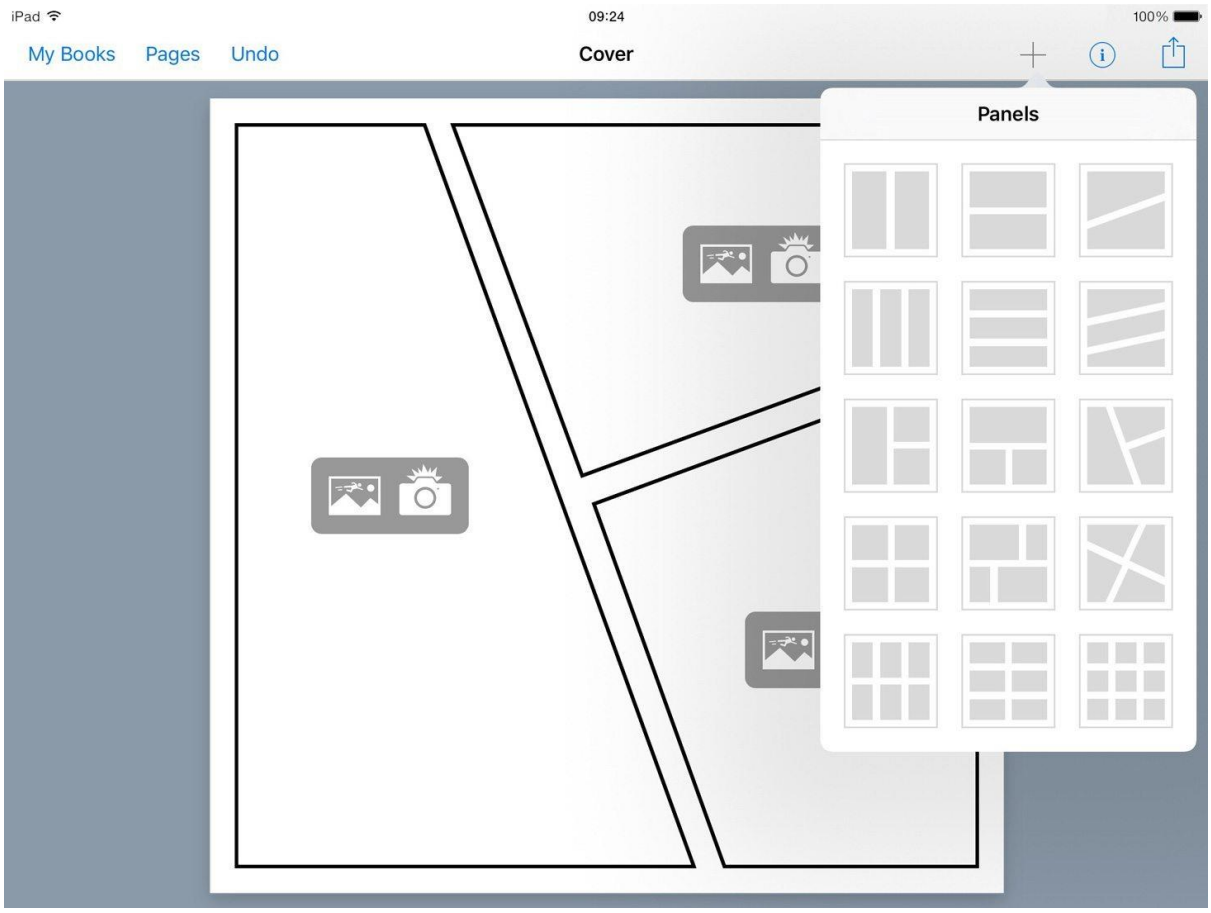
The lesson and observed interactions will now be described in more detail to demonstrate how the teacher established themselves as source of authority during the reading lesson. After about 5 minutes the teacher had the class quiet and relatively attentive as he stood at the front of the class with the book of short stories in hand. He reminded everyone who had not at this stage put their iPads screen-down or away in their bags to do so. He informed the students that today they will be reading short stories. The teacher moved between the board towards the desk to the right while giving out the instructions for the lesson. Presumably to keep the students focussed on the content of the stories, the main activity of creating a digital comic-book summary was withheld by the teacher. At this stage every student had only their book on the desk while a few pairs shared. The teacher began reading the first story from their position at the front of the class. After reading one page aloud he asked for a volunteer to continue and a number of students eagerly raised their hands. A student was chosen and began reading the story. After the first page the teacher halted proceedings and asked some information-checking questions. Another student then assumed the role of reader. This pattern repeated itself for 25 minutes until the students had finished reading two stories. This interaction did not incorporate technology in any way; in fact, the teacher repeatedly told students to put their devices out of sight and to focus solely on their books. Reading was a teacher-directed task and understanding of the main actions and themes in each story was checked and confirmed by the teacher. In this way,

students were positioned as passive receivers of English in the classroom, and the teacher retains authority and knowledge of the subject

A potential reason for choosing a traditional pedagogy for the reading lesson could be because the aim of the lesson was for students to focus on their reading skills and pay close attention to narrative points while doing so. As Merchant (2007) observed, switching freely between digital and other modes during a lesson can cause confusion and have a negative impact on learning practices. I argue that the careful separation of reading a book in one lesson, and focussing the follow-up lesson purely on devices effectively distinguished the different spaces for learning in a way which was logical and made sense to students. It's also possible that the teacher did not want students to be distracted by their devices or by the process of making notes while reading through the stories, which I see as a positive pedagogic decision – at least during the reading stage – as students knew which modes and information to focus on and engage with (as opposed to the learning practices described in the previous chapter). The social relations established by the teacher in the reading lesson can be described as 'authoritative' and 'non-interactive'; that is, the teacher maintained his role as expert and purveyor of 'educated English sensibility. This could be an intentional pedagogic design by the teacher to control and direct a collective reading of each short story in the classroom. Whatever the reason, the meaning of each short story was carefully shaped by the teacher and their movements in the classroom; which student he called upon to read; and the types of questions he asked to check the students' understanding of the story.

5.3.2 The functionality of a comic-book maker application

The teacher's decision that students use the *ComicMaker, PicCollage* or *Book Creator* applications on their mobile devices to create a visual retelling of a short story had a positive impact on learning: not only because some students use this software at home and so the learning task becomes more authentic, but also because the applications are user friendly and give students flexibility with regards to design and layout. The way these software applications, or apps, work, and how the students used them in this lesson is described as follows. Users open the software and are presented with several options regarding the layout, or 'grid' of their comic creation: they can select the number of frames, the shape and design of the page and colour scheme. This opening selection menu and process is presented in a very simple visual manner much like this:



[1]

Figure 5: An example of the opening layout of 'bookmaker' or 'picture collage' style applications on mobile devices.

Once the user has chosen and tapped their desired layout they are presented with the grid and the ability to import visual resources into any selected frame, copy and paste an image from elsewhere on the iPad, or click and drag the resource into the frame from a web browser or file explorer. These applications also allow users to create different shaped text-boxes and fill them with desired text.

In the classroom, this software allows students to work in groups, or on their own if necessary, and due to the simplicity of the applications teacher involvement can be minimised. Although the teacher was available to help in the observed lessons and was circling the classroom and monitoring the groups' progress, no students asked for help or for instructions as to how to use the software. I went closer to one group to observe how they were interacting with the software and one member casually told me they 'use it all the time' outside of school. Every student in the classroom was engaged with their iPads, working on a variety of tasks simultaneously; they switched between their text document (created in Google Classrooms the day before), an internet browser and the comic making software

[1] https://bookcreator.com/2015/11/how-can-we-use-comics-in-the-classroom/

several times a minute, while conversing with and discussing their project with team members. This ability to multi-task comfortably with their iPads was a clear practical indication that these students have had a lot of experience operating various tech devices and using different software. The group I more closely observed spent most of their time browsing images via the Google search engine. The story they were to summarise was about a stray dog befriending an old woman and their search phrases progressed from 'smelly dog', 'dog running', 'happy dog' and 'shocked granny'. They demonstrated an ease and proficiency with the search engine which shaped the task into a fun, engaging means of collage or visual representation of a written text. There was much laughter as students sourced the images and browsed through them. Some students passed around their devices to other group members to reach a consensus. Other groups opted to locate much simpler cartoon-style images. Based on these observations, I conclude that such applications available for mobile devices can have a positive impact on language learning and shape classroom practices from the bottom-up. This relates to Sefton-Green's (2009) concern for teachers to adapt students' at-home practices around digital literacy into the classroom, as well as Roswell and Marsh's (2011) observations that young people's use of the Web 2.0 and social media are an important part of many students' home lives and pedagogy which adapts these practices in some way can benefit learning by making students' more collaborative.

5.3.2 A digital, visual instruction and task expectations

The teacher's creation of a digital visual diagram (copied below), used as an instructional resource, and accessed by students on their mobile devices, effectively guided students towards adapting a written story into a visual reconstruction. This observation demonstrates the potentials of mobile devices, as well as other technology, to create such multimodal instructional resources and transform language learning in the classroom from page-based, monomodal practices. The resource is a colourful depiction of the narrative stages of a story which was intended to provide guidance to the students for summarising a written story with minimal text. This teacher-created resource was important to this lesson's meaning-making processes as, I demonstrate, it showed the students how to bridge the gap between stories read from the page, which included no visuals at all, and a visual reconstruction of the story. In addition, it worked to shape the trajectory of the products expected from the students and reinforced an understanding of storytelling suitable for school work. This visual resource was created by the teacher and was displayed in front of the class while students were in the process of creating their multimodal retellings of short stories during the second lesson. Students also had access to the resource on their mobile devices. The teacher spoke through it once for a brief time, but the intention and meaning of the diagram appeared obvious to the students – they may have seen it

before, which was evidenced by their lack of follow-up questions regarding the resource and the teacher's very short discussion of its meaning.

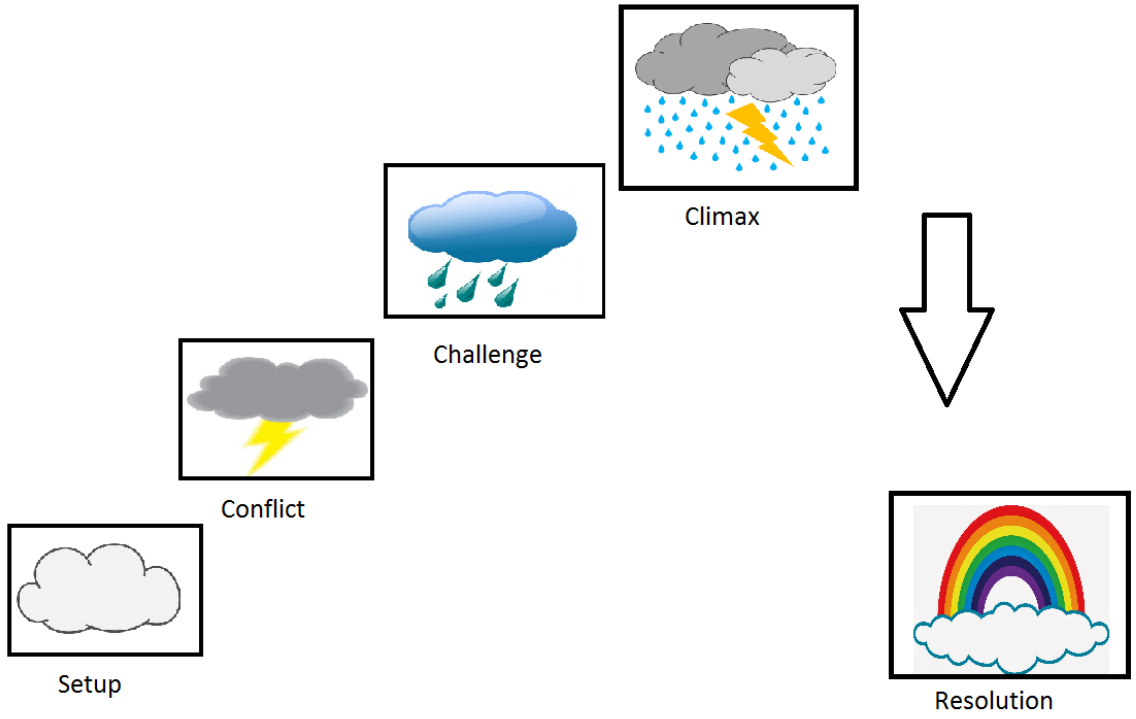


Figure 6: The digital instructional resource created by the teacher and accessed by students.

This resource emulates the framed, sequential visuals which the students were expected to produce. It also positions written text as not always performing a primary role in the task. This visual diagram positioned the task as belonging to the modal spheres of modern Western narratives structure as well as the visual sequence of comic books or cartoons: text and dialogue should follow a sequential narrative structure and play a secondary role in the meaning-making process. The students have so far been asked to turn a written story read aloud from a book into a complex digital product which required the ability to source appropriate images from the internet and place them within the seven-frame construct to best summarise a short story. The nature of the meaning-making inherent in this task relied quite heavily on the method in which the teacher demonstrated the steps of the task required from the students: that is, identifying the 'setup', 'climax' etc. in the written text and reducing this text to the size of an image caption; structuring selected written content in a way which touches on the most relevant plot-points of the narrative; and finally sourcing appropriate visuals to stand in place of – or rather build upon the meaning of – the written resource. Two different short stories were given to corresponding groups of students, both deemed suitable by the teacher for this production task: although the content of each story was different the narratives generally followed the

simplified ‘stages’ of a story. The visual diagram above was an effective bridging tool for students to identify significant elements of plot and consider how best to represent these elements with personalised images.

5.3.3 Meaning making and creativity with mobile devices

In this section I demonstrate, with a visual ‘reading’ or analysis of students’ digital creations, how the above mentioned software and pedagogical design around mobile devices can give students the potential to create complex and meaningful representations of curricular content. I draw upon Kress and van Leeuwen’s (2006) “grammar of visual design” as well as Jewitt’s (2006) implementations of this grammar to analyse digital creations in schools, to conduct this analysis and to support my argument that mobile devices used in this way can have a positive impact on language learning in the classroom. One group of observed students were allocated a story which was itself a subversion of tropes, and this understanding was largely reflected by the students’ choice of visual modes.

Figure 7: The first page of the group's digital comic-book, showing the heading and background design.

As seen above, this group of students have chosen a large, light blue title, created using 'WordArt' or a similar program, for their digital book which contrasts with a dull, brown background. The background is textured in a way that makes it resemble old brown paper, which emphasises the crisp, digital cartoons which dominate the frames of the story. The contrast between the modern visuals chosen for the title (and comic frames) and the aesthetics of the background could point to a notable relation perceived between text and image in this visual resource. The font and style of the title is loud and playful, which correlates with the tone of the story, but the background colour scheme bears a closer association to physical books and formal reading practices. These design choices demonstrate

some complex decisions with regards to visual representation of a written text: the students are playing with an older notion of storytelling and the new digital visuals which are available via their devices. The disjunction between the digital WordArt title and the 'faux' paper background almost represents a subversion of traditional story-telling practices. Worn paper is more closely associated with older books, or even the 'classics', than with comic-books, and so the aesthetics seem to show a conversation between the requirements of the task and the potentials of digital technology. This particular aesthetic decision also contributes to the 'layers of meaning' in this text; that is, how the interplay of visuals and text is used to demonstrate an understanding of important themes, relationships and knowledge visually rather than textually. The loud, cartoony title gestures towards the content of the story being summarised – the narrative itself a subversion of fairytale tropes – whereas the background visually situates the project in a more traditional universe of bedtime stories and collectible books. These relationships and disjuncture visually embolden the subversive nature of the story being summarised, and situates this group of learners as critics of fairytales; culturally aware of tropes and stereotypes found within this popular Western genre of early childhood literacy.

The title and font contrast strongly with the background choice, demonstrating a disjuncture perceived between the 'old' – paper and fairytales – and the new – comics and digital images. This disjuncture is reflected in what the students have made visible and for what they have used the text boxes or speech bubbles. Bright colours and characters permeate the frames and text appears in boxes and bubbles as in comic books. The newly established roles of Goldilocks and the wolf as criminal and crime solver, which are no longer native to the fairytale landscape, are visibly positioned as such by the way they interact – or not, as in this case - with other visual elements. The linguistic elements of the story are confined to the white and grey spaces, and include the narrative of the story and the character's phrases. This group of students are likely very familiar with bedtime stories and fairytale tropes, and their chosen aesthetic shows how digital technology has given them the affordances to position themselves as participants of the genre – it reflects their shared social capital, as well as their willingness to subvert it.

Stepping out of the image and back into the classroom, these students show their proficiency with tablet devices and popular applications, as well as their familiarity with the content being taught in the classroom and its relationship to their home learning environment: bedtime stories find their way into the classroom via digital technology, and their meanings can be transformed. This visual resource also shows a tension perceived between the teacher's expectations and the freedom allocated for the task. The students know they have to feature text from the story, but they have also used visuals to manipulate and individualise their reading of it. The creative freedom given to students for this production task, both at home and in the classroom, has allowed the task to be more student-shaped, even though groups had to follow formal instructions. The actual narrative vector in the resource is largely unclear and the story ultimately doesn't explain the actors' motivations. However, the digital

platform has given this group the freedom to visually interpret genre conventions and subvert them in ways which both alter and build upon their social value and importance.

Figure 8: The narrative and visual design demonstrates a creative representation of a short story.

The subsequent three frames of the visual narrative of "Archie Wolf" (above) position Goldilocks as the antagonist and the 'big bad wolf' as the hero tasked with catching the blonde-haired criminal and restoring order to the world of fairytales. Goldilocks is positioned as instigating several of the tragic elements of familiar fairytale narratives: that is, she breaks into the house of the 3 bears, is accused of stealing Little Bo Peep's sheep and of somehow cracking Humpty Dumpty and spilling his yolk. Visually, the image of evil Goldilocks and her two pistols – which are never referred to in the text – appears in the first frame of the comic and then again in the seventh: her narrative is implied rather than demonstrated by action and visuals. Thus, as antagonist, she is not the 'actor' and the vectors of the visual narrative do not follow her progress through the frames of the story. It is difficult to

determine which visual elements, if any, are the main actors in this narrative, as each frame introduces a new fairytale character who has been 'acted upon' by Goldilocks before the reader 'arrives' at the frame. This may point toward the range of bedtime story characters familiar to this group of students. The mysterious but heroic wolf appears four times in the narrative; twice as a suit wearing, gun-toting secret agent; once in a classical depiction blowing the pigs' house down, and then finally as a top-hat wearing trickster with a new identity. The way in which Goldilocks and the wolf act upon the narrative, but are not visually shown doing so, is referred to as a 'non-transactive' representation. This non-transactive representation of a narrative vector is potentially related to how the students are attempting to subvert traditional fairytale tropes. Neither the hero nor anti-hero of this narrative visually act upon the other visual elements in the creation – which are themselves sourced representations of fairytale characters and clip-art style cartoons. As gun-toting cartoons the wolf and Goldilocks certainly stand out from the fairytale world they inhabit, and so are not given as much visual space as the more familiar characters.

In this section I showed how students collaborated and chose digital visual resources to represent curricular content. The observed practices and creations of this group of students were critical and complex, as they had to choose visuals with which to demonstrate their understanding of a short story. This demonstrates deep engagement with English in the classroom in a transformative way, as students worked together to visually reconstruct a short story. Mobile devices and photo collage software gave these students the capacity to subvert and reimagine curricular content in creative ways. As English is no longer a mono-modal subject, these digitally-afforded visual artefacts demonstrate how visuals and text can effectively be incorporated into an English lesson as an engaging, personalised and fun task for students to produce classroom texts and demonstrate understanding of curricular content. This supports my argument that mobile devices used collaboratively, and with clearly defined activities and roles for different tools interacting in the classroom, can transform English learning in a positive way.

5.4 Authentic language learning with mobile devices

Building on from the above claim that mobile devices can allow students to be more creative in the English classroom, in this section I demonstrate another notable potential of new technology to positively transform pedagogy: mobile devices have cameras which can allow students to photograph themselves and visually represent elements of a short story with their own social identity. This is a significant transformation of English learning as, not only does it allow students to physically step out of the classroom and deeply personalise their creative project, but it also relates to Rowsell and Marsh's (2011) observations that pedagogic designs which engage with social media and the internet can encourage students to be more collaborative and critical in the classroom. As mentioned earlier, the observed group of students admit to using picture collage applications on their devices at home, and so the potential to enact their at-home social identity, in this case with photographs and visual editing techniques, is once again effectively adapted into the classroom. In this section I analyse a digital creation from a group of students which, in comparison to "Archie Wolf", opted to make use of their mobile device's camera outside of the classroom to stage the visuals to be used in the retelling of another short story, and highlight the complex meaning-making processes implicit in the artefact. I use this data to support my argument that mobile devices use collaboratively by students to photograph and edit themselves, as opposed to sourcing visuals online, can also positively transform English learning by shaping it to be more authentic and more closely associated with the at-home social identities of students. The ability to capture photographs 'just in time' and quickly edit and share them is a practice more closely related to social media rather than school work, and so mobile devices used in this way can effectively bridge classroom learning to students' personal lives.

5.4.1 Designing a relationship between text and photographs

The following frame from a student groups' visual recreation of a short story demonstrates a largely different way of organising elements to construct a narrative. It shows the diverse meaning-making process with regards to collaborative learning practices using mobile devices, and I argue it is an example of how to successfully integrate at-home practices with digital media into the classroom to positively impact English learning.

Figure 9: The first three frames of a visual narrative created using photographs and editing.

This group of students, in comparison to those who worked on "Archie Wolf", have chosen not to include a title, colour scheme or background graphics. Instead the photographs share the frames with text in *Comic Sans* in boxes and bubbles with white backgrounds, and small visual adjustments to the photographs such as drawn-on dog ears, a cut and pasted photograph of a goat's head, and a cityscape background in two frames. Photographs dominate the screen and simple text sentences, written in the active formulation, for example "He was happy" "He found a wonderful house…", work to move the reader across the seven frames. In comparison with "Archie Wolf", which featured text taken from the story and was a largely non-transactive narrative vector, this production features a clear narrative vector which is primarily realised by photographs but guided and expanded upon by text. This unique visual design and the depicted relations between the text and the visuals reveal how this group of students are 'positioned' in relation to school English. English learning is not shown to be limited to classroom learning practices, as this group have literally left the classroom and sourced visual resources of themselves around the school property. In addition, very little of the actual text, which was read aloud in class, is featured in this reproduction. Instead the students have re-written key points in the narrative, but focussed more attention on staging and editing photographs. In this regard,

I argue that mobile devices, and the use of photography, can positively transform school English into a multimodal and authentic learning practice. Using photographs can shape learning by allowing students to enact their interpretation of curricular content outside of the classroom and with visuals which represent more closely students' at-home social identity.

5.4.2 Linking digital photographs with curricular content

Although this group of students are using mobile devices to take photos, share and edit them – as young people have been observed to do at home – they make careful design choices to ensure their project is suitable as English 'school' work. These photographs, however, are prevented from being totally natural and intimate - and therefore lacking the formality that is expected for a school-based resource - by the editing techniques which partially disguise the students' identities, and the text boxes and bubbles which advance the narrative. These photo editing decisions in some ways shift the images away from a naturalistic coding, possibly with the intention of situating the project in the symbolic realm of fiction and storytelling techniques. The careful negotiation of intimate and more formal visual modes also shapes the product as belonging to the classroom; it is distanced from the completely naturalistic image sharing which occurs between friends via social media platforms.

Figure 10: Simple editing effects alter the students' identity and demonstrate proficiency with the software and understanding of narrative tropes.

In comparison to the non-transactive actors chosen for the "Archie Wolf" this production (continued above) features two clearly defined actors and a narrative vector which connects their actions across the seven frames. The two actors are also visually differentiated: the dog character by the ears and nose, and the granny character by the cityscape the group have inserted behind the photograph of the student. The student who plays the part of the unnamed dog is positioned as the main actor in the text by greeting the reader in frame one with a close-up portrait. The reader is then shown the character's thoughts, within a cloud-shaped text bubble, which works to sustain this close relationship. The narrative is also contained in the text boxes which include common constructions used when telling stories, for example "One day," and "eventually". The reader is guided through the story by what the visual participants are doing, as well as by the text and thoughts of the actor. The story has a clear beginning, climax and resolution; the dog attempts to befriend the granny, initially fails but eventually succeeds, resulting in a happy ending. The story is not designed to be entirely 'real' or 'naturalistic', evidenced by the extra visuals which add humour and meaning to the narrative.

This demonstrates in this group of learners a solid understanding of English conventions both inside the classroom and at home. The inclusion of narrative text and thought bubbles carefully exposed the narrative in seven frames. This production, however, also shows an engagement with digital platforms like social media, which belong to a more personal realm of literacy practice. An interplay between out-of-school digital practices and curricular demands seems to be taking place, as students negotiate the social distance with the reader; the instructions of the teacher; the aim of the task; and the expectations of school English. Due to this careful interplay of digital meaning-making and school-related learning practices, I ague that mobile devices can make English more authentic and more closely related to students' home-based interests in ways which can balance curricular content and digital literacy practices in effective ways.

5.5 Conclusion

In this chapter, I have made the case that collaborative creative activities with mobile devices can positively transform the English classroom into a multimodal, critical space for original content creation. When students are given time to work on their devices at home and in the classroom to reconstruct a short story, their work demonstrates complex meaning-making and design decisions which indicate a deep engagement with the curricular content. Additionally, when different genres of activity are clearly defined and classified in their own learning spaces, such as conducting reading activities in a lesson prior to responding the content, then English learning with mobile devices can potentially be more meaningful and enjoyable. However, the question remains as to how such collaborative tasks can improve young peoples' writing skills. In the context of this thesis, I aimed to show how mobile devices can engage students in curricular content and be used in ways similar to those students' choose at home. Whether students' writing is ultimately improved remains to be seen, but learning tasks such as those described in this chapter can absorb new technologies in ways which are more natural and authentic for young people.

Chapter 6. The implications of using digital technology as a tool for learning English in the classroom

6.1 Introduction

In this dissertation, I researched how digital technology was used to teach English at a secondary school in Cape Town. In Chapters 4 and 5 I provided descriptions and critical interpretations of how mobile devices were used by Grade 7 learners in two separate lessons: in one lesson, it was used as a tool for producing new content to reinterpret or represent English short stories; in the other, devices were used to supplement curriculum content and as a tool for accessing and receiving teacher-created resources. I paid attention to the social context of the institution and the literacy practices of this group of students to illuminate the socially-situated nature of literacies; coming from a privileged background and having access to several devices – and importantly, the internet – at home shaped these classroom encounters with technology into comfortable, visibly casual, learning practices. I argued that technology, specifically mobile devices, as a tool for student-centred creative tasks which give learners time and space to produce new multimodal content can positively transform English pedagogies, as opposed to learning activities which switch freely between new digital media and more traditional paper-based learning tasks. In this chapter I provide an analytical distinction between the two ways of using technology to show how these different pedagogies impacted the language learning taking place, and provided students with different potentials for meaning-making.

6.1 The potentials of devices for teaching English

In this section I discuss how the different uses of digital devices provided different potentials for learning and meaning-making. One aim of this thesis has been to critically analyse existing classroom pedagogies shaped around technology and the ways in which they have been observed to impact learning practices. Bridging the divide between content and new technologies in ways which do more than entertain – which transform pedagogy - has been a notable challenge for teachers, and it would appear is still a central challenge for teachers at this school. One concern of this thesis is such moments wherein technology encounters social forces in the classroom which shaped the meaning-making potentials of new technologies, and analyse potential reasons for certain learning interactions. Another concern of this thesis is how different social practices find their way into classrooms to shape learning practices, and how the use of new media and modes in the classroom are situated in a specific socioeconomic environment. In this thesis, I showed how the out-of-school semiotic forces of Western bedtime stories, the internet and social media shape the students' visual creations in complex and meaningful ways. Mobile devices can allow students' social identities to enter the classroom and become a means of reinterpretation and representation, with the potential for students to create personalised multimodal resources. Applications and software like *PicCollage* and *BookCreator* –

variations of which are also available for mobile phones – provided a platform for new representational and communicative activities for learning English. A critical analysis of the students' creations demonstrated complex narrative vectors which subvert the meaning and details of the original text.

On the other hand, the familiarity of these students with technology and their expectations of school learning was observed to position pen and paper learning as more 'legitimate' in the eyes of classroom participants. This 'juggling' of traditional modes and new technology in the classroom, and its impact on the potentials for English learning, was evident in a lesson where students used devices alongside their notebooks to identify a grammar point. Activities shaped around mobile devices were not observed to effectively guide or assist students during this task, and students seemed uncertain about when to use the device or their pens. Alternation digital learning tasks with writing practices did not transform pedagogy in a positive way, and apart from a few instances where students could walk around the classroom, the lesson was largely traditional. The question remains as to how best to incorporate technology into a classroom; particularly with a group of learners from diverse socioeconomic backgrounds, which is the case with many South African public schools.

6.2 Student-centred learning and traditional pedagogy

In Chapter 4 I discussed and interpreted how a pedagogy which switched freely between mobile devices and handwriting did not use technology in a way which transformed the meaning-making processes taking place. Mobile devices were used by students to access visual resources to identify grammatical content. The use of new technology in the lessons was shaped by social semiotic forces in the classroom coming from two dominant directions: the expectations of mainstream schooling, curricular demands and traditional teacher-training, and the students' experiences with digital devices, expectations of learning and their home-based interests. In this lesson, the teacher shaped the learning potentials by acting as the source of authority in the classroom and practising a largely traditional pedagogy, which in many ways drew attention away from – and disempowered – the learning potentials of activities with the students' tablet devices. Similarly, when students were tasked with accessing and analysing visual modes the teacher directed them back to their notebook every instance when an important piece of knowledge was to be discussed; this pushed the tablet devices to the sidelines as a fun way to socialise and interact with peers but not crucial to the learning taking place.

In Chapter 5 I argued that a pedagogy which displaced the teacher as provider of knowledge and situated students' mobile devices at the centre of the learning task provided learners with new potentials for meaning-making in the English classroom: a digital multimodal resource is designed and created by groups of students, as the teacher monitors and offers assistance. This pedagogic design allowed learners to create complex responses to curriculum content, and transformed how they learn English. It was in the production of digital comic books that new methods of learning were

embraced by the students in ways which allowed them to personalise, and even subvert, the short stories which form part of the school curriculum. During this lesson the teacher stepped back and gave students the freedom to interpret assigned texts in new and interesting ways, which reflects a potential of technology to transform traditional reading and writing tasks. I argue that tablets devices are perhaps most effectively used during productive tasks rather than receptive learning, or when used alongside other paper-based activities. When students are given the time and freedom to create multimodal texts using the vast resources available online, the results demonstrate personalised engagement with curricular content in ways different to those afforded by pen and paper. Learning activities shaped around software like *BookCreater* and *PicCollage* have vast potential in classrooms with access to the internet. Their intuitive layout and ease of use ensures minimal teacher intervention as students work together to re-tell stories in any number of ways.

6.3 Technology or pen and paper?

In this thesis, I have shown how writing tasks, and other traditional classroom practices, can come into conflict with new technology in ways which can make the expectations of the learning task unclear or confusing for students. As notebooks and pens were not needed during the productive lesson this conflict had less of an impact on the learning interactions: students still had to record information but typed on their devices and in the Google Classrooms platform. When pens and paper were used alongside devices both the teacher and students seemed uncertain as to which media or mode was more important. In my research, I explored why there was little observable, harmonious interplay between traditional writing tasks and activities with mobile devices, and I argued that the expectations of mainstream schooling and the nature of teacher training potentially created a tension in the classroom as teachers are forced to consider what mode to use and how to represent knowledge; on the other hand, students are aware that end of year assessments are conducted with pen and paper, and so have positioned these as the more important modes for success in school.

CONCLUSION

The contribution made by this study to the literature is that it shows how digital technology is taken up and used by learners in a well- resourced school in Cape Town. Activities around digital tools are analysed as “placed resources” and the interactions observed as social practices, which illuminates the contextual nature of literacy learning. I contrasted two predominant learning tasks using mobile devices in the English classroom – for producing new content on the one hand, and alternated alongside writing practices on the other– and showed how the affordances and potentials of digital technology is shaped by the nature of the learning task designed around it. I argued that, as a tool used for production and creation learning tasks, mobile devices can play a more effective role in transforming learning practices when used separately from pen and paper; as a tool used alongside traditional writing tasks devices became a distraction for students and clashed with the social practices

of handwriting. This is important for educational practitioners as classrooms have become increasingly multimodal and, in some countries and socioeconomic contexts, digital. The question of how best to incorporate technology into language learning is ongoing, and this study discussed different ways it is used in a well-resourced school and analysed its effect on learning interactions.

Although this school aims to make its classrooms entirely paperless, this study demonstrated how technologies are still in tension with the social semiotic forces associated with mainstream schooling. When it comes to the question of "What method and mode to use?" teachers and students at this school leaned towards writing as the dominant method of representation and communication. This study showed that it will likely be quite a long time before technology completely overtakes pen and paper in the classroom, even in privileged schools like this one which pride themselves in innovative teaching and learning. Moving forward, teachers should be encouraged to experiment with the productive capacities of all personal digital devices. Rather than finding ways of 'supplementing' curriculum content or other learning practices with entertaining features of technology, I have argued that it may be more useful for teachers to give students time to play with and explore different software on different technologies, including smartphones. Once curriculum content has been covered in a way deemed suitable to the teacher, power should be given back to the students to communicate and represent this information in unique ways. In this way students play a greater role in their learning and are given space to internalise content which they feel an affinity towards. Such activities were observed to produce personalised, meaningful outcomes.

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