

**Student teachers' pedagogical knowledge building in
relation to teaching digital literacy**

Louise Gillian Wheatcroft

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Abstract

This thesis presents the findings of a research study examining a group of second year undergraduate student teachers' digital lives, their developing perceptions of literacy and their classroom experiences and practices. It examines the literature surrounding the changing landscape of teacher education, literacy education policy and perspectives on literacy and how these aspects impact upon student teachers' developing teacher identities and conceptions of literacy as they reflect on the use of digital technologies in literacy classrooms.

The research methods selected included a questionnaire and one to one interviews and brings together Margaret Archer's concept of reflexivity and Gee's discourse analysis toolkit to explore the student teachers' accounts of their experiences and to examine how they navigated their way through the complex spaces and situations encountered.

The findings show that that there remains a gulf between the ideological form of literacy as described in the literature review and school literacy as experienced by the student teachers and demonstrates how student teachers' conceptualisations of literacy and literacy classroom practices are strongly influenced by a complex combination of their personal biographies, classroom practices observed in schools and the English curriculum. This study suggests that international comparative literacy testing significantly impacts upon the student teacher's experience of literacy in classrooms in England with policy deeply embedded in routinised practices that inhibit change and innovation and reduce space for a broader conception of literacy in the curriculum.

This research provides insight into the experiences of student teachers in primary classrooms by focussing on how they exercise reflexivity when they rub up against structuring powers as they develop their literacy beliefs and practices. In doing so it reveals the most significant constraints and enablements impacting upon not only student teachers but on universities, schools, teachers and pupils with regards to developing a contemporary and relevant literacy curriculum. Whilst existing research identifies the constraints on student teachers' literacy teaching practices, this study examines the important role of reflexivity in helping student teachers to make decisions and shows how student teachers act consciously, reflexively deliberating to weigh up their situation and plot a course of action, demonstrating agency even if the routines and structures in place do not allow for experimentation.

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Chapter 1

Introduction

1.1 Thesis aims

This thesis intends to examine contemporary conceptualisations of literacy and how student teachers navigate this noisy and complex discursive world in order to shed light both on the complex spaces that can be found within primary literacy classrooms in the 21st century and also on how teacher education works to support student teachers in becoming effective literacy teachers.

1.2 Motivation for the research

I am a senior lecturer in Primary English teaching on initial teacher training (ITT) programmes at a large university in central England. Previously I had been a literacy coordinator in two primary schools before designing English curriculum texts and teaching primary literacy to untrained teachers in the Maldives whilst working for Voluntary Services Overseas (VSO) between 2001 and 2004. It was during this experience of working with a different curriculum and working to find ways to engage pupils with an English curriculum delivered through textbooks that I started to consider my own views of literacy and noticed how much literacy was changing.

It was particularly noticeable when working within small island communities who were beginning to make use of more innovative ways to communicate. They were making effective use of new technologies such as mobile phones, email, social networking sites and Skype. With islands being isolated from each other and the rest of the world, communication had always been difficult but new technologies and new literacy practices were evolving and improving the communication channels between the islands and between the islands and the rest of the world.

On returning to England I realised how little had actually changed in English classrooms. It was still the same literacy curriculum, assessment and accountability regime with little, if any, evidence of new literacies being incorporated into primary classrooms. I decided to deepen my understanding of literacy and completed an MA with a focus on linguistics and this was the beginning of my research interest into literacy.

When I started my role as a teacher educator in England I took responsibility for a new module called ‘multiliteracies’ which was taught in the second year of a BA (QTS) course. The multiliteracies module was an English subject study module and covered a broader conception

of literacy than that contained within the core English modules. In this module the students examined their own literacy lives and those of a group of children in school.

It was through this module that my research journey began. When I set out on this journey I noticed that many of my students were young and they ‘seemed’ confident users of computers and new technologies. I assumed that they were more competent using computers than myself, who, being a generation older than the average student, had to learn how to navigate the internet, upload photographs, fathom out how to set up a Facebook account, has never played online computer games and could only use the most basic of Microsoft office programmes for functional use. I also assumed that these young student teachers would be more in tune with children’s digital literacy experiences and would therefore make greater use of their experiences and funds of knowledge in the classroom. Having already completed a Master’s Degree I decided to further develop and extend my research skills in order to explore how I might better prepare new teachers for teaching literacy in primary classrooms and as a result I embarked on the PhD programme. I set out to explore their experiences, beliefs and attitudes with regard to literacy, digital literacy and digital technologies and their classroom practice. Through my observations and experience I realised that even though these student teachers had rich experiences of literacy in their personal lives and despite their developing ideas of literacy explored in university, they were not utilising their own knowledge and understanding in the classroom but continued to reinforce the existing practices. I therefore sought to understand the structures that were in place that were influencing the student teachers’ actions and to have a greater understanding of the balance between structure and agency and how this understanding might be used to bring about change in student teachers literacy classroom practice.

1.3 The challenges

I began studying on a part-time PhD programme in 2011 and conducted the initial research in 2011/2012. Since starting on this research journey to explore student teachers’ conceptions of literacy and their classroom practice, much has changed in the literacy world. The changing nature of literacy means that the area of study is constantly changing, literacy practices are evolving as digital technologies provide new ways of communicating and young people’s uses of literacy evolve. This has presented particular issues for a part-time PhD study into literacy and of the digital lives and classroom practice of student teachers.

During this time there have been many changes not only in contemporary literacy practices but there have also been changes in society and government, from a Labour government to a coalition government to a conservative government with each government setting its own agenda for the future of education with literacy at the heart of radical policy change. There has been a new English national curriculum in England and the shape of initial teacher education has evolved to incorporate new routes into teaching. These challenges however are illustrative of the changing nature of literacy, the political nature of the subject and its significance in our everyday lives.

Keeping up to date with what literacy is like today and what literacy means today has been challenging. Even our understandings of digital literacy and its importance for young people is constantly under discussion in the media, in policy and in academia with some research evidence that argues convincingly for integrating digital technologies in schools as digital literacy skills are seen as essential skills for life in the adult world and for a nation's economic well-being whilst other research evidence suggests that this is not yet successfully achieved (Selwyn, 2011; OECD, 2015) and concerns have been raised over the impact of digital technologies on children's well-being through the introduction of new risks to children's health, well-being and safety (Children's Commissioner for England, 2017; Glaser, 2017) and yet others warn us not to be alarmed by young people's uses of digital technologies and social media, that in fact young people are capable of making the most out of the online world (Livingstone and Sefton-Green, 2016) if they are supported in navigating the dangers and risks through education.

1.4 Existing research

Studies have been carried out in England examining student teachers' attitudes and views of popular culture in the literacy curriculum (Marsh, 2006) and examining their personal experiences and comfort with digital technology/media (Robinson and Mackey, 2006; Burnett, 2009). In Burnett's study the focus was on student teachers' digital lives. Burnett examined how the student teachers in her study incorporated digital technologies into their everyday lives as well as exploring their experiences of trying to integrate digital technology into their classroom practice to support literacy learning.

All of these studies identified student teachers as having a range of experiences and competencies with digital technology and having positive beliefs around the inclusion of digital

technology in literacy teaching but most did not make use of it in their own professional practice. These studies highlight the danger of making assumptions about young student teachers' abilities to transfer their experiences of literacies and digital technology in their personal lives to their professional practice.

This thesis intends to explore this issue further through examining a group of student teachers' experiences of literacy classrooms. It will examine the context of the classrooms that these students face and how agency and structure works in these complex and often coercive environments. How do student teachers conceptualise literacy, build professional identities and how do they find agency in the classroom contexts experienced?

1.5 The significance of the research

Research conducted by Marsh (2006), Burnett (2009) and Robinson and Mackey (2006) was carried out at a time where teacher education took place primarily in universities. This thesis is of particular significance in the current context due to the changing nature of initial teacher education (ITE) in England and the political ideological shift in focus from theory towards practice with government policy viewing teaching more as a 'craft' to be acquired through an apprenticeship model (Department for Education, 2010). This shifting landscape of teacher education will be examined and analysed.

The thesis explores the importance of the social relationships between students and teachers, the relationships between student teachers and the pupils that they teach but importantly it examines the complex relationship between government education policy, university training, schools, teachers, classrooms, students and pupils and how all of these are connected.

This thesis explores the important relationship between the theory and practice loop for student teachers and their learning, highlighting the importance of research informed practice and the importance for student teachers to reflect on theory in practice. It highlights the important role that universities and research have in developing thoughtful, reflective literacy teachers of the future who are able to meet the literacy needs of the next generation.

Importantly this thesis examines the drivers behind the large-scale literacy education policy reforms in England and the impact on ITE, student teachers, teachers and literacy pedagogy and classroom practice.

1.6 A review of the literature

In the following chapter a comprehensive review of the literature has been carried out. This provides the background in which the research study has been situated. A number of significant topics are examined starting with the shifting nature of teacher education in England. The positioning of teachers and student teachers by policy makers is important to recognise and the impact of large-scale education reform with particular relation to how literacy is conceptualised by governments around the world, and not just in England, is important to understand. The impact of new technologies on people's everyday literacy practices cannot be ignored and this shall be examined with regards to the impact upon school literacy, children and young people, teachers and student teachers. And finally, how student teachers transition from students to teachers is also key to understanding how they manage structure and agency in classrooms and manage their becoming selves as teachers.

1.7 The methodology

Looking through Archer's (2007) lens of reflexivity and drawing upon Gee's (2011b) discourse analysis tools this thesis builds upon the existing research by offering a deep insight into the factors that affect student teachers' decisions and actions in the classroom, through exploring their projects and concerns and how they make their way through the world of the primary school and classroom. The tools that I selected for this research were an electronic questionnaire and participant interviews.

There will be an in-depth examination of the students' experiences and the underlying structures that affect their agency in the classroom. In particular it examines the underlying structures that enable or constrain student teachers' experiences of teaching literacy and if/how they find agency and space to draw on their own funds of knowledge in their classroom practice and how this impacts upon themselves in terms of their own professional development but also the impact upon the teachers that they are working with and the relationship between teacher and student and the knowledge exchanges taking place. How student teachers make sense of their experiences and the complex spaces that they find themselves in are explored in depth. This research offers recommendations for a range of education stakeholders.

1.8 The aims of the research and key questions for investigation

Initially I began with a focus on digital literacy and the digital literacy practices of students and pupils and my original research questions centred upon the student teachers' digital practices

and conceptualisations of literacy but as the study moved forward what began to emerge was the complexity of the situation. Just how student teachers think about their situation with regards to the literacy curriculum, their developing professional identities, school policies and wider national policies and what do they do and why became really interesting. The focus switched to examining more closely the spaces that they inhabit and constraints and possibilities that they encounter. Why do some student teachers find agency in classrooms with regards to incorporating digital literacies and others do not? Answers to these questions can inform teacher education and education policy.

1.9 Research aim:

To explore student teachers' digital lives and literacy practices and their experiences of digital literacies in primary classrooms. To analyse their experiences in terms of the constraints and possibilities that they encounter in classrooms and how they develop a sense of agency in their practice when building their pedagogical knowledge of digital literacy.

1.10 Research questions:

- How and why do student teachers use digital literacy in their own lives?
- What are student teachers' experiences of digital literacy in schools?
- What are the key influences that shape student teachers' views of literacy and their classroom practice?
- What factors impact upon student teachers' confidence and competence in the use of digital literacies in their teaching?
- How do student teachers build pedagogical knowledge with regards to teaching digital literacy in classrooms?
- How do student teachers develop agency in their classroom practice?
- What are the implications for teacher training?

Chapter 2

Literature Review

2.1 Overview of the literature review

Whilst I began my research with an initial idea for my research topic based on my own experience and context, it was through a review of the literature that I was able to focus in on the research questions, research methodology and analysis. Due also to the length of time taken over this research study, I have revisited the literature throughout the research process, finding that this informed and developed each subsequent stage of the research process as well as keeping up to date with existing research.

This thesis is about student teachers' conceptions of literacy and their classroom practice but it is also about the social structures that impact upon their experiences and practice as they make their way through a complex world where external structures provide them with possibilities but also constraints. It is about the wider issues of globalisation, competing definitions of literacy, international literacy tests, large-scale literacy reform in England, literacy curriculum, contemporary literacy practices and classroom practices and how these impact upon student teachers' beliefs and classroom practice. And essentially, it is about how student teachers navigate this complex world, exploring their beliefs and goals and what they actually do in classrooms. How do they develop agency within the situations that each of them faces?

The literature review will begin by exploring the shifting landscape of teacher education taking place in England and the impact that this has on initial teacher education (ITE). This will be examined first in order to explain my choice of terminology for describing students who are training to be teachers but it also relates to the impact of government policy on conceptualisations of the teaching profession and how best to train new teachers.

Because this thesis is primarily about literacy it is important to examine the various definitions and conceptions of literacy. With an examination of competing views and the shift from an autonomous view to a social view of literacy and suggested pedagogies.

The current global education climate will be explored through examining the impact that international comparative testing has had on literacy policy around the world and the large-scale reform that ensued in England. It will examine the competing models,

definitions and views of literacy and how all of these aspects impact upon classrooms, teachers, ITE and student teachers in England.

How student teachers learn to become teachers and literacy teachers in particular and the importance of their past experiences of literacy and schooling, the social relationships between the student and the teacher, the student and the pupils and the student and their trainers is important to examine and will be addressed towards the end of the literature review.

Because all of these areas are interrelated, it is hard to separate them out into distinct sections and it was difficult deciding on which aspect to present first. For example, should I have discussed student teachers before examining literacy in schools or was it best to discuss the different conceptions of literacy and examine literacy policy before exploring how this impacts upon ITE and student teachers? I therefore find myself referring back or forward to some key themes throughout, one of which is the impact of government policy on literacy education, literacy educators and on the learners themselves.

2.2 The shifting landscape of teacher education in England

In working to decide on the most appropriate terminology to describe student teachers, it became clear how laden with meaning are the words that we use and how important it is that we select words and language carefully in order for us to communicate clearly with others. When examining a piece of language in critical discourse analysis (this shall be examined in depth in the methodology chapter) Gee (2011a) asks how this language is being used to make something significant. We choose our language carefully to make clear to others what it is we want to say and what our view on the situation is.

As I began to read around the area of teacher education I came across a number of different terms used to describe students on ITE (Initial Teacher Education) programmes. I therefore needed to select the one that I felt was most appropriate for my research. In ITE views are often framed by the official discourse of policy documentation. Most policy documents are produced by the Department for Education and Ofsted and commonly use the term ‘trainee’ to describe students training to be

teachers regardless of their route. Other terms used are ‘pre-service teachers’, ‘student teachers’ and ‘participants’.

Thinking about the range of terms used to describe student teachers it is possible to infer meaning from the author’s choice of language. In using the term ‘trainee’ teacher, the apprenticeship or practice element of training is made significant and if they are called a student teacher, the academic or theoretical element of training is made significant and thus the author’s intention becomes visible.

2.2.1 School-led teacher training

Currently in England there are a number of different routes to becoming a teacher whereas previously it was mostly the role of universities to train teachers. More recently, government policy has favoured school-led routes with the aim of significantly increasing the number of teachers being produced through practice-based routes. Alongside the 3 or 4 year undergraduate degree with qualified teacher status (QTS) and the Post Graduate Certificate of Education (PGCE) with QTS which are based in universities, there is an increase in school-led teacher training which includes a one year PGCE graduate teacher programme through either the ‘Teach First’ route which aims to recruit high-achieving undergraduate students to schools in low-income communities in the UK or the School Direct route. Through the school direct route, ‘trainees’ can earn a salary whilst training in classrooms.

Figure 1 on the next page shows the different routes into teaching outlined by the department for education.

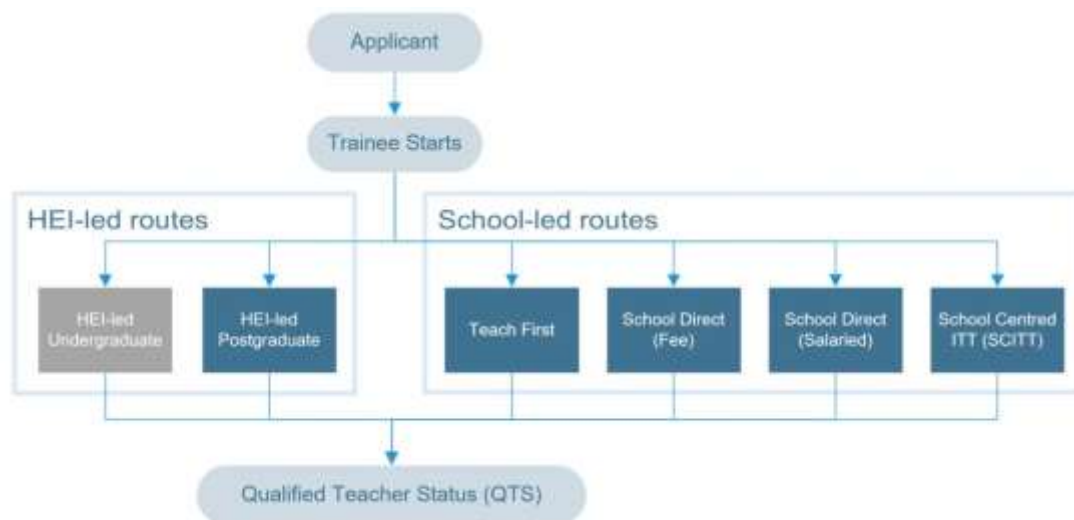


Figure 1: Routes into Teaching. Source Department for Education (2016)

Other school-led training programmes include School-Centred Initial Teacher Training (SCITT) and Troops in to Teachers. This move is significant in teacher education and signals government views on the teaching profession and what constitutes professional knowledge in teaching. In 2010, Michael Gove, the then education minister for the Coalition government, in his speech at the National College’s annual conference in Birmingham used the term ‘craft’ to describe how teachers learn their profession. ‘Teaching is a craft and it is best learnt as an apprentice observing a master craftsman or woman’ and he went on to state ‘and that is why we will reform teacher training to shift trainee teachers out of college and into the classroom’ (DfE, 2010). In his public speech, Gove seemed to be implying that college training is not as effective as school-led training serving to undermine public trust in university based training.

Some (Orchard and Winch, 2015; Peiser 2016) do not believe that the term ‘craft’ was helpful at a time when many were already concerned about the deprofessionalisation of teaching. “Teacher education requires an integrated relationship between theory and practice and the academic and the practitioner” (Donaldson, 2010:4) and Donaldson claims that more time spent in the classroom is not the answer suggesting that student teachers need time to reflect and learn from the complexities of 21st century classrooms. He calls for a greater synergy between schools and universities to allow student teachers to reflect on theory in practice. The deprofessionalisation of teaching as a result of ‘the

practical turn’ (Cochran-Smith, 2016) and the focus on the technical skills of teaching is widely discussed (Donaldson, 2010; Peiser, 2016; Murray and Mutton, 2016) and shall be explored later when examining the impact of government policy on ITE.

According to the DfE in the academic year 2016 to 2017 there was an increase in the proportion of new entrants to school-led routes and a decrease of postgraduate entrants to HEIs (DfE, 2016). Entrants to school-led routes went up from 51% in 2015 to 2016 to 56% in 2016 to 2017 with the proportion of postgraduate entrants to HEIs falling from 49% to 44%. This is evidence of the significant impact of government policy on teacher education.

How the ‘trainee’ is viewed depends on the training programme/route. The word ‘trainee’ implies ‘in training’ and in the Oxford English dictionary a trainee is defined as ‘a person undergoing training for a particular job or profession’. Tomlinson (1995) suggests that the term training places the emphasis on the practical element of the course, which can be seen to underestimate the academic learning and development aspect of the course. Hobson et al. (2006: i) claim that because training teachers is so complex, both aspects are important. Goodwin (2010) agrees that learning to teach is a complex process that “requires acquisition of specialised knowledge and methods through formal study and apprenticeship” (Goodwin, 2010: 20). Cheng, Tang and Cheng (2012: 781) regard teacher preparation as “a process involving the integration of the campus-based and the school-based components of a teacher education programme”. However in the current climate of teacher preparation in England, there no longer needs to be a campus-based element to the training programme despite most training being provided in part by university providers and in part by schools.

International journals and academic texts relating to ITE use a much wider range of terms to describe trainee teachers which can depend on the discourse in different international contexts. In the UK, the US and Canada the term ‘pre-service teachers’ is frequently used and has been used by Marsh (2006) and Burnett (2009) in England; Robinson & Mackey (2006) in England and Canada; and Clarke and Fournillier (2012) in the US. In Australia the term ‘student-teachers’ is often used as used by Kerin (2009) and Penn-Edwards (2011). The term ‘student teachers’ places emphasis on the learning element alongside the practical and professional element of the programme.

Interestingly, in comparison, in the field of health in the UK, nurses in training are called student nurses both in university based documentation and government documentation.

Before the current multiple routes into teaching existed in the UK, the term pre-service teachers suggested that the students are in a transition period between studying for a degree and starting employment as a teacher in schools. Now it is possible to gain a teaching qualification whilst working in schools and the term pre-service teachers might not be applicable to all in the process of training to be a teacher. As the students in this study were undertaking a university based ITE course and studying for a BA (QTS) I have chosen to use the term 'student teacher' as the most appropriate term in order to make significant the academic and theoretical aspect of their training whilst also encompassing the practical learning involved.

2.3 The researcher's standpoint

I have a range of experiences of working with literacy curriculum in England and abroad. I have been a primary teacher and literacy coordinator in primary schools so have experience of teaching literacy, implementing literacy curriculum reform across whole school settings and writing literacy curriculum guidance for teachers. I have spent four years working in teacher education abroad where I was training untrained teachers to teach literacy in more creative ways to supplement their use of National English curriculum text books. And in my current role I train student teachers to teach English, introducing them to English curriculum policy and requirements as well as strategies for teaching English in primary classrooms. One of the modules that I have been responsible for has been an English subject study module entitled 'multiliteracies' which has involved encouraging student teachers to broaden their understandings of literacy, to examine children's home and school literacies and consider the implications for their own practice.

I have experienced two versions of the English National Curriculum as well as the government's National Literacy Strategy (1998) and its revised version in 2006. Throughout this period, there have been constant and rapid changes in technology that continue to provide us with new ways to communicate in our private lives, in local communities and in the workplace. This has meant that literacy and what it means to be literate for real people in their everyday lives is evolving. However, these changes have

not been reflected in curriculum change despite a number of opportunities for the English curriculum to be rewritten and reimagined to fit with contemporary literacy practices. So why is this and does it matter? These are some of the questions that I shall be exploring in this literature review.

Importantly, what does literacy mean? Does it mean the same thing to all people? Are there different conceptions of literacy? Is it one thing or many? It would be helpful at this point to examine literacy in order to understand the different perspectives that exist and what challenges or opportunities this poses for educators and those interested in literacy.

2.4 Defining literacy

Goodwyn (2011: 1) claims “there is only one agreement about the nature of literacy, and that is that there is no exact agreement about what it is”. Goodwyn points out that whilst there are many subtle differences in definitions of literacy, some differences are ‘deep and ideological’. These differences will be explored later on in the literature review as these are important to understand when examining literacy from the perspective of the different stakeholders with an interest in literacy.

Let us begin with the term ‘literate’ which has commonly been used to describe a person who is well-read and has knowledge of a wide range of literature and stems from the term literate which in turn originates from the Latin ‘literatus’ meaning letters and makes a direct link to reading and writing. More recently, the notion of being literate referred to a person who can read and write and has some basic literacy skills. This was developed through a need to measure a nation’s cultural, social and economic development. An early measurement of literacy provided by UNESCO in 1958 defined being literate as “one who can, with understanding, both read and write a short simple statement on his or her everyday life.” This definition was developed over time in response to suggestions that the definition was too narrow and needed to reflect the complexity and plurality of literacy. Functional literacy was redefined in June 2003 by UNESCO and evolved into “Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to

achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society” (UNESCO, 2004: 12).

2.4.1 From reading the word to reading the world

From the UNESCO description of literacy it is possible to see that there are two very important features of literacy. Firstly, that literacy changes, it is not static and it incorporates more than reading and writing print bound texts to now include digital texts. Literacy is important for individuals in society in order for people to be able to fulfil their personal potential and to find meaningful work but it is also important for wider society in general, enabling people to contribute towards civic life in their own communities and the wider economy of a country.

Lankshear and Knobel (2011) suggest that the term literacy came about as a result of a number of factors including: a literacy crisis in the United States and Europe after a significant number of adults were identified as ‘illiterate’; Paulo Freire’s work to combat social injustice through adult literacy programmes; the emergence of a socio-cultural theory brought about through concern over the widening gap between home and school literacies and finally as a result of literacy being seen as an indicator of economic growth. These four factors shall each be examined in the following sections.

2.4.2 Literacy, the economy and politics

Kress (2003) also suggested that it is no longer possible to think about literacy without considering all of the other factors involved; social, technological and economic. Such is the significance of Literacy as an indicator of a nation’s economic success that Literacy has become a key word in political agendas and educational discourse with Lankshear, Knobel and Searle (1997) claiming that since the 1970s literacy moved from the margins of educational discourse to the forefront of education policy with literacy, economic growth and social well-being being seen as connected (Lankshear and Knobel, 2011).

Governments consider Literacy as an indicator of economic growth whilst others see literacy as a way to address social injustice and inequalities. Clearly how one views literacy depends on one’s standpoint.

One of the key influences in driving thinking about the significance of literacy for addressing social injustice was Paulo Freire (1970) who conceptualised literacy as more than reading the word but involved teaching people to ‘read the world’. This signified the importance of seeing literacy as more than the acquisition of basic reading and writing skills but as something much more powerful. Literacy is a way of enabling people to understand their position in the world and to be agentive in changing their personal circumstances and the life chances of others. Paulo Freire’s work provided an example of how literacy work could be used to combat unjust social processes. His concept of ‘reading the word and the world’ involved teaching more than just how to decode texts but involved how people can change these unjust processes through greater consciousness and understanding of how texts position people in society. Through this concept literacy education became politicized and something which could be used to bring about social change.

2.4.3 Literacy as a social-cultural theory

Kress and Van Leeuwen (1996, 2001) identify some key paradigmatic shifts that have taken place in the world of literacy – from understanding language as an abstract system to a social one, from individual thought to a social practice and from verbal aspects to a range of semiotic resources that include new media. The change from talking about children’s reading and writing skills to children’s literacy development is significant in many parts of the world as a result of changing views of the social nature of reading and writing. Reading and writing are viewed by some as inherently social practices that are embedded in everyday lives as something that people do. Previously reading and writing were seen as psychological processes but for many the processes involved in reading and writing are “something to do with social relationships” (Gee et al., 1996: 1) and literacy is often described as being ‘situated’ in time and place (Barton et al., 2000) with different forms of literacy knowledge and skills required for different situations.

The term ‘literacy practices’ was used by Scribner and Cole (1981) to help people to move away from thinking about reading and writing and literacy as tools or technology but to think about literacy ‘as practice’ and it is helpful in establishing a link between reading and writing and how we use these skills in our everyday lives or to describe ‘what people do with literacy’ (Barton et al., 2000: 7).

Barton and Hamilton argue however that literacy is merely a concept rather than something that is observable and Kress (2003) agrees that literacy only exists because people have given it a name, with the noun ‘literacy’ suggesting that it exists out there as something real. Whilst Barton and Hamilton also view literacy as an abstract concept, they point out that what we do with literacy is observable and they refer to these observable events as literacy events and that these events are always situated within a social context.

2.4.4 Autonomous and ideological views of literacy

Street (1984) described two models of literacy: autonomous and ideological. In an autonomous model literacy is portrayed as a tool or technology which is used to develop knowledge and understanding and is a decontextualized set of skills that can be applied autonomously in any situation and with a focus on learning to read and write (Carrington and Robinson, 2009).

On the other hand, an ideological view of literacy views literacy as something that we do that is embedded in social contexts. Literacy is situated in the practices that people enact with each other and unlike in an autonomous model “it cannot be separated from what people are doing, how they are doing it, when, where, under what conditions and with whom” (Bloome and Green, 2015: 20). Carrington and Robinson (2009) describe an ideological model where literacy links knowledge, understanding and critical thinking and that literacies are multiple and embedded in diverse social practices. Literacy practices and events are constantly evolving over time whilst an autonomous view of literacy, which views literacy as a universal set of skills to be learned, is static and not responsive to the changes in literacy practices that are taking place (Street, 1984; Pourbaix, 2000). The way that literacy is actually lived is far more complex than a decontextualized set of skills. “Literacy is digital, immersive and networked. Literacy is felt, sensed and associated with place” (Rowse and Pahl, 2015: 1).

More recently, as digital technologies have provided people with new ways to communicate, viewing literacy as a universal set of skills that can be applied autonomously regardless of the situation becomes increasingly problematic. The New London Group (NLG) in a literacy manifesto published in 1996 also suggested that because of an increase in local diversity and global connectedness there can be no one

standard of literacy but that there are many literacies, multiliteracies and which no longer aligns easily with an autonomous model of literacy. However Brandt and Clinton (2002) cited in Rowsell and Pahl (2015) ask where does the local literacy stop and the wider, more autonomous literacies begin? Are both models required for children to become fully literate? A suggested pedagogic model put forward by the NLG that incorporates multiliteracies shall be examined shortly.

Gee (1999) argued that due to the rapid changes in literacy practices and the new understandings that came about from researching literacy practices and viewing it as inherently social it was no longer possible to have an autonomous model of literacy. Whereas Snow (2000) argued that children need to be taught ‘school’ literacy in order to gain the skills needed for survival in society and to gain employment in the workplace. Bloome and Green (2015) claim that the autonomous model is still evident in school literacy where literacy is regarded as a defined set of cognitive processes, a universal set of literacy skills. This view is preferable if one is focussed on the links between literacy and economic growth as designing curriculum becomes easier and attainment more measurable if there is a defined set of skills to be acquired. The issue of measuring literacy attainment shall be examined in greater depth later on when examining the current social, economic and political context and the significance of literacy for government policy.

2.4.5 New literacies: plurality of literacy

Kress (2003: 8) proposes that, because the field of literacy is experiencing such significant changes, “What we need are new tools for thinking with, new frames in which to place things, in which to see the old and the new, and see them both newly.” Alverman (2011) explains that the term ‘new’ in new literacies does not refer to literacies being replaced by something new but that the word new indicates that literacy is changing with ‘new literacies’ (Lankshear and Knobel, 2006) being used to describe a new way of looking at literacy, rather than new ways of ‘doing’ literacy.

According to the New Literacy Studies group of researchers (Street, 1995; Brice-Heath, 1983; Barton & Hamilton, 1998) literacy is not a single thing but that there are multiple literacies - multiliteracies. Gee (1990a: 153) adds “literacy is always plural” and that school literacy is just one of the many literacies that we use in our everyday lives in

different contexts and for different purposes. Kress (1997: 115) however, argues that defining literacy is not quite so simple and that “literacy is messy and diverse and not in need of pluralizing.” He suggests that “the more that is gathered up in the term, the less meaning it has” (Kress, 2003: 22).

Similarly, Street (1995) views literacy as a multiple and complex phenomena which includes different modes such as visual, print based and multi-media and that literacy brings all of these modes together rather than separating them into different literacies. Kress agrees and prefers to keep the definition simple using it to describe the making of messages using letters which can include writing which is print based or multimodal.

2.4.6 Literacy discourse: little d and big D

Gee (1990a) proposes that there exists two key forms of literacy or discourses; the primary discourse where vernacular literacies are used in face to face communication with familiar people and secondary Discourse where a more formal literacy is required such as classroom talk, filling in forms or in an interview situation. He explains that Literacy is mastery of, or fluent control over the Secondary Discourse and argues that knowing when to use the appropriate literacy gives people greater control over literacy use and therefore greater access to goods (money, power, status) and membership to different social groups. It is more than just possessing literacy skills but it is how/when/where they are applied that is important (Scribner and Cole, 1981). Having mastery over the Secondary Discourse provides people with the powerful literacies that enable them to fulfil their potential in their personal lives, local communities and beyond.

Gee makes another distinction between discourse with a little ‘d’ and Discourse with a big ‘D’. The little ‘d’ discourse refers to stretches of language (either spoken or written) that are contained within the larger Discourses that people are involved in. Big ‘D’ Discourses are a combination of elements that include ‘the saying, doing, being, valuing and believing’ that demonstrate our belonging to a particular group or community. “Discourses are ways of being in the world” (Gee, 1990b: 142) that enable others to recognise us as a member of their community. These ways of being can include not just what we say, but how we say it, our clothing, our body language, the tools that we use as well as abstract things such as our values and beliefs. All of these things, which Gee

refers to as ‘an identity kit’ combine to help us demonstrate that we ‘belong’. Literacy is clearly a complex phenomenon linked to identity, power and equality and is inherently about social relationships in many different realms of our lives.

In the methodology chapters that follow I draw on Gee’s concepts around discourse, figured worlds and identity formation to find a way of thinking about my data. I then make use of his discourse analysis tools to help in the analysis of the data, examining in detail the little ‘d’ discourses; the stretches of language that the student teachers use as well as trying to identify the big ‘D’ Discourses of the social worlds that they inhabit. Gee recommends discourse analysis as a way of trying to understand what people are trying to say. I also make an original link between Gee’s discourse analysis tools and the work of Margaret Archer and her concepts around how people experience structure and agency in the world as both authors provide a way forward in trying to figure out what the student teachers in this study were trying to say about the goals and purposes that they were trying to achieve and to provide insight into how they develop their professional identities as teachers in classrooms.

2.4.7 A pedagogy of Multiliteracies: Designing social futures– New London Group (NLG) 1994

The work of UNESCO in the 1950s, the influential work of Paolo Freire in the 70s and the New Literacies Studies Group in the 1980s and 90s paved the way for new ways of thinking about literacy and literacy pedagogy. Their aims to address inequalities through education and providing access to powerful literacies and the emphasis on literacy as a social practice in contrast to viewing it as a decontextualized set of skills led to new understandings of literacy.

The 1990s was also a time when great changes were taking place in the world of technology and communication as digital technologies were making new forms of communication possible. Multimodal forms of communication that incorporated visual forms of communication were particularly prevalent and people’s everyday literacy practices were developing rapidly to incorporate these new modes of communication both in their personal lives and in the workplace. Digital technologies were also supporting global connectedness which led to greater cultural diversity and linguistic differences and this began to change the way that people worked (NLG 1996).

Workplaces required new literacy skills and the time was therefore ripe for rethinking the role of literacy in the world and education.

In 1994 in New Hampshire in the US The New London Group (NLG) of academics interested in literacy set about addressing the changing social environment for children and teachers by calling for a new approach to literacy pedagogy that recognised the burgeoning forms of communication as a result of new technologies and for a broader understanding of literacy that included new literacy practices and diversity of languages and cultures. They suggested that because of global connectedness brought about by new technologies, literacy practices were becoming ever more diverse and that this required a new way of thinking about literacy education; one that recognised that texts were no longer necessarily page-bound but that communication involved many more modes made available by digital technologies. The NLG's other aim was to address social inequality through a literacy education that provided disadvantaged people access to powerful literacies.

2.4.8 The genre wars

Serafini and Gee (2017) suggest that the origins of the NLG's pedagogy of multiliteracies began in Australia during a time known as 'the genre wars' where the argument was whether to teach children the universal rules of the genres to enable them to access more powerful literacies or to teach them to critically analyse texts and how they are used to position marginalised groups or privilege others. The overall aim was to allow disadvantaged children access to power in society but how that could be achieved was contested. At the time grammar was not explicitly taught so the more advantaged pupils had access to better models at home and Gee argues that "people who follow the rules tend to be more successful and powerful" (Gee, 2017: 23). Martin (1992) also strongly believed that immersing children in literacy in schools without direct instruction of the rules was hiding the rules from the disadvantaged. But some (Kress, 2003; Luke, 1988) disagreed with the idea that genre rules should be explicitly taught as genres should fit the context in the real world, situated in practice and argued that they should be taught as part of critical literacy – learning the genres and the full range of purposes and that people are not passive learners but actively producing.

2.4.9 Multiliteracies

The NLG wanted to settle the genre wars and create a pedagogy for classrooms and adult education. They wanted to intervene in political debates arguing that literacy is social, multiple and cultural. They coined the term ‘multiliteracies’ to include all forms of literacy. They proposed that teachers combine all the multiple literacies to enable pupils to achieve mastery and oppose oppression. “They need to be able to design in socially conventional ways in order to be successful in school, society and life but they also need to learn how to redesign, transform conventions and create new designs in the name of human development as agentive people, global citizens, activists and proactive creators”(Gee, 2017: 29). Here, Gee is addressing Snow’s (2000) earlier claim that children need to learn a universal set of literacy skills to gain access to skills needed for survival in society and the workplace. Gee argues that children need to learn both sets of literacies: the vernacular and the Secondary discourses.

One of the key aims of the multiliteracies’ pedagogy was that “the role of pedagogy is to develop an epistemology of pluralism that provides access without people having to erase or leave behind different subjectivities. This has to be the basis of a new norm” (NLG, 1996: 72).

The NLG group claimed that traditionally the role of schools was to discipline learners and create homogeneity in order to prepare a workforce able to work in industry. However as new technologies were transforming the workplace and communication, new ways of working were required and thus literacy education needed to be reconsidered if it were to remain relevant to society. New forms of workplace organisation requires different literacy knowledge and skills. What students needed to learn was changing ‘and that the main element was not a singular, canonical English that could or should be taught anymore’ (NLG, 1996: 63).

Because of local and global difference in order to be relevant, classrooms needed to “recruit rather than attempt to ignore and erase, the different subjectivities – interests, intentions, commitments and purposes – students bring to learning” (NLG, 1996:72) and the curriculum needs to draw on these differences as a resource for learning in order to provide greater access to powerful literacies and life chances. The NLG highlighted

the importance of schools drawing on children's 'subjectivities', their existing funds of knowledge to make literacy learning meaningful and relevant.

The NLG proposed that through curriculum people can design their own social futures. In a pedagogy of multiliteracies they considered the 'what' that students need to learn and the 'how'. Their premise was that "meaning making is an active and dynamic process, and not something governed by static rules" (1996:74) with people making use of the communication methods available to them to redesign and create new texts and new meanings. This is evident today in the way that YouTube, for example is being used in ways that were never originally imagined. Some people are using it as a source for teaching and learning through posting/using instructional videos on a multitude of different topics. Businesses use the platform to promote their companies, people use it as a blog to share their personal lives with an audience and people make and watch films via its platform.

2.4.10 The 'What' of a pedagogy of multiliteracies

The 'what' of a pedagogy of multiliteracies involved supporting learners to consider the 'Available Designs' that they can use such as the grammars of language, gestures, films, style, genres and the discourses and conventions of literacy practices and to then consider how they can make use of these available designs to make something new and create the 'Redesigned'. The word Design being used in place of the word grammar; "Grammar is used to design communication – like an artist's tools" (Gee, 2017:29).

Thinking about contemporary literacy practices, many people are constantly working through this process in their everyday literacy practices, particularly in the online world, creating new digital resources and texts by adapting existing resources. The NLG argued that through redesigning, people are not only finding new ways of making meaning but are also remaking themselves.

2.4.11 The 'how' of a pedagogy of multiliteracies

The NLG explain pedagogy as 'pedagogy is a teaching and learning relationship that creates the potential for building learning conditions leading to full and equitable social participation' (NLG, 1996: 60) and that literacy pedagogy plays a very important role in enabling equitable social participation. They argued that traditionally literacy pedagogy has been carefully and deliberately restricted to what a nation considers

important for creating a productive nation with a formalised, universal set of skills identified (the autonomous model). Their principle argument is that for some groups of people this limits access to the more powerful literacies required for greater participation in society and that this no longer meets the requirements of a more culturally and linguistically diverse society.

They suggested a pedagogy that would enable learners to examine how literacy works in real situations, to examine how a particular literacy text is framed and how they are positioned by the text and to explore how they can make use of the available designs to create their own texts/redesigns. “Students need to think critically about how oral and written language and multimodal forms of communication are designed to function, mean, and accomplish things – and sometimes manipulate people” (Gee, 2017: 29).

They argued that teachers and students needed a metalanguage for talking about available designs and the redesigned. A language for talking about text, images, language etc., but not to impose rules but to allow people to examine how texts work in certain situations and to then redesign.

The multiliteracies pedagogy included the following four steps: situated practice, overt instruction, critical framing and transformed practice:

Situated practice: immersion in experience and the utilisation of available Designs of meaning, including those from the students’ life worlds and simulations of the relationships to be found in workplaces and public spaces

Overt instruction: systematic, analytic, and conscious understanding of Designs of meaning and design processes. In the case of multiliteracies, this requires the introduction of explicit metalanguages, which describe and interpret the Design elements of different modes of meaning

Critical Framing: interpreting the social and cultural context of particular Designs of meaning. This involves the students standing back from what they studying and viewing it critically in relation to its context

Transformed practice: transfer in meaning-making practice, which puts the transformed meaning (the Redesigned) to work in other contexts or cultural sites

(Cope and Kalantzis, 2000:35)

2.4.12 Multiliteracies pedagogy and its relevance in contemporary times

The NLG published its manifesto just over 20 years ago and whilst some claim that the aims have not been fully realised (Cope and Kalantzis, 2009; Rogers and Trigos-Carillo, 2017), others suggest that the multiliteracies manifesto put forward by the NLG in the 1990s still has relevance for today “it was at once a pedagogical framework and a political treatise about literacy instruction in changing times” (Serafini and Gee, 2017: 2). Rowsell and Burgess (2017) also consider its aims and pedagogical approach to be highly relevant for contemporary society. They comment on how the NLG at the time provided a new perspective on literacy teaching and learning encouraging us to think about literacy as plural and multimodal however Rowsell and Burgess do suggest that contemporary literacy and modern meaning-making is far more layered and varied than the original manifesto.

Rogers and Trigos-Carillo (2017) claim that the NLG helped to shift the idea of an autonomous view of literacy towards an ideological view and it encouraged educators to take more notice of children’s multimodal literacy experiences and the literacy skills that they bring into classrooms. However they also caution that multimodality has been foregrounded whilst the social justice aim of the manifesto has been overlooked. Cope et al. (2017) also stressed their disappointment that the social equities that they had hoped for have not been realised. Mills (2006, cited in Rogers and Trigos-Carillo, 2017) claimed that whilst children and youth are confident users of new technologies, they may still not have access to powerful literacies.

Cope et al. (2017) claim that whilst the NLG manifesto called for a literacy pedagogy that was responsive to the new and varied forms of communication it has proved to be much more complex –young people need to know when and how to use social media. Never has this been more relevant than today with ‘fake news’ making the news and reports about mental health issues related to young people’s uses of social media (Children’s Commissioner, 2017). It has led to an even greater need for media and

information literacy to be taught in schools and for young people to learn the difference between fact and fiction. Rogers and Trigos-Carillo suggest “extending our gaze to connect what happens inside classrooms with the broader world of social change and movements can help fulfil the transformative potential of multiliteracies” (Trigos-Carillo, 2017: 101).

Coiro et al.’s (2017) work (Personal Digital Inquiry Framework) builds upon the original NLG manifesto and the idea of building social futures. They stress the importance of deep, authentic and personally relevant learning. Through solving problems in their own community learners are connecting their own interests to real life and this can lead to real change through collaboration with others. They argue that through learners investigating local problems and exploring ways to make changes, the problem becomes more personal and they become more active designers of meaning “and thus, designers of their socially constructed futures and their roles in them” (Coiro et al., 2017: 124) .

Holmes’ (2017) research into ‘multipedagogies’ also builds upon the important ideas of the NLG. Holmes used the multiliteracies concept and extended it to other, informal spaces where teaching and learning take place. Today people can learn in online spaces that were not available 20 years ago. He argues that it is in the informal environments that young people learn 21st century skills. He argues that as literacy is shifting so is teaching as there are many more online spaces for teaching and learning to take place. He argues that the where and who of pedagogy is important as what people are learning in their everyday lives also contributes to preparing them for work and society which was a key aim of the NLG multiliteracies pedagogy.

Holmes suggests that schools could learn from the informal pedagogies and highlights the importance of social interactions arguing that digital media changes the way that learners interact with each other and also with the content. It also changes the social relationship between adults and children as digital learning environments enable people to be experts unlike the school environment where teachers are the experts. Digital media changes the nature of the literacy learning from individual to community and allows for peer to peer teaching and learning. Through his examination of the informal places where teaching and learning occurs rather than school as the dominant, formal

site for learning he has identified some important ideas that could be transferred to inform pedagogy in more formal learning environments. Multipedagogies within schools “school could be a hub that connects in-and out-of-school teaching and learning and centers teachers as expert designers, curators and practitioners” (Holmes, 2017: 144).

2.4.13 Digital literacies

If literacy is to be viewed as a social practice dependent on time and context, then in order to understand what literacy means today, it is important to examine current literacy practices. As highlighted by Kress (2003) communication through the use of digital technology or new media forms is now, for most, an everyday occurrence and ‘digital literacies’ permeate society and are ‘ubiquitous’ in people’s lives (Carrington and Robinson, 2009). The current generation of children and young people have grown up completely surrounded by digital technologies and have been described in a number of ways; Tapscott (1998) talks about a ‘net generation’ and Prensky (2006) describes them as ‘digital natives’. Young people’s literacy practices will be quite different to previous generations and will inevitably reflect the way digital technologies are used in everyday life but yet it can be argued that despite the call for a broadening understanding of literacy developed by groups such as the NLG, England’s curriculum does not reflect the wide range of digital literacy practices that young people are familiar with (Marsh, 2007).

Martin (2008) defines digital literacy as the ability to appropriately use digital tools and facilities for a range of purposes in real life situations to enable social action. Nearly twenty years ago Gilster (1997) described digital literacy as being more than the possession of skills and competencies with digital technologies and more importantly, he stressed, it is how you use the skills in everyday literacy practices. Thus supporting the socio-cultural view that literacy is a social practice and not a set of digital skills to be learned alongside or in addition to literacy skills. Davies and Merchant (2009: 83) describe digital literacy as “a set of social practices that are interwoven with contemporary ‘ways of being’”.

Thinking back to Street’s (1984) ideological model of literacy described earlier and Kress’s (2003) desire to keep the definition of literacy simple, the fact that we are using

digital technologies to assist us in ‘making meaning’ simply reflects current literacy practices but that at the heart of all literacy practices is the ‘making meaning’ in a social context whether it utilizes digital tools or not. And this brings us back to the socio-cultural view of literacy where literacy is seen as a social practice constantly evolving rather than seen as a static set of skills to be learned which will not be able to keep pace with future literacy demands.

2.4.14 Home and Schooled literacies

Carrington and Robinson (2009) argue that the limitations of schooled conceptions of literacy as skills led and paper based need to be expanded to include digital texts to reflect children’s literacy practices outside of school. Carrington and Robinson are not excluding schooled conceptions of literacy or paper based texts but that a broader understanding of literacy and literacy practices is required that includes all forms of texts and literacies. Home and school literacies are not mutually exclusive but should be merged to enable children access to all literacies and literacy discourses to prepare them for full participation in society.

Green and Cormack (2015) also suggest that ‘Schooled literacy’ the literacy of schooling needs to be understood as a restricted and specialised set within a larger field of literacy possibilities. Literacy possibilities brought about by a broader understanding of literacy with its many forms, modes, purposes and the different ways in which different people use it in social relationships with one another. Collins and Blot (2003) suggest that school literacy restricts textual and semantic possibilities “school literacy emerged out of and in response to a complex, multifaceted commonplace literacy – of workplace, church, family and politics” (Collins and Blot, 2003: 95) and Graff (2013: 90) describes school literacy as “a very special use of literacy and language”. Livingstone and Sefton-Green (2015) also express the notion that whilst school literacy provides learners with some essential literacy skills it does not provide a wide enough range of literacy practices; ‘school constitutes a culturally and context specific set of arrangements, norms, and expectations that are central to but not necessarily defining what it means to be educated’ (Livingstone and Sefton-Green, 2015: 30).

Burnett and Myers’ (2002) research explored young children’s literacy practices outside of school. They provided children with cameras to take photographs of literacy events taking place outside of school. They found that outside of school children were creating

and recreating literacy in ways that were meaningful to them and that sometimes they utilised school literacy for their home literacy practices, using the literacy skills that they had learned in school to support their own interests. They found ‘in the children’s worlds, literacy is broad, varied and offers choices. If literacy within school is framed by curriculum initiatives, literacy as presented by children is framed by their relationships, interests and values’ (Burnett and Myers, 2002: 61).

The importance of social relationships in children’s uses of literacy is key as recognised in Lankshear and Knobel’s earlier work in the New Literacy Studies where they proposed that literacy be understood as a social practice. Marsh’s research into young children’s literacy practices within virtual worlds also found that children’s literacy practices regardless of whether they are online or offline are grounded in ‘the social, material and cultural structures in which the children operate in the offline world and thus cannot be viewed in isolation from these wider discourses’ (Marsh, 2011: 101).

And Livingstone and Sefton-Green (2016) in their study of young people in a secondary school found that despite the fears surrounding young people and their use of digital technologies, young people have a rich and diverse range of literacy practices built around social relationships with close friends and family and that they still valued the face-to-face social encounters just as much as online communication.

The benefits of bridging the gap between children’s home and schooled literacy experiences are many. Allowing children to bring in their home literacy practices to school recognises the cultural, linguistic and social assets that they bring with them, validating their out of school experiences and building on existing funds of knowledge (Gonzales et al., 2005). It incorporates authentic social literacy practices rather than decontextualizing literacy skills for school purposes. Whilst some would argue that a universal school literacy provides equality and access to powerful literacies, others question whether this is enough to prepare young people for living in contemporary society. Whilst school literacy undoubtedly provides young people with essential literacy skills, a wider view of literacy is needed to enable young people to fulfil their potential as outlined in the NLG manifesto. Teachers are key agents in maintaining and/or contesting what constitutes literacy in school (UKLA, 2010) but policy and the standards agenda do not provide an environment in which this can happen easily.

Millard (2003) when referring to the use of popular culture and children's interests in classroom literacy argued for the fusion of children's own interests with the teacher's pedagogical purpose to create new learning. She argues: "The aim of using children's pleasure is to create a literacy of fusion, uniting children's individual interests and cultures with the processes and learning contexts created for them in school" (Millard, 2003: 9). Here, Millard is making an important point about how children's home literacy experiences can be used to bridge the gap between home and school and makes school literacy relevant to their real life experiences.

Green and Cormack suggest that it is important to make literacy richer and more complex than what is contained within schooled literacy. However Lankshear (2006) warns against the use of using inauthentic literacy learning experiences in classrooms. Schooled literacy learning activities often provide 'pretend' rather than 'real' versions of literacy social practices whereas in their out-of-school lives, young people are engaging in real problem solving and real social practices with real social relationships. There is a danger that in an attempt to address the need to widen the view of literacy in the school curriculum, children are provided with inauthentic literacy learning opportunities which only serve to widen the gap between home and school literacy. Indeed, Burnett and Myers (2002) also stressed the importance of using children's home literacy experiences appropriately otherwise attempts to bring children's own literacy practices into the classroom can lead to a loss of social context which is what makes the literacy practices meaningful. Rather, they proposed that teachers reflect on the literacy experiences that they provide and ask themselves how often do they use literacy in the context of promoting real relationships or how does school validate children's experiences and interests?

2.5 Digital Technology and Literacy

2.5.1 Children and young people and digital technology

Recent UK research shows that digital technology plays an important role in young children's and young people's literacy lives and practices (Ofcom, 2016). Ofcom's annual reports on children's media lives highlight just how children's media experiences alter as the digital landscape changes. For example, in 2016 it was noted how children's

media habits had changed significantly with children aged 5-15 using vlogs (video blogs) and YouTube as their preferred sources of content, group chats became the dominant mode of communication. The 2016 survey showed an increasing number of children owning portable devices with 44% of 5-15 year olds owning their own tablet device. In 2016 one in six 8-11 year olds said that they would miss their mobile phones the most which is more than twice as many as in 2015. The data suggests a shift from television towards the mobile phone as their preferred device. It is clear from surveying children's use of media that technology has had a significant impact on children's literacy practices and that technology facilitates new ways to communicate and new ways of making meaning.

The way in which literacy practices incorporate digital technologies cannot be ignored and it is important to consider the impact that technology has had on our literacy practices and in particular how it has affected children's home literacy practices. As already identified, many are concerned that school literacy practices do not reflect children's diverse home literacy practices and that this will not only lead to children being unprepared for the literacy demands of adult life but also might lead to the growing distance between children's everyday literacy practices and schooled literacy (Merchant, 2007; Lankshear and Knobel, 2011).

2.5.2 Concerns surrounding young people's use of digital technologies

Schools have been swift in investing in digital technologies to support learning and teaching. Yet despite the significant role that technology plays in contemporary literacy practices some argue that it is not yet fully understood or effectively utilised in literacy education. In an OECD (2015) report '*Students, Computers and Learning: Making the Connection*' it highlights the PISA results that show that in countries that invested heavily in ICT in schools, no significant improvement in progress in literacy was seen. In the media it was reported as 'Computers 'Do Not Improve Results' says OECD' (BBC 15th September 2015). However, the OECD report does go on to suggest that it might be more to do with the fact that schools and teachers are not yet harnessing the potential learning that technology has to offer and importantly, it claims that children who do not acquire the basic digital literacy skills will be unable to participate fully in the economic and social world around them. Whilst it does recognise the important role that digital technologies can play if utilised effectively to support learning in schools,

again it refers to the connection identified earlier between literacy education and a nation's economic well-being.

Eliane Glaser's article in the Guardian newspaper (25th January 2018): "Children are tech addicts and schools are their pushers" adds to the alarmist beliefs that not only is technology not supporting effective learning but that it is harmful for children's health and well-being. And this is supported by some recent reports into young people's uses of social media. The Children's Commissioner's report into young people's use of social media '*Life in Likes*' (2017) identified both the positive aspects and the negative aspects of young children's engagement with social media and made recommendations for schools and teachers suggesting that digital literacy in schools should be widened to include digital literacy education beyond safety messages in order to develop children's critical awareness and resilience, whilst the recommendations for teachers are to improve their knowledge about the impact of social media and encourage peer-to-peer learning.

This is supported by the Government report (DfE, 2017) '*Growing up Digital*' which claims that not enough is being done to support children to navigate the online world safely. Both reports call for a wider digital citizenship programme in schools resulting in the compulsory teaching of digital citizenship in schools as part of the Relationships and Sex Education curriculum from 2019.

2.5.3 Reasons to be more hopeful

However, some research is more hopeful. Livingstone and Sefton-Green's (2016) study of a class of young people in school and at home over the course of a year is largely positive and encouraging. One of the aims of the research was to investigate concerns surrounding young people and their use of digital technologies. Livingstone and Sefton-Green were concerned that the fears surrounding children's use of digital technologies in schools might be closing down rich opportunities for learning. Whilst their research found that young people are generally happy and doing well, they found that whilst the young people in her study found it difficult to navigate between school expectations and home and community expectations they were finding spaces for their voices in the online world. These young people were making good use of online spaces for their literacy practices, for communicating with friends and their communities.

Livingstone and Sefton-Green question the purpose of education, suggesting that it is seen as instrumental in achieving a successful economy and that this has a detrimental impact on the well-being of young people. They were more concerned about the impact of living in a neoliberalist society on the expectations of young people than of the impact of digital technologies on their well-being. They suggest that in a neoliberalist society where individualism and competitiveness are encouraged, young people find themselves in changing times and with uncertain futures. They suggests that digital technologies are just one source of change that society is experiencing and they question whether the purpose of education is to ‘fit children to their future as conceived by the state or to encourage them to think creatively or critique the status quo’ (Livingstone and Sefton-Green, 2016:30).

2.5.4 Government policy and digital technology and literacy in schools

New technologies have had a significant impact upon the way that we communicate and have greatly influenced our everyday literacy practices. As a result, governments around the world have been quick to respond to developments in technology and communication and to tap into technology in order to compete in today’s knowledge economy. In a drive to modernise schools and integrate more ICT into the curriculum, policy makers in England have embraced the interactive whiteboard (IWB) technology and provided funding for schools to install IWBs in the majority of classrooms.

However Selwyn (2011) argues that it is a taken for granted assumption that technology will benefit teaching and learning and its use needs to be reflected on in a more thoughtful way whilst others also point out that the funding provided to install technology in schools has not been based on research findings (Reedy, 2008; Beauchamp, 2011; Selwyn, 2011) with research being carried out after the installation of technology in schools (Munroe, 2010). It is therefore advised that teachers must go beyond integrating technology for technology’s sake and consider the evolving nature of literacy (Borsheim et al., 2008; McLean & Rowsell, 2013), focusing on the practices and activities that surround technological devices rather than the devices themselves. The limitations of technology must be considered alongside the perceived transformational benefits (Selwyn, 2011; Reedy, 2008).

Honan (2008) suggests that whilst ICTs are infiltrating classrooms the use of ICT is still not widespread and she suggests that one of the key reasons is conflicting policy. She argues that England, the US and Australian Governments have conflicting discourses around what literacy is and that policies and initiatives encourage teachers to use ICT in literacy and engage with children's digital literacy practices but that 'back to basics' campaigns such as the focus on early reading and phonics and more recently, the spelling, punctuation and grammar tests (SPAG) (in England) give conflicting messages.

2.5.5 Digital literacies, technology and pedagogy

Ham (2010) highlights the fact that it is not just in England but that in many countries the policy focus has been on funding hardware, software, systems and introducing curriculum but now it needs to focus on the classroom pedagogy. In the race to get mobile technology such as tablet computers and laptops into schools in order to modernise education and prepare learners for life and work in the 21st century, the pedagogical considerations related to the use of technology for learning and teaching have been overlooked. Teachers are given the technology and instruction on how to use it but not guided on how to integrate it effectively to support learning (Ham, 2010; Reedy, 2008; Munroe, 2010; Selwyn, 2011).

Munroe (2010) questions the effectiveness of computers and educational software being placed into schools without actually evaluating the impact and points out that teachers in Scotland were given very little training in technical aspects and none in pedagogical issues. In Scotland where ICT is an integral part of the curriculum, 93% of teachers had participated in IT skills training but not necessarily pedagogical training.

As well as the need for governments to consider more carefully the installation of technology in schools, teachers also need to reflect on how technologies are to be integrated in order to support learning effectively (Borsheim et al., 2008; Saudelli & Rowsell, 2013). Pedagogy needs to be considered when utilising technology if teachers are to be able to move beyond integrating technology for technology's sake (Borsheim et al., 2008; McLean & Rowsell, 2013). Alexander in his review of the English National Curriculum described pedagogy as "the act of teaching together with its attendant discourse of educational theories, values, evidence and justifications. It is what one

needs to know, and the skills one needs to command, in order to make and justify the many different kinds of decision of which teaching is constituted” (Alexander, 2010: 280). Loveless (2011: 301) also highlights the importance of relationships in pedagogy and describes pedagogy as “Relations, conversation, reflection between teachers, learners, subjects and tools.”

Burnett (2009) suggests that one way to encourage educators to consider the pedagogy behind integrating technology in the classroom is to engage student teachers in evaluating how technology is used in classrooms. Merritt (2008, cited in Borsheim et al., 2008) talks about how she used wikis and blogs effectively in pre-service teacher education programmes, to enable them to not only engage in multiliteracies but to engage in discussion on the pedagogy of using such tools as well as giving them the confidence to use such approaches in their future classrooms.

Reedy's study of secondary teachers' uses of the IWB highlighted the dominance of what she calls “a visual culture of technology in schools” (Reedy, 2008: 143). Reedy found that there was an over-reliance on presentation tools in classrooms including the IWB, PowerPoint (PPT), and projector and she raised concerns that this was leading to a presentational style of teaching where “the PPT mind-set might be problematic to teaching and learning if it is limiting classroom discourse” (Reedy, 2008: 161). This, she suggested, was as a result of government and school policy to install presentational hardware and software in all classrooms and this, it might be argued, is impacting upon teaching styles and pedagogy in classrooms. Tufte (2004) raised concerns about the dominance of PPT in educational contexts and suggested that this presentational style is at odds with the aims of education where interaction, discussion, collaboration and student centred learning are viewed as important in the learning process. Whilst IWBs have been commonplace in classrooms for well over a decade now, the presentational style of teaching identified by Reedy (2008) and Tufte (2004) is still prevalent in classrooms today. Beauchamp and Kennewell (2008) explored how ICT is used in classrooms to support interactive learning and mediate in the learning process. They suggested 3 categories of how ICT supports interaction in learning contexts:

1. **As the object of interaction** - interaction around the ICT resource such as using a video to focus discussion

2. **As a participant in the interaction** - where the ICT is used to interact with - as a partner in a game for example
3. **As a tool for interaction** - the medium of interaction such as a piece of software like Skype for communicating with others

Beauchamp (2011) in his study of teachers and their uses of ICT found evidence of all three categories of interaction and that the teachers in the study were able to articulate both the benefits and limitations for classroom interaction, suggesting that teachers are able to use ICT in a more thoughtful way than others suggest. However, Beauchamp did find teachers using the IWB as a presentational tool for displaying information and modelling tasks and often did not exploit its potential.

Some teachers have found space in their classrooms to use digital technologies to make more effective links between children's home and school literacy practices. Waller (2010) made very effective use of Twitter in his classroom to motivate a group of young boys to write and the children in his class had a real audience and purpose for their writing, making connections and communicating with people outside of their classroom and school. Waller (2010) commented that the use of Twitter "enhanced learning and teaching in our classroom and opened up new opportunities for authentic literacy practices" (Waller, 2010: 15). Waller's use of Skype to enable storytelling across the globe and his use of a class blog to document the children's learning journey and have authentic dialogue with mountain climbers and astronauts has developed children's literacy skills and understanding of contemporary literacy practices as well as learning how to be good citizens online and to navigate the online world safely.

Koehler et al. (2007) built upon Shulman's (1987) concept of pedagogical content knowledge where effective teachers integrate what they know about how to teach with the content of what they are teaching and they created a new framework called technological pedagogical content knowledge (TPCK). Their research showed that the teachers in their study who were involved in working together on a project to design an online course moved on to a much deeper understanding of how to integrate technology than simply learning how to use the technology which, they argue, is what most teacher training programmes on technology entail. They learned to view each aspect of

technology, pedagogy, and content as being connected rather than viewing them individually.

Koehler et al., (2007: 742) claim:

There's more to teacher preparation and faculty development than training teachers how to use tools – it requires appreciation of the complex set of interrelationships between artefacts, users, tools and practices. In particular, it requires teachers to become sensitive to the demands of harnessing and integrating technology, pedagogy and content. We argue, as do others, that knowledge of technology cannot be treated as context-free, and that good teaching requires an understanding of how technology relates to the pedagogy and content alongside an understanding of how learners learn in a social context

This is particularly relevant in the teaching of literacy where new literacy practices make excellent use of digital tools and technologies. Literacy teachers need a broader conception of literacy that incorporates new literacy practices and how the digital tools are utilised within these literacy practices.

2.5.6 A generational divide?

Some commentators have raised concerns about a generational divide between children and young people who have grown up surrounded by the world wide web and digital technologies and those who have been introduced to it as adults and that this might cause a generational divide between older adults such as teachers and young people which might impact upon classroom practice.

Tapscott (1998) talks about a 'net generation' of people who have grown up with the world-wide web and Prensky (2006) describes them as 'digital natives' and their parents and other adults as 'digital immigrants', arguing that all digital immigrants retain one foot in the past. This is clearly an over-simplification with many young people lacking experience and/or confidence with digital literacies and many older people's literacy practices making excellent use of digital tools. Many have expressed concerns about a 'digital divide' developing between those who are digitally literate and those who are not (Lankshear and Bigum, 1999; Lankshear and Knobel, 2008; Prensky, 2006; Gee, 2007) but this divide may not necessarily relate to age but can also relate to issues of

access to digital technologies. Lankshear and Bigum suggest that this gap is exacerbated by the fact that many teachers are positioned as ‘outsiders’ or ‘newcomers’ to technology whilst most young people are the ‘insiders’. Again, in current times many teachers are insiders and this is no longer a valid argument. Indeed, this research aims to explore how young teachers draw upon their insider knowledge of contemporary literacy practices to support their literacy teaching.

White and Le Cornu (2011) also critique Prensky’s age assumption that there is a connection between computing competence and age and they challenge his metaphor of digital immigrants and digital natives and suggest alternatives. They suggest a new typology where ‘online visitors’ and ‘online residents’ would be more appropriate to describe online engagement. They prefer to use ‘online visitors’ to describe those people who use the internet to get things done and ‘online residents’ for people who have a more constant online presence and identity.

In addition, Currant et al.’s (2008) research on learners in higher education (HE) identified four digital types: the digitally reluctant, the digitally inexperienced, digital socialites and the digitally experienced. They describe the digitally reluctant as learners who are not confident users of technology and find technology frightening. The digitally inexperienced are willing to try but lack the skills and experience which can act as a barrier to their engagement with digital technologies. They found the majority of young HE learners are digital socialites, using technology mostly for entertainment but who prefer face to face teaching rather than e-learning. Finally, the digitally experienced learners are those for whom digital technologies form a major part of their everyday lives.

Research carried out by the Center for Educational Research and Development (CERI) on ‘new millennium learners’ in HE also found different student profiles regarding technology use and adoption and that amongst the students there are digital divides. Their research showed that just because some students are heavy users of the internet, this does not make them ‘new millennium learners’ “To be considered as true new millennium learners, students have to be using daily a variety of digital devices which form a constellation surrounding them” and many young learners just did not fit this description (CERI, 2009: 11).

Clearly, people's usage and confidence with digital technology is much more complex than the assumption that young people are confident users of technology and older people are less confident. Teachers able to translate their knowledge of digital literacies into their classroom practice cannot be taken for granted. In fact Graham (2008) found exactly that. Graham's research examined the digital lives of young teachers and she found that some young teachers were confident users of digital technologies and some were not. She explored how the young teachers in her study learned to use digital technologies and she identified three categories of learner: self-taught, school-taught and playful solitary. She described the first two categories as serious solitary learners as they learned how to use digital technology to support their professional roles as teachers, teaching themselves or learning at school whereas the playful-social teachers learned in more playful ways such as online collaboration to produce texts or play games and were using technology to get on with their lives and not just their professional roles. In Graham's follow-up study (2012) she traced some of these teachers as she was interested in finding out whether these effective teachers of literacy were able to translate ways of knowing about digital worlds into their classroom practice. What she found was that it was not a straightforward correlation; one teacher felt frustrated by the ways that teachers added digital technology to existing classroom practice whilst another teacher, in her new role, felt freed from curriculum constraints and was able to bring innovative practices into her classroom that were based on her funds of knowledge from her everyday literacy practices. It cannot be assumed that teachers who are confident users of digital technologies are able to make use of this knowledge in their classroom practice but that there are other factors involved other than their competence and competence. Classrooms and schools are complex spaces worthy of further exploration. It is exactly this complex space that I wish to further examine through the eyes of student teachers. This shall be discussed further in the methodology chapter that follows.

Whilst there are strong proponents for the idea that there is a generational divide, Jones and Czerniewicz (2010) highlight the fact that there is much disagreement as to whether such a generational divide between the net generation and the generations that came before it actually exists and that many argue that the net generation is in fact a myth and that it oversimplifies a much more complex situation (Sanchez et al., 2011; CERl, 2009; Bennett et al., 2008; Kennedy et al., 2006). In fact, Bennett et al. suggest a 'moral panic'

was caused by the academic debate around the net generation rather like the moral panic in the 60s around popular culture where people were concerned about children living in two different worlds and that this panic encourages a sense of urgency to respond to the technological changes. Many now argue for a more critical stance to be taken before rushing into curriculum and policy changes (Selwyn, 2011; Jones and Czerniewicz, 2010; Bennett & Maton, 2010; Bennet et al., 2008). Selwyn suggests we need to remain mindful of avoiding ‘unquestionable acceptance’ of educational change and highlights the fact that historically, introducing technologies such as film, radio, television and microcomputers have all had recurring issues suggesting a more complex issue of whether technology clashes with current educational structures.

Concerns over the growing distance between children’s home and school literacies are complex and cannot necessarily be attributed to an outdated autonomous view of school literacy or to a perceived generational divide between teachers and children. This thesis will examine the relationship between the school literacy curriculum, teachers’ digital literacy competences, student teachers’ digital literacy competences and children’s literacy experiences.

2.6 Literacy Policy

2.6.1 Neoliberalism

A key aim of my research is to examine the literacy classroom context that the student teachers are working in and this cannot be done without considering the structures that impact on the schools and classrooms that they are teaching in. I begin by examining the concept of ideology and its impact on schooling and curriculum in general before moving on to one of the key drivers of literacy policy reform and exploring the issue from the top down, starting with the global picture and wider context before moving on to how this has impacted upon the practices of student teachers in primary literacy classrooms in England.

As a result of neoliberal economic restructuring in the 1980s a ‘human capital framing of education’ has developed in England and across the world (Sellar and Lingard, 2015). Livingstone and Sefton-Green posit that it is through education that societies manage and organise knowledge and behaviour claiming that we live in a neoliberalist society

where education is viewed as instrumental in providing economic benefits to a nation. With a skilled and literate workforce, economic gains can be made in the global market place.

2.6.2 Ideology and literacy curriculum

A common ideology and worldview that schools can be used to solve economic problems has greatly influenced curriculum reform in schools. Apple (2004) describes curriculum as a particular kind of technology used by teachers and students to produce learning outcomes and is often presented as based on the result of scientific enquiry and is therefore neutral and interest-free. Governments around the world have attempted to address economic issues through curriculum reform in order to provide a nation with the workforce required to improve productivity and this has been established as common-sense, which, according to Apple, allows schools and teachers to believe they are neutral actors in the process of schooling as the economic and political intentions are hidden. He takes a structural- functional view of schools where schools might appear to be neutral but in fact are masking the powerful structures at play.

Apple studied the connection between ideology and the curriculum, examining how ‘official’ school knowledge contained in the curriculum represents the dominant interests in society with the assumption that school knowledge is cultural capital and a resource which everyone requires. In doing so the cultural capital of young people is not recognised as legitimate knowledge. Apple draws upon Bourdieu’s concept of cultural capital. For Bourdieu schools act as a filtering device taking the cultural capital of the middle class – the habitus - as natural and employ it as if all children have access to it. Bourdieu asks us to think of cultural capital as economic capital in that it is also distributed unequally in society and schools are helping to reproduce these inequalities. Bourdieu maintains that people acquire an understanding of the society that they live in including the rules, socially accepted behaviours, morals and beliefs, all of which are filtered down from the macro-level to the individual through education, the workplace and families. Apple makes links between the hidden curriculum in schools with Bourdieu’s and Passeron’s ‘symbolic violence’ concept to describe how curriculum and pedagogy impose power on young people and serve to reproduce social order suggesting that it is the day-to-day routines in schools that reinforce inequalities. As discussed above when examining home and school literacies, it is a common-sense ideology that

everyone requires school literacy and as a result of curriculum reform, schools privilege the formal register of school literacy. Indeed, there have even been incidences in England of schools banning local dialects in classrooms and around school. It is argued that a standardised school literacy while under the guise of equality is, in fact, disenfranchising young people through not recognising the cultural capital that they bring into the classroom (Burnett and Myers, 2002; Millard, 2003; Gonzales et al., 2005; Carrington and Robinson, 2009).

Gitlin (2006: 173) claims that teachers are exposed to powerful ideology and common-sense beliefs through training and curriculum materials and argues that teachers' common-sense in classrooms is based on the dominant discourse of the time and things become normative. "Teachers' thinking and action are not individual choice but part of local and dominant discourses and contextual influences that motivate and influence teachers even if the teacher doesn't view it as commonsense". And Cochran-Smith (2001) claims that when teachers do not view the ideology as common-sense and if teachers do not get rewarded or recognised for practices that go against the grain in a particular school context, then they are unlikely to continue and will resort to the existing routines and classroom practices.

Apple suggests we stand back from common-sense and study it in order to explore the relationship between the external structures and classroom practice. "It is critical inquiry into the routine aspects of our day-to-day experience that is demanded" (2004: 151) in order to find out how ideologies unconsciously work through institutions and educators. However, assumptions known only tacitly, remain unspoken and for researchers, revealing assumptions presents particular difficulties and shall be considered in the methodology chapters.

Through my research I aim to explore how student teachers find agency and spaces for innovation and resistance in classrooms through taking a close look into their experiences. Whilst Apple calls for critical examination of the way in which dominant groups influence education and schooling he also believes that it is important to not only examine the realities of dominations but to also consider ways in which people contest and struggle. To uncover these realities Apple (2004) and Cuban (2013) recommend examining the 'black box' of the classroom in order to identify how external structures

affect classroom practice. I shall return to the concept of the black box in the methodology chapter. Cuban claims that in the case of the US, policy makers have ignored the classroom context and focused only on the input and output in terms of student attainment and questions how policy makers can understand what is happening if they have no idea about the transformation taking place in classrooms. Apple asks “Just how do teachers and student teachers find ways of ‘activating resistance?’” (2004: xxiii). This is a question for my research study too. Why is it important for student teachers to have agency in classrooms and how do the student teachers and their teachers find ways to resist and find spaces to express their own ideas and implement changes in classroom practices with regards to teaching contemporary literacies? For changes in practice to happen, student teachers need the ability to question the status quo and solve problems based on their own and the local context or the result is an unquestioning and compliant workforce unable to respond to the needs of individual learners and communities. Apple suggests that this is important to study in order to better understand the conditions under which teachers operate but also the possibilities for changing these conditions. This shall be further examined in the methodology chapter when considering the student teachers and the classroom contexts that they encounter.

2.6.3 Global education policy and the power of numbers

Global policy discourses make a causal connection between literacy competency, employability skills and economic growth. Grek (2015) describes this as a global education policy; a shared belief that competitiveness, skills development and employability are closely linked to measurement and where both literacy and human capital are viewed as commodities (Hamilton et al., 2015). In order for nations to assess their potential economic growth in the global marketplace, international comparative literacy tests (alongside numeracy and science tests) have been created to provide the data to enable nations to compare themselves with each other, ascertain their position in the world in terms of the economy and potential growth and identify solutions to identified skills-gaps by borrowing best practices from nations that are performing successfully in the international tests.

2.6.4 ‘Seeing like PISA’

One of the most significant international comparative tests which produces internationally comparable statistics on literacy through standardised assessment is the

Programme for the International Student assessment (PISA) produced by the Organisation for Economic Cooperation and Development (OECD). Sellar and Lingard (2015) suggest that the OECD came about as a result of cold war globalisation and the desire of OECD nations to be able to measure future economic competitiveness. Literacy was seen as a proxy for economic success. Gorur (2015) describes the situation as “seeing like PISA” where “measuring the education system’s outcome and predicting the yield is seen as crucial to a nation’s fiscal outcomes” (Gorur, 2016: 598).

Gorur warns that the use of numbers, data, measurement and standardisation is ubiquitous in education and numbers can be very persuasive but should be viewed with caution. Gorur (2015: 4) suggests that “In the current climate of neoliberalism and market orientation, numericisation has been flourishing” as the data produced provides evidence-based quantitative evidence that is hard to challenge. Grek (2015: 37) claims that the PISA charts offer nations “fast-selling policy suggestions” through the production of ‘shock data’ (Hamilton et al., 2015).

Importantly, Gorur warns that numbers are often misused in policy and should be viewed with suspicion as they cannot possibly capture the complexity of literacy and instead become reductive with literacy simply reduced to aspects that can be assessed and therefore do not provide a true picture of literacy competency. Sigporsson (2017) voicing concerns of how Iceland’s literacy policy has been driven by PISA results agrees claiming the tests are not assessing today’s complex and varied literacy practices. The tests only measure a reduced amount of literacy skills and what they are being measured on “is not compatible with modern definitions of literacy” (Sigporsson, 2017: 70).

2.6.5 Literacy Isomorphism

Other criticisms of the PISA assessments of literacy argue that because the nature of the assessments aim to use comparative data over time this has led to generic unchanging literacy assessments unresponsive to changes in literacy practices and therefore not reflecting children’s current complex literacy practices and funds of knowledge (Gorur, 2015; Sellar and Lingard, 2015). Statistics gained from international comparative testing are being used to inform literacy policy around the world in a drive to compete in the global marketplace and is leading to what Sellar and Lingard refer to as ‘literacy

isomorphism'. A situation where as a result of nations policy-borrowing from more successful nations, literacy is being standardised across the globe resulting in a universal set of literacies.

2.6.6 Competing views of literacy in the current political climate

Street (1994) suggested that particular views of literacy are linked to particular views of thinking. Clearly there are competing views about how to define literacy. From a policy maker's perspective, assuming an autonomous model of literacy where people possess a universal set of literacy skills that can be applied in any situation is advantageous to creating a workforce with the literacy skills required for the global workplace and is desirable in a neoliberalist society where education is framed by human capital framing (Sellar and Lingard, 2015). This provides policy makers and educators with clear learning outcomes and measurable outputs. Reducing literacy down to a set of skills enables literacy competency to be easily measured and any skills gaps are easy to identify and address.

However, as discussed earlier, there are others who conceptualise literacy differently, as socially situated dependent on the person, context, time and place and a part of everyday situated practices that require different sets of literacy skills in different contexts and for different purposes (Barton and Hamilton, 2007). This definition of literacy is however, much harder to measure quantitatively and therefore not as useful as an indicator of economic success but is ever more relevant in current times. Sellar and Lingard suggest that through globalisation linguistic practices have become ever more diverse as people become increasingly mobile and ideas and practices are enabled to flow and mingle around the globe, broadening the range of literacy practices that exist. The international comparative tests use generalised texts designed to be used across different countries and cultures and Sellar and Lingard question how the tests can accurately measure real-life literacy knowledge when the tests are decontextualized and deliberately removed from every day literacy practices in order to be applicable by so many different countries and cultures.

2.6.7 Literacy Policy in England

The Literacy curriculum has long been a focus for England's government attention due to its 'currency' in the political world (Moss, 2017) with literacy levels being used as

an indicator of economic growth. Cremin et al. (2014) suggest that the dominant discourse in literacy in primary education is the standards agenda and the desire to raise literacy standards and compete in the global arena.

The focus on literacy assessments and the numerical data that it produces results in policymakers overlooking the diverse literacy practices and skills that children today actually demonstrate in their literacy lives and moreover, the skills that they will need to be literate persons in the future. Literacy standards have become high stakes in the UK with government policy setting minimum literacy floor targets for schools and using numerical data to measure individual pupil progress, literacy standards in schools and between schools. As a result, the curriculum is reduced to a set of measurable outcomes that do not reflect the broad, rich and complex literacy practices that children engage in today (Bearne, 2017; Sigporsson, 2017). Many question whether school literacy as defined by curriculum policy will provide children with what they need to be literate in the 21st century, arguing that the UK literacy policy “treats children as individuals divorced from their socio-cultural contexts, where multimodal texts proliferate” (Reedy et al., 2017: 54).

Not only are there concerns about the key drivers for literacy policy reform but many argue that policy decisions have been reactionary and have not been based on empirical evidence (Cummins, 2016; Peiser, 2015; Kennedy, 2016) nor are they learner-centered and that these policies have had a far-reaching and damaging impact in classrooms, schools and ITE. Donaldson (2010:11) calls for “a culture within which policy, practice, theory and accountability are better aligned to serve the needs of learners”.

Donaldson (2015) argues that England’s school curriculum has been shaped by political concerns about the economy and calls for the purpose of education to be reassessed and similarly, Ravitch (2013) when describing US government education policy also questions whether children are at the heart of the reform or whether economic success in a highly competitive global market is the key policy driver. Evidence of the UK government’s utilitarian view of education could clearly be seen in the Coalition government’s 2010 Schools’ White Paper where it stated “What really matters is how we’re doing compared with our international competitors. That is what will define our economic growth and our country’s future” (DfE, 2010: 3). The White Paper used

figures published in the 2006 OECD PISA report to highlight the worrying fall in England's literacy standards compared to other countries in the region. "In the most recent OECD PISA survey in 2006 we fell from 4th in the world in the 2000 survey to 14th in science, 7th to 17th in literacy, and 8th to 24th in mathematics. The only way we can catch up, and have the world-class schools our children deserve, is by learning the lessons of other countries' success" (DfE 2010: 3). Whilst the rhetoric around what 'our children deserve' is present, the aim is clear; the aim is to improve England's position in the global market. The children are in fact marginalised and not viewed as being central to the issue.

Gorur (2016) warns that this current phenomenon not only describes the current situation but worryingly it also shapes and changes the situation because in describing the situation, governments respond by acting to change literacy policy and change literacy classroom practice. The PISA results are therefore having a significant impact on literacy policy around the world. Not only are there concerns about the nature of the key political drivers behind literacy policy but also because of the way that the international tests are shaping literacy policy and curriculum and reinforcing a dominant view of literacy.

Because the PISA tests aim to compare the results of each of the countries involved, the methodology requires that the tests have measurable outcomes and as such the PISA literacy tests represent a dominant view of literacy using questions to measure a set of universal literacy skills which, if one takes the view that literacy is a social practice and is situated then these tests will not be sufficient in ascertaining children's actual literacy skills.

2.6.8 The standards agenda and literacy policy in England

Whilst the international comparative tests are relatively new, the drive to raise standards in literacy in England is not a new phenomenon. As a result of increasing concerns over a long tail of under-achievement in international surveys and an economic downturn in the 1970s politicians in England turned their attention to education as a possible cause of economic problems and also as a possible solution to the problems. The 1980s and 1990s saw unprecedented large-scale education reform, firstly with the introduction of a national curriculum by the Conservative government in 1989 including a national

curriculum for English. Then nearly a decade later came the implementation of a national literacy strategy (NLS) in 1998 by the New Labour government and in 2014 the Conservative government published a new English national curriculum.

These reforms brought about increased direct government control of teaching and learning of all subjects and of literacy (and numeracy) in particular. In 2006 government policy turned to the teaching of reading after having commissioned an independent review of the teaching of early reading published by Jim Rose. The report recommended that schools teach systematic synthetic phonics daily and they also introduced a phonics check for all Year 1 pupils in England with results being published to parents and made public, thus creating pressure on all schools and teachers to implement the policy. More recently, in 2014, the Conservative government redefined the English national curriculum once again as part of the revised national curriculum and introduced spelling, punctuation and grammar tests in Key Stages 1 and 2. The impact of each of these policy reforms shall now be examined in greater depth.

2.6.9 The National Literacy Strategy (NLS)

The following section will examine some of the key literacy policy turns in England including the National Literacy Strategy (NLS), the independent review of early reading and the revised national curriculum in 2014. Whilst the first national curriculum for English in 1989 provided a curriculum for all subjects as selected by the government, it was not until the New Labour government that the focus on literacy sharpened. With its focus on raising standards in literacy, Labour implemented the most ambitious large-scale strategy of education reform since the 1960s (Fullan, 2000).

In a speech given at the Labour annual conference in Brighton 1997, the newly elected Prime Minister, Tony Blair, was quoted as saying “Getting the basics right. We are launching the biggest assault on poor literacy and numeracy standards this country has seen”. The literacy curriculum focused on a return to basics and over subsequent years literacy was reduced to ‘basic skills’, which could be more easily measured than the broader, more complex conception of literacy that many believed to be a more accurate description of literacy. Again, driven on by alarms about international comparisons, “Britain is out-performed by a group of countries...most disturbing in international studies is evidence of an existing ‘long tail’ in the results among British schools, since

performance of lower ability children is substantially below that of other countries” (Literacy Task Force, 1997:21). The choice of vocabulary *disturbing* and *assault* on poor literacy (note the italics are mine) was designed to cause concern in the public as well as to reassure us that the government will solve the problem. In every government’s education white paper they play on the flaws of the previous government, attempt to alarm the public and then to assuage their concerns with new policy. This is reminiscent of the moral panics that took place in the 1960s around popular culture and the impact of the media on young people’s behaviour.

The National Literacy Strategy began in 1996 as a National Literacy Project (NLP) in schools in 15 underperforming LEAs, with a framework for teaching literacy, which included word, text and sentence level objectives and a structured literacy hour. In 1998, just two years later, after showing some success in the schools where it had been piloted, the framework for teaching literacy was rolled out nationwide with the aim of meeting the government’s newly introduced floor target of 80% of pupils to reach level 4 in English in Key stage 2. Stannard and Huxford (2007) and Beard (2000) claim that because the aims of the existing national curriculum for English were too broad, teachers were struggling to plan for English alongside all of the other subjects, they were becoming frustrated and suffering from low morale. They claim that the NLP was “met with an overwhelmingly positive response” (Stannard and Huxford, 2007: 8) and “it answered a need and provided stability”.

Michael Barber (2007), former head of the Prime Minister’s delivery unit during the Blair administration, responsible for systemic whole school reform in England, describes policy implementation as ‘the delivery chain’, a top down process of policy implementation from the Government to government departments, schools and classrooms. This positions children at the bottom of the process with teachers just one layer above and with little or no agency to influence change. This is reinforced by Barber himself in an interview in 2006 “You need to be very conscious of what you’re doing and how you’re doing it, and you need to design mechanisms to make sure that the programme is faithfully implemented”. In an interview for Pearson’s Learning Talks (2013) where Michael Barber was discussing policy implementation he stated “10% of effort is writing the policy and 90% is making it happen”. This suggests the existence

of various mechanisms of power and authority policy makers utilise in effective policy implementation.

With some promising results in reading standards reported following the NLP project (Sainsbury, 1998), Barber scaled up the project. Barber's 'informed prescription' was used to describe the first stage of the implementation. Some researchers question the research upon which the NLS was based with claims that the authorities involved in the pilot project were only partway through the experiment and no findings had been established and therefore question the decision to base such large-scale reform on such unconfirmed evidence (Bailey, 2002; Goodwyn, 2011; Ellis, 2011; Wyse, 2011). Beard (2011) suggests that the schools involved in the pilot project were from disadvantaged areas and were underperforming and were therefore more likely to see an impact and Beard accuses Barber of taking 'a learn as we go' attitude. Goodwyn (2011) claims that underpinning the NLS is an ideology and not evidence with Barber's 'informed prescription' being the ideology – telling teachers what to do and how to do it. Informed prescription is concerning in the way that it deprofessionalises the teaching profession, taking the decision-making away from teachers. The NLS contained more than a thousand learning objectives from Year 1 to Year 6 exemplifying an autonomous universal set of skills to be learned in each year with the view that at the end of Year 6 pupils will have acquired a prescribed set of skills for literacy to be tested at the end key stage 2.

The NLS was a huge undertaking, which included funding for training materials for all schools, in-service training and appointment of NLS consultants in all LEAs. Across the UK teachers were required to implement the new materials, being prescribed with the 'what to teach' but also the 'how'. Teachers were provided with the Framework for teaching literacy which contained 1024 learning objectives and were required to teach a daily literacy hour which was divided into segments of time for word, sentence and text level work. This reform was not only about curriculum but was designed to change practice at classroom level, introducing standardised delivery through introducing new literacy pedagogies such as guided reading and writing.

Ofsted reviewed the NLS in 2002 after in its first phase 1998 – 2001 and claims that some 20,000 schools, 190,000 teachers and 3 million pupils were using the NLS and

after two years a 10-percentage point increase in the number of children attaining a level 4 in English was achieved. Results showed that in 1997 63% achieved level 4, 1998 – 65%, 1999 – 70% and in 2000 – 75%. These results were indeed impressive. However, other evaluations of the NLS were not so positive. Ofsted (2002) and Ofsted (2003) in their reports identified that the government's targets for 80% by 2002 had not been achieved despite the early improvements and the results had plateaued shortly after. Despite the improvements in the first two years, progress was uneven. Standards remained at 75% for 4 years in a row and reading attainment had dropped and writing attainment was still low (Ofsted, 2003).

Despite concerns raised, constant pressure was applied as teachers and schools were expected to raise standards. The appointment of local authority (LA) consultants were tasked with ensuring that schools were improving their test results, checking test results and monitoring pupil progress data regularly. Although the NLS was not statutory, schools felt under pressure to follow it because if test results were poor or declining, it could be argued that it was because they were not following the strategy. Underperforming schools were under particular scrutiny with a focus on pupil data, focused support and regular reviews, leaving them little choice but to conform.

Stannard and Huxford (2007) in their evaluation of the NLS in their aptly titled book *The Literacy Game: The Story of the National Literacy Strategy*, which plays on the title of the book by Barber (1997) *The Learning Game: Arguments for a Learning Revolution*, claim the Conservative government, in introducing the first national curriculum in 1989 and then Ofsted, the first organisation to monitor and report on standards in education, were responsible for initiating the standards and accountability agenda that we have today. “The publication of school league tables along with the hostile practice of naming and shaming weak schools simultaneously raised public awareness and depleted professional morale” (Stannard and Huxford, 2007: 4). It is interesting to note the disapproving tone of Stannard and Huxford when in fact, they were both involved in the next stage of exerting pressure on teachers and schools through the implementation of the national strategies (including the NLS described above) under the Labour government with Stannard going on to lead the NLS.

Goodwyn criticises Stannard and Huxford in their choice of book title '*The Literacy Game*' as "learning or literacy are not a game" (Goodwyn, 2011: 6) and Ellis (2011) criticises Stannard's and Huxford's evaluation of the strategies for not fully acknowledging the flaws and reinforcing the ideology behind it. They recommended that policy makers "define clear, precise messages, common practices and implement them 'persistently'" (Stannard and Huxford, 2007 cited in Ellis, 2011). Despite the national strategies not achieving the desired results, Stannard and Huxford believed that if policy makers continued to standardise classroom literacy practice and give even clearer guidance, then standards would rise. However, many were arguing that the 'more of the same' approach was not working and that the dominant view of literacy needed to change as literacy needed to be viewed, not as a standard set of skills but as a practice that is situated, local and evolving (Street, 1995; Lankshear and Knobel, 2011; Ellis, 2011; Moss, 2017).

The focus on raising standards, measurable outcomes and comparing pupil and school attainment data has led to what Ball (2003) called a culture of performativity and this culture has now become a taken for granted 'commonsense' approach in education which is accepted as the norm even if teachers do not have the same belief. Ball (2003: 216) describes performativity as "a technology, a culture and a mode of regulation that employs judgments, comparisons and displays as means of incentive, control, attrition and change – based on rewards and sanctions (both material and symbolic)." These measures and culture of accountability create mechanisms of power. "Holding individual schools to account for the progress they make towards the target becomes an important means of keeping everyone on board for the job of implementing policy" (Moss, 2009: 158). Foucault (1977) building upon Bentham's theory of surveillance and a panoptic prison where prisoners can be seen from all angles and are under constant surveillance suggests that people regulate themselves through internalising discourses. Through constant monitoring, tracking and accountability, teachers are always visible and because of this, they conform and self-regulation occurs leading to the creation of "bodies that are docile and capable" (Foucault 1977: 294). Troman (1997) described this self-surveillance regime as one where school leaders act as the ever-present inspector where self-inspection is used to maintain policy and monitor standards. It is possible to see that with all of the literacy policies implemented, schools and teachers, although not always agreeing with policy decisions, have implemented them and a

culture of assessment, testing and accountability has now become the norm in schools and classrooms across the UK.

2.6.10 The Independent Review of the teaching of early reading

After the initial success of the NLS, when standards in literacy plateaued, the focus switched to the teaching of reading. The next key UK literacy policy turn that utilised similar accountability and monitoring strategies was the policy to change the teaching of reading in schools. This time spurred on by the PIRLS international reading tests (Progress in International Reading Study) but the debate surrounding how best to teach reading has been going on for decades. The debate swung from more traditional phonics based approaches pre 1960s to more progressive whole language approaches in the 60s and 70s where the teaching of reading was felt to be most effective when children were exposed to language, print and literature and the focus was on larger units of meaning rather than smaller units of meaning such as the letters and the sounds. In the whole language approach children were encouraged to derive the rules for reading from their attempts at making meaning through sharing and enjoying texts. It promoted the development of a range of reading strategies for gaining meaning from text. In 1975, the Bullock review recommended that there was ‘no one method to teach reading’ which can be contrasted with the most current approach, as outlined in the latest review of early reading which identifies systematic synthetic phonics as the most effective method to teach early reading and forms part of the policy drive towards improving standards in literacy (Rose, 2006) despite critics’ concerns over the evidence that the policy is based on (Wyse & Styles, 2007).

In 2006 the government commissioned Jim Rose to conduct an independent review of the teaching of reading in England. His report recommended that the existing model for teaching reading known as the ‘Searchlight’s Model’, which included the teaching of a range of reading strategies or cues to decode text, be replaced by the simple view of reading (SVR) as the most effective way to teach reading. “Having considered a wide range of evidence, the review has concluded that the case for systematic phonic work is overwhelming and much strengthened by a synthetic approach” (Rose, 2006: 20). This involves teaching young children a systematic programme of phonics known as systematic synthetic phonics (SSP) as the first strategy for decoding text. Children are

taught the 44 phonemes of the English language in a structured and systematic way through daily phonics lessons.

There have been numerous reports published outlining concerns about the recommendations of the Rose report and its far-reaching implications (Wyse and Styles, 2007; Clark, 2006; Ellis, 2007; Reedy, 2012). Wyse and Styles claim “The Rose report’s conclusions are based on assertions rather than rigorous analysis of appropriate evidence” (Wyse and Styles, 2007: 40).

One of the key concerns raised by Wyse and Styles are that there were methodological failings in a piece of research that Rose used to inform his recommendations. The research was a 7 year longitudinal study conducted in Scotland in 2005 by Johnston and Johnston entitled, *The effects of synthetic phonics teaching on reading and spelling attainment*. Wyse and Styles amongst others are not satisfied with the lack of controls in the experiments with regards to pupils’ prior attainment in reading, teachers’ experience and expertise and the three groups being studied and compared received different amounts of teaching. In addition Wyse and Styles point out that previous research had showed that although systematic phonics is more effective than non-phonics programmes, the systematic phonics programmes do not differ in effectiveness so they question Rose’s bias towards systematic synthetic phonics over other systematic phonics programmes.

Just as with the results of the international comparison literacy tests the government were quick to respond and initiate large-scale educational reform, rolling out the policy across England despite the concerns raised about the validity of the research and the ideology behind it (Clark, 2006; Ellis, 2007; Wyse and Styles, 2010; Reedy, 2012).

The approach is again reflective of a dominant view of literacy where reading is seen as a set of basic skills to be learned whereas many consider reading to be a social practice and one that is much broader than reading the letters on the page. Sigporsson (2017) raises concerns that this narrow focus on teaching the technical skills of reading may also overshadow the importance of the pleasure of reading.

Lefstein (2011) examined the effect of the media on UK reading policy and claimed that the way the media portrays educational debates on television is like the genre of makeover television programmes. He writes in particular about the debate around the teaching of phonics and how the media can influence public opinion and policy. He argues that makeover values have been used to think about English educational policy: “Policies such as the national strategies reflect makeover assumptions about the locus of expertise, confidence in ‘what works’, ease of change, the ‘transferability’ of ‘best practice’ and the limited role of teacher agency” (Lefstein, 2011: 152). Lefstein's research highlights how phonics has been presented in the media over 20 years and he describes how, in 2005, a BBC Newsnight programme about synthetic phonics in a London primary school presented the teaching of synthetic phonics in a way that influenced public debate and policy shift. The Rose report and the Letters and Sounds documents were produced shortly after the first of three episodes which followed Ruth Miskin as she introduced synthetic phonics into an underperforming school. Miskin was presented as the expert who could transform attainment and the programme presented the before and after. Since the publication of Jim Rose's *Independent Review of Early Reading* report (2006), the government adopted the recommendations of the report and the policy was implemented rigorously in schools and ITE.

Cummins (2015) has two main concerns. Firstly that England and US governments have created policies that are ideologically unsound and secondly that they are not grounded in empirical research. Cummins claims that literacy policies have been created based on the findings of researchers who view reading as a purely cognitive activity. Whereas Gee proposes that reading is a social activity, which cannot be separated from the social world in which it takes place. Cummins argues strongly that governments have attempted to tackle poverty and underachievement through viewing children as having deficits in phonic knowledge and teachers lacking competence to teach reading skills and phonic knowledge. He argues that schools can address some of the issues relating to underachievement but calls for government policies to be based on empirical research and not to focus on ‘weak interventions’ such as the teaching of phonics (Cummins, 2015). Cummins' argument is that “policies that arbitrarily exclude social influences on achievement are likely to be ineffective because they exclude a considerable amount of data” (Cummins, 2015: 236).

Cummins presents a range of empirical research to evidence the significance of social variables for children learning to read and that this research is what should be informing policy and practice. Research, for example, on the importance of schools providing a print-rich environment to impact upon children's literacy skills is highlighted in a number of pieces of research (OECD, 2004: 2010b). Or research from Sullivan and Brown (2013, cited in Cummins, 2015) in the UK who claim that early exposure to books before the age of 5 is fundamental to learning to read and is evidence of the causal relationship between reading engagement and attainment. Cummins claims that reading policy in recent years is out of alignment with the research evidence because the government privileges scientific, individualistic research which is limiting and they have systematically ignored research around reading engagement: "literacy curriculum and instruction should enable students to use their growing literacy abilities for powerful purposes" (Cummins, 2015: 236).

The impact of the government's policy on the teaching of reading was not only impacting upon classroom practice across the UK but was felt strongly in initial teacher education. In ITE primary English tutors were invited to regular Primary National Strategy meetings where information regarding the teaching of systematic synthetic phonics (SSP) was disseminated and the 'what' and the 'how' ITE should be teaching with regards to SSP was emphasised. All ITE institutions/providers were sent copies of the Letters and Sounds document for every student teacher in the first few years of the policy. Every year newly qualified teachers (NQTs) are asked to complete a questionnaire by the DfE. The survey contains a number of questions about the quality of their training and ITE providers are ranked according to the responses given. Particular attention is paid to the student teachers' responses to the question about how confident they feel to teach early reading (SSP). Providers are given a RAG rating (Red, Amber, Green) based on the survey. Providers who score badly are given Red, and this would trigger a visit from the government monitoring team or even Ofsted, with amber also leading to careful monitoring. For a number of years providers were asked to submit to the government data regarding the number of hours dedicated to teaching SSP on their courses, the key texts used on the courses and examples of how they have improved student teachers' understanding of SSP and the impact that these initiatives have had on students and children in classrooms. In the most recent Ofsted inspection Framework,

providers whose RAG ratings are below average or drop significantly can trigger an inspection.

All of these pressures have caused ITE providers to pay increased attention to teaching SSP on their courses at the expense of other areas to such an extent that many providers are paying huge sums of money to a private company to provide discrete SSP training in order to ensure RAG ratings remain high. The government has been criticised over the influence that Read, Write Inc. (RWI) Director, Ruth Miskin has had with regards government policy due to her involvement in designing and implementing the government's reading policy whilst being the director of a company that sells phonics training and phonics programmes to schools (Mansell, 2012). Indeed, as part of its monitoring strategy, schools were asked to inform the government of the phonics programmes that they were using in schools to ensure that they were using SSP programmes and discounts were provided for government approved schemes including the RWI scheme.

In addition, the Teachers' Standards (DfE, 2011) have also included a section where teachers (and student teachers) have to demonstrate their understanding of the teaching of early reading including SSP. No other subject apart from early Maths is identified. Clearly the performativity agenda extends to ITE providers as well as schools and this strong framing of the curriculum will have long lasting effects on student teachers' conceptions of literacy and will be examined further later on in the literature review.

2.6.11 The revised national curriculum for English (2014)

In England, despite concerns that the English national curriculum was already narrow due to the focus on basic skills, assessment and testing, in 2014 the government published a new national curriculum for English with a much greater focus on specific skills in spelling, punctuation and grammar (SPAG) and introduced a SPAG test in key stages 1 and 2. In addition to the phonics check in Year 1 where children are tested on their phonic knowledge, in Year 2 children are tested on their spelling, punctuation and grammar and again in Year 6. Children continue to be measured by a defined set of literacy skills. Moreover, in 2014 the new Conservative government handed over responsibility for standards to schools whilst still maintaining the pressure of accountability through publishing test results.

In the DfE (2014) report, *Reforming Assessment and Accountability for Primary Schools*, it was announced that due to current expectations being too low, the floor targets for reading, writing and maths would be raised from 80% to 85%. These targets were set by the previous Coalition Government and will continue under the new Conservative Government elected shortly after in 2015.

Not only were literacy levels remaining stubbornly low but the floor targets were raised even further. The reform also intends to make schools more accountable through providing more information publicly on pupil attainment and school performance, with each child receiving a scaled score based on their test results and school performance and comparing information with other schools locally and nationally. And so the trend to drive up standards through putting continual pressure on schools through increased accountability continues.

Mansell (2014), in an article for NAHT (National Association of Head Teachers), argues that the new proposals for reform of assessment and accountability promote the view that pupils' achievements should essentially be seen in competitive terms, rather than being concerned with what each individual can do, and does not show pupil progress. Mansell raises concerns about the impact of these tougher changes on the profession and cynically suggests that this is a strategy to appear tough and concerned about children's attainment when in fact, it is primarily concerned with how England compares with other nations which brings us back around to the influence of international testing on UK literacy policy and 'seeing like PISA' Sigporsson (2017). Mansell decried government's ability to force a school into academisation if results do not conform to centrally-devised statistical indicators claiming: "I found this staggering in the sense that it is still the view of the government that the only way to ensure children succeed is to threaten their schools, seemingly with takeovers" (Mansell, 2014, online). In the DfE report *Reforming Assessment and Accountability for Primary Schools* it states; "A school will come under additional scrutiny through inspection if it falls below this minimum standard. In some cases intervention may be required and could result in the school becoming a sponsored academy" (DfE, 2014: 10).

Diane Ravitch, writing about education reform in the US, describes a situation that bears a striking resemblance to education reform in England and the standard's agenda "The

thirst for data became unquenchable. Policy makers in Washington and the state capitals assumed more testing would produce more learning” (Ravitch, 2013: 13). She suggests that because schools are being held accountable based on their test scores, this has resulted in a narrowing of the curriculum and teaching to the test.

With a literacy curriculum driven by testing and accountability, it has been suggested that the assessment becomes the new curriculum as the literacy curriculum is narrowed to meet the needs of the narrow assessments (Moss, 2017; Ellis and Smith, 2017) and that these reductionist assessment tools narrow what teachers are focusing on leading to teachers missing valuable insights into their pupils’ learning (Ellis and Smith, 2017). For example, Bearne’s (2017) examination of the current summative writing assessment policy in England suggests that it does not take into account children’s rich experiences of multimodal texts as children are required to write paper-based texts, arguing that what counts in the current climate of assessment and accountability are the technical aspects of writing such as spelling, punctuation and grammar and that this will not prepare children for the complex writing skills needed to communicate in the 21st century and neither will it demonstrate the rich literacy skills and experiences that children have but that are not assessed.

Reedy et al. (2017: 53) identify “a need for broader, evidenced-informed descriptions of what it means to be literate in the 21st century”. Furthermore, Hall (2013) claims that effective teachers of literacy draw on children’s existing funds of knowledge and home literacy experiences and contextualizing the learning that demonstrates the importance of being literate and yet literacy in the current policy reform is viewed as a set of technical skills divorced from real-life literacy practices and does not take into account children’s social-cultural literacy experiences. The importance of the richness of children’s socio-cultural experiences of literacy is highlighted by Moss (2017) who suggests that when assessing children’s literacy learning, it is the variation in children’s literacy performance that is the aim because “good literacy teaching is situated in the local context and this does not align well with the standardisation of literacy teaching as it obscures these specificities” (Moss, 2017: 59). Children have a wealth of literacy practices and specific literacy needs that standardised teaching and assessment masks and promotes the view that these experiences are not what counts in life but what gets counted is what counts (Hardy, 2013 cited in Simpson, 2017). Sigporsson (2017) not

only warns that this reductionist approach to teaching literacy reduces the opportunity for rich literacy learning experiences in schools but also that it devalues the expertise of teachers as they are not involved in the decision making.

2.6.12 Impact of literacy policy on teachers and classrooms

Many agree that policy implementation from the top down is not the most effective way to bring about change in education and that if policy implementation is to be successful, strong central control at the start of the policy cycle needs to give way to greater local autonomy later on (Earl et al., 2003). However, Lefstein and Parath (2014) argue that for too long teachers' voices have not been heard during the process of educational reform and they should have greater involvement in policy creation and not just be at the receiving end of implementation. And this is particularly evident in the case of literacy policy in England where Simpson (2017) claims that policy has been working against professionalism and that teachers and teacher education experience a lack of pedagogic agency due to modes of surveillance and performativity especially in literacy and the teaching of reading and this has led to a culture of compliance (Menter, 2016). Gorur (2016) and Simpson (2017) argue that this culture of surveillance and performativity has resulted in a lack of trust in the profession by government and the public. The perceived need for a prescribed curriculum and prescribed classroom pedagogies has led to a mistrust of the profession through the implication that teachers are not able to plan for effective learning themselves but require specific guidance. In addition, the creation of Teachers' Standards as well as the requirement for all teachers to have passed literacy (and numeracy) skills tests also implies that teachers have not been sufficiently qualified in the past or were not demonstrating the necessary skills to be effective teachers.

Bottery (2004) suggests that large-scale reform like the NLS whilst reasonably successful in achieving its targets raises serious longer-term concerns for teachers. Hargreaves (2003) cited in Bottery (2004) believes that programmes like the NLS with such intensive whole school training, comprehensive materials and instruction at classroom level, can be rather 'evangelical' which Bottery believes can lead to teachers thinking that there is only one way to teach which leads to less reflective practice remaining at implementation level rather than critiquing and amending to suits the pupils' and school's needs "demanding an unthinking allegiance" (Bottery, 2004: 96)

with teachers becoming ‘technicists’ rather than professionals (Ball, 2006). Bottery suggests that this might actually be viewed as a form of power. Through providing teachers with a prescribed curriculum and classroom pedagogy they are prevented from creating the curriculum and designing the classroom pedagogy for themselves and in this way, they will not find out other alternative pedagogical strategies that might compete with the dominant views. “Teachers need also to be seeking out the truths” (Bottery, 2004: 96). It is also argued that teachers were complying with the policy rather than fully committing to it, which can lead to a passive reproduction of the routines outlined in the NLS without any real conviction or belief (Goodwyn, 2011; Ellis, 2011) and Bailey (2002) found that many teachers simply implemented the NLS at a literal level with hardly any reflection.

Ten years after the NLS was implemented Ofsted found “Where the curriculum was least effective, the teachers had found it difficult to respond creatively to the new opportunities. They were implementing national policy changes unthinkingly, often because they had no deeply held views about the nature of English as a subject and how it might be taught” (Ofsted, 2009: 19). An overly prescriptive literacy curriculum which also sought to prescribe pedagogical approaches led to teachers having little opportunity to develop their own values and beliefs about effective literacy pedagogy and curriculum. In the Ofsted (2012) report *Moving English Forward*, whilst they found evidence of good practice and effective literacy teaching, there remained a legacy from the NLS that was living on in the classrooms observed. Ofsted found what they referred to as “Myths about what makes a good lesson: excessive pace; an overloading of activities; inflexible planning; and limited time for pupils to work independently” (Ofsted, 2012: 5). When the NLS was revised in 2006 it admitted that the original framework “demanded that attention was given to the structure and organisation of the lesson” (DfES, 2006: 13) and resulted in an ‘off the peg’ structure that some teachers found restrictive. This had serious implications for literacy as this prescribed structure left little or no room for a broader conception of literacy to be taught. Teachers had complied with the NLS policy and the literacy hour structure was implemented in schools across the country. For years teachers had worked hard to teach the enormous amount of objectives through the prescribed structure of the literacy hour and as a result the NLS became embedded in teachers’ practice.

Ellis, making reference to Barber's 'behaviours not minds' approach questions the policy's expectation that if you change teachers' behaviour, then their minds will follow (Ellis, 2011). She suggests that it is not that simple and that in separating teachers' behaviour from their minds, it actually causes slower progress and leads to teachers becoming dissatisfied. By not allowing teachers to think, apart from disempowering them as discussed earlier, it prevents them from being creative and innovative which is what leads to new learning for teachers and for the profession and thus hinders teachers' professional development.

Ellis refers to the work of Knorr-Certina (2001) where she explored the affective nature of knowledge and found that it is the times when teachers find something unexpected happening and they are required to problem solve that bring about new knowledge and understanding and it is that that defines professional knowledge. The NLS prevented teachers from developing their professional knowledge (Ellis, 2011). Ellis' research into Secondary English teachers' experiences of the NLS framework found that the teachers in the study experienced a range of problems when trying to implement the new strategy. Pupils became unusually poorly behaved and made little progress, which led to teachers feeling anxious, angry and guilty. She found that teachers found that they had to ignore their deep professional knowledge of teaching English in order to follow the prescriptive framework provided by the strategy. Eventually, the teachers returned to what they believed was the right way to teach English in order to meet their learners' needs. Indeed, Ofsted noted that blind acceptance of the strategy did not enable teachers to meet all pupils' needs (Ofsted, 2002).

Much of the research on the impact of the NLS on teachers shows much dissatisfaction with the policy, a feeling of being patronised and a lack of flexibility for creativity (Ellis, 2011; Goodwyn, 2011) and yet Stannard and Huxford claim that "it was met with an overwhelmingly positive response and it answered a need and provided stability" (Stannard and Huxford, 2007: 8). "The fact that so many teachers have come to embed within their own practice the guidance offered by the NLS reflects that they welcome the support it provides" seems somewhat naïve in thinking that just because policy is embedded in practice, teachers agree with it (Rose, 2006: 12). This is in stark contrast to Goodwyn's findings where secondary teachers actually 'loathed' the training programme and materials and rather than quiet compliance, some teachers appeared to

be following the programme when in fact it made no change to their practice. However, Alexander (2010) found that the many young teachers welcomed the guidance that the PNS offered and it was older, more experienced teachers, literacy organisations and research communities that were more critical of it. However, in contrast to Ellis' concerns about policy being able to change behaviour but not necessarily attitudes, Webb and Vuillamy (2007) in their research in key stage 2 classrooms between 2003 and 2005 claim that many older teachers who were teaching prior to the implementation of the NLS did change their views on effective literacy pedagogy as a result of the NLS and look back critically on their practice before the NLS. Webb and Vuillamy's research shows that teachers are able to be creative and develop their professional knowledge following changes in policy (Vuillamy et al., 1997, cited in Webb and Vuillamy, 2007).

Ball (2006) suggests that since the 1980s education has been subject to a quality improvement drive and policy makers have looked to the private sector for good practice where, in marketisation, self-interests are at play and incentives and rewards are used to motivate and drive up performance in the market place. "These incentives and rewards are intended to displace the 'outdated' niceties of professional ethics" (Ball, 2006: 11) resulting in the deprofessionalising of teaching where teachers become technicians, trained to deliver targets. "The investment of the self within practice, and professional judgement related to 'right' decisions are devalourised" (Ball, 2006: 12) and he argues that the discourse becomes one of performativity based on outputs and targets where the performance of individuals and organisations are used as a measurement of productivity. Barber's 'deliverology' of policy implementation gave rise to a meta-language for describing productivity in schools where standards, data, monitoring, tracking, target setting and auditing became common language. Ball (2003) suggests that through educational reform, what it means to teach and what it means to be a teacher is redefined. Through policy texts, new terminology and language are introduced for describing teaching and learning and teachers need to describe themselves using this new language and thus teacher identities evolve and are created as a result of policy implementation. The effects of literacy policy and implementation are thus far-reaching.

Ball claims that conflict can exist between the individuality of teachers and their role within the institutional community of the school, particularly in the current education climate where many schools are managed by private companies in the form of

academies, which can be argued to have even stronger corporate identities. Where teachers experience conflicting beliefs, Ball (2003: 220) claims teachers can become 'ontologically unsure' of themselves and uncertain of their self-worth resulting in teachers simply fulfilling expectations and not teaching as they would like to. Consequently, Ball suggests that teaching becomes inauthentic and teachers can lose sight of their own identities, "Effectivity rather than honesty is most valued in a policy regime" Ball (2003: 226).

In January 2018 a report carried out by Leeds Beckett University and Teachwire.net highlights teachers' mental health as a current issue for teachers but also how it is impacting upon the relationship between teachers and learners, teachers' ability to be creative and on pupils' attainment. The report suggests that this is caused by workload pressures and constant scrutiny.

Bearne (2017) in relation to the UK literacy assessment policy is in agreement and suggests that teachers are struggling with their instincts between what they feel is right and what they have to do to because of the pressure of accountability. Bernstein (1996: 73) warns of the danger for teachers "If the identity produced by (performativity) is socially 'empty' how does the actor recognise him/herself and others?" Ball argues that teachers, with their individual values and beliefs, often struggle as their values are challenged by such performativity and educational reform changes who teachers are. "This is the struggle over the teacher's soul" (Ball, 2003: 217) where beliefs are no longer valued, and are part of an older displaced discourse. Teachers' identities, values, beliefs and attitudes can shape responses to policy or be shaped by their experiences of policy enactment.

Mills, writing about literacy policy, claims that "it is important to understand how power works in the field of United Kingdom primary school literacy policy and its – often politicized – travel into schools and classrooms" (Mills, 2011: 103). Mills examined the policy drivers responsible for transferring literacy policy into schools. His findings found that areas of conflict existed between the people involved in implementing policy and the policy drivers because of their different interests. Particularly when teachers have strong views on what counts as literacy, which are in conflict with the policy drivers' views. Mills' (2011) research suggests that the different actors either driving

policy or enacting policy frame policies differently to one another depending on their interests and stakes in the process. The policy drivers tend to frame literacy policy based around issues of performativity whilst head teachers and teachers frame literacy policy based around their own understanding of literacy from initial training, professional development and classroom experience and their framings are very closely linked to their professional identities. Head teachers however, were often ‘caught’ between two framings: their personal, professional identities and the need to adhere to government policy and the school improvement agenda whereas the current mix of policy drivers tends to frame policy around school improvement, raising standards and target setting.

Since 1997, and until fairly recently, LA consultants have been the policy drivers in primary schools, driving National Literacy Strategy initiatives into schools but in 2009, when the PNS ended, the role of the LA was to develop effective partnerships to support schools in improving standards. With the marketisation of schooling, the LA is no longer the sole provider of support for schools but is one of the many providers, which has resulted in schools opting to buy in from a range of private consultants or companies to provide training and support. These providers have a range of interests and influences and can get caught up between the interests of the school and the companies that they work for. Mills found that teachers are more likely to view the policy from the school’s and children’s priorities and are closely related to their professional identities often talking about their understanding of literacy based on their initial training or professional development experiences and what they knew about literacy learning and teaching from their experience of teaching.

2.6.13 Impact of literacy policy on ITE in England

The impact of literacy policy on initial teacher education has been strongly felt and whilst many have disagreed with some of the literacy policy drives, they have been left with little choice or agency due to effective monitoring and surveillance strategies employed by policy makers. Whilst universities may have been viewed as independent sources of knowledge and training, some claim that university-led teacher education has been manipulated by governments to achieve their desired outcomes: to raise standards, compare favorably in the international comparative tests and compete successfully in the global market (Cochran-Smith, 2016; Murray and Mutton, 2016). Governments have also manipulated teacher education in order to address issues within the school

system. For example, as discussed earlier, not only were universities pressured to include the teaching of SSP in their literacy programmes but also around the time of the Independent Review of Reading by Sir Jim Rose in 2006 and the subsequent policy drive to prescribe the teaching of systematic synthetic phonics in schools, universities were funded to carry out a project called Leading Partners in Literacy where student teachers were to work in schools to support the teaching of reading. Universities then had to report on the impact of the project in terms of the impact on the learners in classrooms. There was much pressure on universities to carry out the project and compile impact reports. Despite complaints, not only did HEIs add the teaching of SSP to their literacy programmes but they duly implemented all of the government's policies with regards to the teaching of reading, allocating much more time to the teaching and monitoring of phonics at the expense of other important areas of literacy teaching and learning. And this was because of the intense system of monitoring and surveillance through NQT surveys and Ofsted inspections. Cochran-Smith (2016) claims that this compliance was a result of the government micro-managing ITE and a general culture of compliance that has been developed over time through the strict monitoring systems.

Not only have universities been manipulated to support policy implementation but it would appear that university-led teacher education has fallen out of favour with the government and this has led to less autonomy and funding and an increase in pressure to change the nature of teacher education to a more practice-led training route. "Analysis of teacher education in any nation is deeply revealing of the currently dominant values within that society" (Menter, 2016: 3) and none more so than in the UK. As discussed in the introduction, the UK has witnessed significant changes in the way that ITE is delivered. Sigporsson (2017) argues that the government's practical turn away from university-led teacher education to school-led teacher education has resulted in universities having less of a say in the ITT curriculum. Concerns over the importance of student teachers' making theory practice connections has been voiced by many (Donaldson, 2015; Cochran-Smith, 2016; Peiser, 2016). "Teacher education requires an integrated relationship between theory and practice and the academic and the practitioner" (Donaldson, 2010: 4). Donaldson argues that simply spending more time in the classroom is not the answer. Student teachers need to reflect on the complexities of the 21st century classroom. He calls for a greater synergy between schools and universities to allow students to reflect on theory in practice. Ellis and Smith (2017)

suggest that effective literacy teaching draws on a range of professional knowledge and it is the role of ITT to enable student teachers to be ‘nimble’ in adapting their teaching to meet individual learners’ needs. This requires theoretical understandings in order to apply their ideas in practice and hence the value of university training and academic learning is essential in teacher education.

In agreement are the recommendations made in the BERA and RSA report into the role of research in teacher education in 2014 where they recommend the importance of supporting student teachers to develop strong connections between theory and practice and that teachers should be supported to become research literate resulting in teaching that is informed by the best evidence.

Research informed practice is still vitally important for developing the profession and Sigporsson calls for a common understanding of the desired outcomes of a literacy education based on a shared definition of literacy and this requires research into literacy and literacy pedagogies. He suggests that universities should be included as stakeholders in supporting policy decision-making and that student teachers and teachers should be consulted in developing literacy education. However as a result of a ‘practical turn’ (Cochran-Smith, 2016) in government policy university-led ITE now has less of a say in teacher education. Peiser suggests that there are several obstacles in the way of research-led practice in universities and warns that university teacher education institutions are now more likely to employ teachers from a practice background than academic or research background and warns of ‘a gulf between education researchers and those teaching on teacher education programmes’.

2.6.14 Impact of literacy policy on student teachers

Hall (2013) and Ellis and Moss (2014) in their research found that student teachers’ views of literacy are influenced by the literacy policies that they have experienced. Their views of literacy reflected the current dominant view of literacy in that they focused heavily on the cognitive skills of literacy such as phonic knowledge. This is not surprising given the policy on teaching daily SSP in schools and the emphasis placed on phonics in university training as a result of Ofsted phonics inspections and the NQT survey that ask students how confident they feel to teach phonics after their training has completed. Teachers’ standard 3 relates to the teaching of phonics in particular “if

teaching early reading, demonstrate a clear understanding of systematic synthetic phonics” (DfE, 2011: 11). Student teachers are required to demonstrate competence in this very specific area of the curriculum.

In order for student teachers to have a broader understanding of children’s literacies and become effective literacy teachers Ellis and Smith (2017) propose that student teachers use a literacy assessment tool with children to enable them to see the bigger picture of literacy learning rather than the narrow assessment focus contained within the current assessment policy. They recommend that student teachers are encouraged to examine a mix of evidence from three knowledge domains: cultural and social capital, personal-social identity and cognitive knowledge and skills. They argue that current assessment policy focuses on the domain of knowledge and skills but Ellis and Smith argue that effective assessment of literacy needs to assess the areas within all three domains. This will enable student teachers to recognise that children have existing funds of knowledge from their home literacy practices that can be utilised to contextualise school literacy learning.

Figure 2 below shows the three knowledge domains proposed by Ellis and Smith

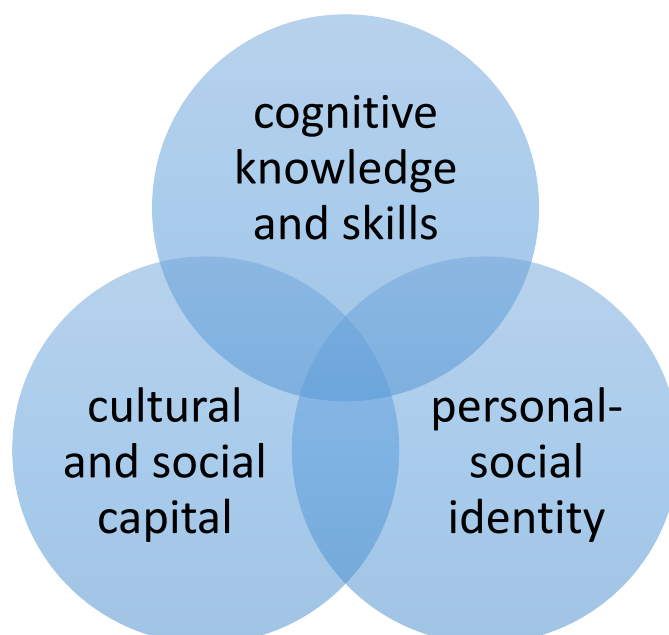


Figure 2. The three knowledge domains as a boundary object situating literacy as a cognitive, cultural & social/emotional practice.

Source: Ellis and Smith (2017: 86)

Whilst the skills-based discourse influences student teachers' views of literacy, Student teachers' views of literacy and classroom practice are also shaped by a number of factors including: their personal literacy practices; their own school experiences; their experiences in classrooms during their training and education policy and the literacy curriculum. Britzman (2003) suggests that student teachers bring to their training their own school biography; their experiences of being at school, of being a learner and that this influences their own beliefs about what a teacher 'is and does' helping them in their apprenticeship into the Discourse of a teacher. However, Britzman suggests that becoming a teacher can feel both "uncannily familiar and utterly strange" (Britzman 2003: 4). Labaree (2000) and Warford (2011) suggest that because student teachers have spent over a decade in schools, they bring to their training embedded understandings of teaching and learning and knowledge of curriculum content. Unlike other professions, where they are likely to have little personal experience to bring to bear upon their training, student teachers bring their past experiences as learners to their training. "It may be that the widespread idea that 'anyone can teach'... originates from this; what child cannot, after all, do a reasonably accurate portrayal of a classroom teacher's actions?" (Lortie, 1975: 62). Labaree argues that many student teachers, when observing teachers in the classroom, make the mistake of observing what teachers do but do not analyse why they do it. Warford suggests that student teachers need to be encouraged to reflect on their experiences as learners and examine their assumptions in order to develop a more analytical approach to teaching and learning. Marsh (2006), in exploring student teachers' uses of popular culture in the literacy curriculum, also found that the student teachers in her study were strongly influenced by their own experiences of school where 'the use of popular culture was not a done thing' and therefore, they were wary of using it in their own practice. If student teachers are seeing the focus on literacy skills in schools and in their training, then their understandings of literacy and their own practice will reflect these dominant practices.

2.7 Transformative, additive and disruptive pedagogies

Not only are student teachers heavily influenced by their own experiences of literacy in school but Burnett (2009) also found in her study of student teachers' digital lives and classroom practice that student teachers try hard to fit in with the existing practice of the classrooms that they are placed in. The student teachers in her study also showed that where they incorporated digital literacy into their teaching it was to fit in with the

existing classroom discourse around the production of digital texts, creating PowerPoint presentations rather than more transformative pedagogies. In this way they were using an ‘additive pedagogy’ where the digital technology is being used to support existing classroom practice (Vratulis et al. 2011). In the pedagogy of multiliteracies approach advocated by the NLG transformative pedagogies refer to redesigning practice. Burnett suggests that student teachers learn what is possible through seeing teachers modelling transformative practice and if they are not seeing it in practice, they are less likely to try it out for themselves. Vratulis et al. used Hedberg’s and Freebody’s (2007) description of ‘disruptive pedagogy’ to describe how digital technologies can bring about a transformation of classroom practice because they encourage new ways of thinking about teaching and learning that result in an actual change in classroom practice. Vratulis et al. recommend that ‘disruptive pedagogy’ be used with student teachers in order to disrupt the taken for granted pedagogy that student teachers experience in many classrooms and encourage them to reflect on what they see and upon their own practice. Student teachers need to be challenged by different practices that do not always fit with the dominant discourse and practices. In this way, they are encouraged to critically reflect on their own practice and compare with ‘normal’ practices seen in classrooms.

However, student teachers, in their endeavours to fit in with existing practices, do not usually challenge and therefore continue to support existing views and practices. Research supports the idea that student teachers’ views are heavily influenced by what they see in classrooms (Marsh, 2006; Burnett, 2009; Vratulis et al., 2011) and Vratulis et al. therefore suggest that teacher training programmes and schools need to work more closely together to develop shared aims and common goals. He argues that it is not enough to expose trainees to new pedagogies or ‘disruptive pedagogies’ in initial teacher education if they are not seeing them in practice when they go into schools. This might become more problematic as a result of the government’s ‘practice’ turn where teacher education is increasingly delivered by and in schools with ITE having less influence on policy and practice.

2.8 Student teachers’ professional identity formation

Student teachers are not only learning to take on a professional role and become teachers but part of this process is being able to recognise themselves and each other as teachers. This process is complex as they move through and negotiate different spaces on their

journey and move from being a student to a teacher. Victor Turner used the theory of 'Liminality' in the 1960s to describe the rites of passage in tribal groups. It describes the space between being a new member of a group and eventually becoming accepted as an experienced member of the group. He used the term to describe the space in which the transition takes place from the state of being inexperienced to being experienced and used the phrase 'Betwixt and Between' to help describe this transitional phase as a separate space between the two spaces; before and after initiation; a state of becoming (Turner, 1970). Cook-Sather (2006) drew upon Turner's theory to help her to understand how the student teachers that she worked with inhabited this liminal space through email dialogue with experienced teachers, thus applying Turner's theory to a contemporary and relevant socio-cultural context. Cook-Sather recognises her own multiple identities, as an experienced teacher with deep professional knowledge but also as a teacher educator bound by US education policy, "I have significant freedom to structure a teacher education program according to 'social progressive' (Oakes & Lipton, 2003: xv cited in Cook-Sather, 2006) or even radical principles, but in doing so I struggle with the increasing tensions between such an approach and the current, more conservative emphases in U.S. schools and federal policy" (Cook-Sather, 2006: 5). Cook-Sather recognises the complexity of modern life and the multiple identities that teachers and student teachers move between, highlighting the struggles that student teachers experience as they reconcile differences between their different identities; that of being a student teacher with that of a 'teacher to be'. Cook-Sather suggests that "through reflecting on what they read, think, see, or experience, student teachers must consider how they will position themselves and be positioned by what they think and see, and they must actively engage in the process of their becoming selves able to take on the identity and responsibilities of a teacher" (Cook-Sather, 2006: 10).

2.8.1 Structure and agency

How student teachers actively engage in classrooms is discussed in greater depth within the methodology and discussion chapters that follow. Archer (2007) claims that people use their inner conversations 'reflexivity' to actively engage in the world by considering themselves in relation to the social world and they devise a course of action based on these deliberations. This would suggest that they are acting consciously. She does however suggest that people cannot act with complete freedom but are acting within the constraints of the social structures they encounter whilst making their way through the

world whilst Bourdieu (1990) argues that people are influenced more heavily by the social structures and act mostly unconsciously based on their past experiences and social and cultural powers. There is clearly debate around how much external structures and social and cultural powers affect a person's actions and how much agency individuals experience when operating in the social world. How agentic can student teachers be and how are their decisions and actions depicted by social structures? I will examine further the structure/agency debate and what this means for student teachers and how they develop their professional identities and how they know what to do when in classrooms when exploring the agency-structure debate in the methodology chapter. In that chapter I will be comparing Archer's notions of reflexivity, Bourdieu's concept of habitus and the figured worlds of Holland et al. (1998) and Gee (2011a).

Lave and Wenger (1999) used the theory of peripheral participation to describe how apprentices move from being an apprentice to becoming accepted into the community of practice that they are training for. "Participation involves a process of participating, of absorbing and being absorbed in – the culture of practice" (Lave and Wenger, 1999: 22). Lave and Wenger suggest that whilst on the periphery, observing and participating, the apprentice gradually develops an understanding of what it is to become a member of that community. As newcomers or learners move from the peripheral to become part of the community, they occupy the liminal space that Turner identified, in which they undergo the transformation from apprentice to an experienced member of the community. In the case of student teachers, they achieve this by taking on a more active role in the classroom and eventually taking full responsibility for planning and teaching. Lave and Wenger suggest that during this transformation, newcomers will experience a dilemma of wanting to be accepted into the new community by taking on the identity of someone in the desired community in terms of behaving like them and talking like them, but at the same time wanting to establish their own identity.

As discussed earlier, Gee (1999) uses the notion of a 'big D' Discourse to describe how we use language plus 'other stuff' to enable ourselves to be recognized as members of specific communities. He suggests that when you speak or write you project yourself as a certain kind of person depending on the social practice or community that you are operating within or trying to become a member of. Gee claims it is more than simply the language that you use:

It is a way of saying, doing and being”; “it is important to see that making visible and recognizable who (identity) we are and what (practice) we are doing always requires more than language. It requires, as well, that we act, think, value, and interact in ways that together with language render who we are and what we are doing recognizable to others (and ourselves) (Gee, 1999: 30).

Being a teacher requires a particular kind of Discourse and student teachers will experience multiple identities and Discourses throughout their training: being a student, being a student teacher, becoming a newly qualified teacher and finally becoming a fully qualified teacher. “In the end a Discourse is a dance that exists in the abstract as a coordinated pattern of words, deeds, values, beliefs, symbols, tools, objects, times and places as a performance that is recognizable...it all comes down to what the ‘masters of the dance’ (the people who inhabit the discourse) will allow to be recognized as a possible instantiation of the dance” (Gee, 1999: 36). Student teachers will begin to talk like and act like a teacher, through taking on the language and practices (ways of being) of the experienced teachers they encounter. Sfard and Prusak (2005) used the term ‘significant narrators’ to describe ‘the most influential voices that have the greatest impact on one’s actions’ (2005: 18). When student teachers are busy building their professional identities they are drawing on the voices and stories of others (Bakhtin, 1981) such as the teachers that they work with but also the dominant Discourse contained within policy documents that they implement in their practice will influence their ideas and beliefs.

Power relations between the experienced teacher and the student teacher will play an important part in the newcomer becoming an accepted member of the teaching community. Gee suggests that the newcomers are the carriers of a Discourse, and in becoming a member of a particular community of practice they continue the Discourse. Moreover Lave and Wenger claim that learners not only enable the Discourse to perpetuate but that conflicts can exist between the experienced members and the newcomers, and as they act out their differences new learning for both parties will emerge with the practice under constant development. Lave and Wenger argue that this is a natural order of things, newcomers will eventually displace the experienced members and whilst the practice will find continuity through the apprentice, the apprentice will add something new to the existing practice.

The apprenticeship model as discussed by Lave and Wenger is particularly relevant in the current climate where more and more teacher education is taking place in schools. In the case of School Direct and SCITT training where the majority of student teachers spend their time learning to become teachers whilst working alongside experienced teachers, student teachers become immersed in school practice and are more likely to be influenced by the teachers that they work with due to the increased amount of time spent with them in classrooms. Whereas in university based training there exists an additional space for learning and reflection providing student teachers with a wider range of experiences that includes working alongside teachers in different schools and working with different university tutors on the taught part of the programmes which will provide them with multiple perspectives and experiences upon which to base their own beliefs and practices. Providing the space for thinking and reflecting with others outside of the classroom and allowing time to consider the links between “Theory and practice is a key element of learning to be a teacher with teacher education needing an integrated relationship between theory and practice and the academic and the practitioner” (Donaldson 2010: 4). Cochran-smith (2016) points out that with policy turning away from university-led teacher education to practice-led training it is presenting the notion that the universities and the academic or theoretical underpinning inherent in university training programmes are somehow failing to effectively prepare student teachers for the classroom.

Loughran and Russell (1996) cited in Vratulis et al (2011) suggested however that initial teacher education programmes exert a great influence on trainees’ views and that it is during their training that they are apprenticed into innovative pedagogies and practices, literacies and digital technologies. Rowsell et al (2008) suggest that initial teacher education needs to develop student teachers’ understandings of new literacies and new media and encourage them to consider the implications for pedagogy and they suggest that student teachers need to be encouraged to go beyond the print based materials and provide learners with texts that reflect the emerging literacies experienced in their daily lives.

However, Williamson (2013) points out that student teachers are experiencing a disconnect between what they are learning in university based training and what they are experiencing in schools. Whilst literacy educators are trying to prepare student

teachers to teach literacies that are ever changing, the English curriculum remains autonomous and skills based. If student teachers are only trained in schools, they will only be exposed to the dominant view of literacy contained within school literacies. Student teachers' experiences of the English curriculum also serve to heavily influence their understandings of literacy. Unfortunately, many argue that school literacy has continued to fail to reflect the range of children's home literacy experiences and practices and needs to do more to reflect the ways in which young people engage in literacy practices outside of school (Davies, 2006; Marsh, 2007; Merchant, 2007; Prensky, 2012).

More recently research in England conducted by Burnett et al. (2015) of a group of undergraduate student teachers' perceptions of literacy and literacy pedagogy identified three binaries in the ways in which literacy can be perceived: fluid/fixed; social/individual and paper-based/digital. Whilst the student teachers' uses of literacy in their personal lives were fluid, social and often incorporated digital technologies, when they spoke of their experiences of literacy in schools their experiences were of a fixed curriculum based on specific skills, was focused on the individual as a learner and often paper-based. Burnett et al.'s research also found 'practices encountered in school often won out over practices we had explored at university' (Burnett et al., 2015: 26). Sadly reinforcing earlier findings (Marsh, 2006; Burnett, 2009; Vratulis et al., 2011). However much can be learned from this research which can be used to inform ITE in preparing student teachers to teach literacy. Burnett et al. suggest that it is the role of universities to support student teachers in "navigating the complex context they face in the classroom, make informed decisions about approaches to teaching and learning literacy and to reflect on the implications" (Burnett et al., 2015: 29).

2.9 Conclusion

The literature review has examined an extensive range of literature exploring the complex and messy business of literacy (Kress, 2003). It has included different definitions and perspectives on literacy, the impact of international comparative literacy tests on literacy policy in England and around the world and the impact of large-scale literacy policy reform on classrooms, teachers, initial teacher education, student teachers and children. The changing nature of literacy and the role of digital technology in everyday literacy practices and the relation to schooled literacy has also been

considered. Existing research suggests that student teachers find it challenging to navigate complex literacy classroom spaces and that tensions exist between personal views and experiences of literacy and the framing of literacy in curricular frameworks. The next stage in this thesis will outline the methodology used to further examine the literacy lives and classroom experiences of a group of undergraduate student teachers.

Chapter 3

Methodology: The theoretical underpinning

3.1 The researcher's position (ontological perspective)

What do I want to know and how will I find it out? In answering these questions I will outline my position in terms of what knowledge is to be gained and the best way to obtain such knowledge. As a former primary teacher I know that there are structures that teachers work within in their daily practice. These structures heavily influence teachers' practice but is there also space for individual teacher agency? How much agency do student teachers' exercise in classrooms? How does each student teacher encounter structure and agency and what do they do in these situations? As already discussed in the literature review, there are a number of structures that impact upon student teachers and teachers, including: powerful ideologies; government policy in the form of curriculum; and the standards and performativity agenda. What I want to explore is how do student teachers experience these social structures when teaching literacy? How do the structures impact upon their beliefs, identity, practices and relationships with teachers? And how do teachers and student teachers build pedagogical knowledge and agency with regards to digital literacy? And finally, what can we learn from their experiences that can be used to inform ITE and government policy?

In conducting the literature review and considering definitions of literacy and views of literacy that permeate literacy policy I was also made aware of my own beliefs and views on what literacy is and on the significance of digital literacy. Particularly during the interviews I did not want my own views to influence the participants' responses, especially as some of the students had studied one of my modules on multiliteracies earlier in the year where definitions of literacy and the literacy curriculum were explored. It is inevitable however that I will have influence over the participants but where the questions were asking them to talk about their own experiences I am hopeful that the researcher's influence is reduced. I was also aware of just how much my own practices are shaped by government policy. On a daily basis in my role as an English lecturer in initial teacher education I have to consider the government's back to basics phonics agenda as it is deeply embedded within our teacher training courses in the form of organising the teaching of phonics sessions, monitoring the students' phonics booklets, discussing with students their progress with teaching phonics, observing students' phonics lessons in schools, staff training or preparing for an Ofsted phonics inspection. Our literacy programmes are heavily shaped by government policy and so

are my own practices as I work within these social structures. I am shaped by the structures within the university department, the wider university structures and government policy in ITT as well as in schools as I move between these social spaces.

In recognising that these social structures exist even though they are not observable to the eye, I believe in a realist ontology. This is what makes the ‘how will I find out’ question more difficult because it will not be possible to observe these structures operating but it will be necessary to find out about them from analysing other peoples’ experiences resulting in issues around interpretation and analysis. All of these dilemmas will be discussed in the following sections as I work through the issues to come to a satisfactory understanding of the best way to approach this piece of research.

3.2 The search for truth

The purpose of research is a search for truth. What do I want to know? And how will I find it out? There exists a difference between truth and truthfulness where ‘truth’ is based on the idea that some knowledge claims can be more epistemologically sound than others and ‘truthfulness’ is the desire to get to the truth, to delve beneath the surface (Williams, 2002 cited in Maton and Moore, 2011). In 2013 in an article written by John Furlong in the Times Higher Educational Supplement (THES) Furlong writes about his fears for university based educational research and the role of universities in ITE. Furlong defends universities claiming that what universities continue to do well is to challenge ‘truths’ and ‘contest knowledge’ and encourage future teachers to evaluate and challenge assumptions about learning and knowledge for themselves. As already identified in the literature review, there is a current shift from university based teacher education to school based teacher education which poses challenges for educational research and the evaluation and development of new and effective practices.

Our confidence in the “truth” of our knowledge may now be tempered; we know that any “truths” that research and scholarship can reveal are partial and only temporary - in the end they atrophy. But what does not change is our commitment to the process of the pursuit of truth. Generating and assessing evidence, challenging and contesting assumptions; these are processes that go to the heart of our teaching and research (THES, 2013: 3).

Furlong recognises that any pursuit of truth only provides a picture of truth, as it is at that moment in time, and that with time, new knowledge is discovered that can amend existing knowledge although some truths are more permanent.

The search for truth or truthfulness presents the social scientist with a number of challenges. The very nature of studying social phenomena means that there are many different things going on at once, making it difficult to isolate individual events and processes, unlike the natural scientist for whom it may be possible to isolate processes through controlling variables in experiments.

People and institutions are fundamentally different to the natural sciences and therefore studying the social world requires a different perspective (Bryman, 2012).

Phenomenology presents the researcher with an alternative research paradigm through the study of how individuals make sense of the world around them. According to Sayer (2000) meaning cannot be measured or counted, it has to be understood. Phenomenology is a point of view, involving hermeneutics; the interpretation of human action which leads to *understanding* human behavior in contrast to positivism which seeks to *explain* human behaviour (Bryman, 2012). The researcher seeks access to people's understandings of the world that they inhabit, by attempting to see things from their point of view which requires the social scientist to gain access to people's 'common sense' thinking, requiring the researcher to interpret not only their actions but the social world from their perspective (Shutz, 1962 cited in Bryman, 2012).

3.3 Interpretivism

Interpretivism however requires careful consideration. The researcher must keep in mind that they can only provide an interpretation of the subject's point of view and one might argue that there is a third interpretation or a double hermeneutic whereby the researcher's interpretations of the participants' interpretations have to be interpreted (Bryman, 2012). Sayer suggests that the social scientist has to enter the world of the participant and thus a double hermeneutic creates "a fusing of the horizons of listener and speaker" (Sayer, 2000: 17). Interpretivism requires the researcher to be reflexive, aware that they are interpreting meaning through their own frames of meaning (Sayer, 2000). "Social Scientists are construing, rather than 'constructing' the social world"

(Sayer, 2000: 11). The social scientist should be reflexive, and aware of not allowing their own standpoint to affect the interpretation of the research and lead to a misrepresentation of the subjects' views. Acknowledging standpoints, of both the researcher and the subject is important to the integrity of the research (Bourdieu, 1984 cited in Sayer, 2000).

Because interpretivism is concerned with the individual meanings and understandings of subjective human experiences, there is a danger of leaning towards idealism. By focusing on individual meanings and interpretations of the world one might accept multiple interpretations of events and avoid identifying any truth at all. Haraway (1991) explained this in terms of the 'god-trick' to explain how relativists claim everyone is correct and everyone's view is valid and therefore avoiding having to claim an absolute truth 'it is a way of being nowhere while claiming to be everywhere equally involving a denial of responsibility and critical enquiry' (Haraway 1991: 191). Whilst positivism seeks to search out the truth, at the opposite end of the spectrum is relativism which accepts multiple truths, that the world is what people understand it to be, implying that we can make the world to be what we want it to be, that all points are valid, in fact, there is no absolute truth.

3.4 Realism

It has been suggested that there exists an epistemological dilemma for social scientists in education who are torn between the assumption that they have to make a choice between positivist absolutism and constructive relativism where knowledge is either decontextualized and value-free or it is socially constructed (Alexander, 1995 cited in Maton and Moore, 2010). Bhaskar (1975) suggested an alternative to positivism and interpretivism, offering a third way between the two, a perspective known as 'realism'. Maton and Moore believe that realism replaces the and/or of positivism and interpretivism with a more refined both/and. According to Sayer, realism aims to combine natural science with recognising the need to interpret understanding of meaning in social life. "It is neither law-seeking (nomothetic) or idiographic (concerned with documenting the unique)" (Sayer 2000: 5).

Both realists and positivists agree that there is a world that exists independently of our knowledge of it. Just because we do not know something does not mean that it does not

exist. The world exists regardless of what we think we know about it. Realism accepts that our knowledge is fallible, and in fact, history has proved this many times in the world of science, when new knowledge has proven existing knowledge to be incorrect and has led to new understandings.

From a realist perspective, like positivism, causes and effects are investigated and identified but realism recognises that social research takes place in open contexts where there are many events happening all at once and many connections between people and events, unlike closed systems often investigated using natural science methods where variables are controlled. “Realists expect concrete open systems and discourses to be much more messy and ambiguous than our theories of them and do not consider that differentiation poses a threat to social science” (Sayer, 2000: 5). Sayer goes on to explain that critical realists do believe, like interpretivists that interpretative understanding is important and necessary but it is also necessary to identify causal explanations. However, realists do not rely only on empirical evidence based on what can be observed, they also consider things that cannot be observed as they can be discovered by the observable effects (Collier, 1994). Unlike positivism, in the social world, causation cannot be understood by the search for regular conjunctive events (Bhaskar 1975). Sayer argues that regularities are virtually impossible to find in the social world due to the varying and different conditions that exist due to the social world being an open system. Realists agree with post modernism that the world is diverse and there exists multiple perspectives, which can make it difficult to obtain reliable knowledge. Explanation depends on identifying the structures and mechanisms that lie beneath the surface (Bhaskar, 1975).

Critical realism is ‘critical’ because it suggests that if we can identify the structures and mechanisms that generate events, then we can identify ways to bring about change, which is the basic principle of critical realism. Critical theory criticises both positivist and interpretivist perspectives because they do not take into account important political and ideological contexts. Bhaskar (1989) argues that these mechanisms are not always observable patterns of events and can only be identified through the ‘practical and theoretical work of the social sciences’ (Bhaskar, 1989: 2).

Because the search for truth in social science is complex and the findings partial, Sayer (1992) suggests that we should think of it more in terms of ‘practical adequacy’ – what is a good interpretation of events and meanings? Realism recognises that our knowledge of the world is fallible, and that we can never claim to have found the absolute truth. However, Collier suggests that ‘not all knowledge is equally fallible’. Whilst natural science is often viewed as the highest form of ‘pure’ science, Sayer (1992) argues that there are different types of knowledge, which are appropriate for different functions and contexts. Realism does not suggest that people understand each other perfectly but that the knowledge gained may be more or less adequate to be useful. Sayer argues that knowledge is useful where it is ‘practically adequate’ to the world (Sayer 1992: 70). Because we can only understand the world in terms of our conceptual resources and through language, this does not affect the existing structures as they really are – hence the world exists independently of what we think we understand about it and thus we cannot claim to know the absolute truth but what we do learn must be useful. Therefore it is important that through this research, I not only seek to explain the students’ views of literacy and their experiences of classrooms and training but also seek to identify the social structures that are not observable but nevertheless exist. Only in identifying these structures is it possible to understand behaviours and seek to bring about change.

3.5 Social structures

Social structures are the social and cultural systems that shape the society that we live in and create a network of social relationships as discussed earlier in the literature review. Apple (2004) argues it is important that we understand that all people at all levels are connected in society. Archer (2003) in her book *Structure, Agency and the Internal Conversation* explains how cultural and social structures affect the social conditions that people are living and operating in and I will be returning to Archer’s ideas on agency and structure later on in this chapter as I make use of her ideas to analyse the data. As we interact and live with others in society we are developing our sense of place and who we are. Whilst it is important to note that social structures can influence behaviour, it is not always so and the extent to which social structures impact on attitudes and behaviour is hotly debated and shall be discussed in detail later.

3.6 Looking inside and outside of the ‘Black box’ of classroom practice

This research will examine the social context of the primary classroom and how student teachers respond to the social and cultural structures that they experience in classrooms. Whilst I will identify the structures that shape the classroom conditions that students and teachers encounter, the focus will be on *how* they operate within the classroom context and *how* they respond to the structures shaping their experiences.

The metaphor ‘black box’ has been used (Black and William, 2005; Apple, 2004; Cuban, 2013) to describe the relationship between the external structures that impact on schools and classrooms, the schools and classrooms themselves, and the outcomes in terms of pupils’ learning outcomes. Rather like an economic model; funding goes in and student output in terms of attainment and raised standards comes out. As explored in the literature review, the neoliberal ideology that education has been viewed by policymakers as the solution to economic crises has far-reaching consequences, and none more so than for teachers and classroom practice. Apple claims that policy makers view what happens inside the black box, the daily life of school and classroom practice, as unimportant as they are primarily concerned with what happens outside of the box in terms of global and macro-economic matters and the reproduction of the division of labour. Cuban (2013) adds that whilst policy makers are interested in the input and the output, they have no clue about the transformation that has actually occurred inside the black box of the classroom and argues causality between policy reform and teaching quality is usually inferred when standards rise or fall. Cuban argues that policy makers know very little about the complexities of schooling and classroom practice and that much more information and data is needed about the complex realities of the classroom if potential change is ever to be realised. This research will provide more information to support a greater understanding of classroom practice.

Whilst some claim that policy reform has greatly impacted upon classroom practice (Bottery, 2004; Ball, 2006; Cummins, 2015; Ellis and Smith, 2017), Cuban argues that in the United States in spite of fundamental changes in the structures of schooling through education reform, teaching routines have been left largely untouched. He cites an example of one of the key aspects for change that was introduced into classrooms; the implementation of new technology intended to transform teaching practice which he claims has not been realised. “Continuity in classroom practice has trumped

fundamental reforms in teaching” (Cuban, 2013: 8). Cuban argues that we need to get into the black box of the classroom in order to find out why teaching practices are so durable. Cuban’s perspective on the impact of ideologies and curriculum reform on actual classroom practices and the use of new technologies is highly relevant to my research and interesting in light of the impact on conceptualisations of literacy as a result of policy and educational reform discussed in the literature review and in particular, in relation to the student teachers in this study. Just how durable are the teaching routines in the classrooms that the student teachers experience?

Both Apple and Cuban agree that it is important to pay more attention to what happens inside the black box of the classroom in order to find out more about the complexities of classroom interactions. If Cuban is right, and fundamental reform is not altering classroom practices greatly, why is this so and how might transformation be possible?

Archer (2003) also considers realist social theory to have focused on the social structures rather than what agents actually do when they encounter structure. She argues that it is the interplay between the causal powers of the social structures and the causal powers of the subject/agent that needs examining. She argues:

Considerably more effort has been devoted to conceptualising how structural and cultural properties are transmitted to agents, and potentially work as conditional influences upon them, than has been given to the other side of the equation, namely, how they are received and responded by agents in return. It is this one-sidedness that I seek to address (Archer, 2003: 131).

It is exactly this aspect of the classroom interactions that I want to explore. The focus of my research is to examine closely what happens in the classroom through the eyes of the student teachers as their personal causal powers meet with the causal powers of the structures they encounter. What do they actually do and why?

3.7 The classroom context

At the centre of this research are the student teachers and the classrooms that they are placed in. As Apple and Cuban suggest above, it is this site that needs to be examined closely in order to discover how structures work to offer student teachers and teachers

possibilities or constraints or work to transform (or not) classroom practices. The classroom is a complex space where a number of people and structures come together. Student teachers in classrooms are experiencing a range of structures which affect how they operate in classrooms but a central theme of the research will be to determine just how much are they determined by the structures and how much agency do they exercise under particular conditions and what are the conditions that serve to constrain or encourage agency?

From the literature review we know that a range of external structures impact upon student teachers' views of literacy and classroom practice. They are influenced by their own experiences of literacy policies both as pupils and in classrooms as students (Hall et al., 2014; Ellis and Smith, 2017) as they bring their own school biographies and dispositions with them to inform their practice (Britzman, 2003). And they are heavily influenced by the practices that they see in classrooms during their training as they try hard to fit into existing practices (Marsh, 2006; Burnett, 2009; Vratulis et al., 2011). Even when university training encourages different practices, they need to 'fit in' and are hard at work managing multiple identities: student, student teacher and 'teacher to be' (Cook-Sather, 2006) that they often experience a disconnect between the ideas explored in university training and the routine practices of the classrooms that they experience (Williamson, 2013). They are subject to a number of sources of power: government policy in the form of the curriculum; the Teachers' Standards that are used to assess their performance in the classroom; the individual school policies; the hierarchy of staff in schools including the head teacher, their mentor, teacher, teaching assistants; and the university tutor who is assessing their practice.

Figure 3 on the next page illustrates the complexity of the classroom context with the different structuring powers that student teachers are working within. The student teacher is at the centre of this complex space.

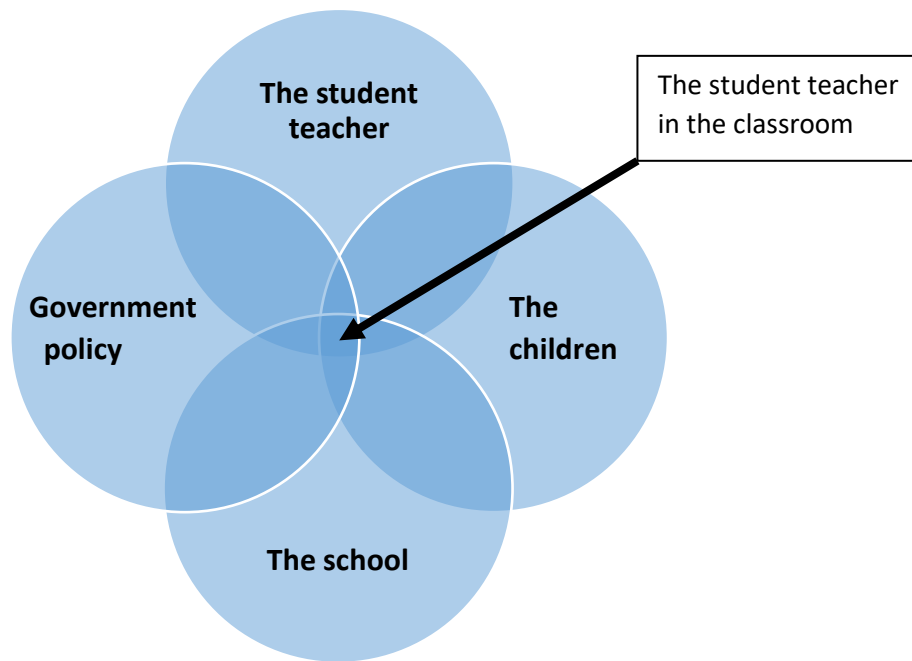


Figure 3. The structuring powers that student teachers experience

Each student teacher has their own history to bring to bear on the social situation of the classroom but how significant are the students' habitus and dispositions when placed in this unique social situation? How much are the more powerful ideologies promoted by the government shaping their experiences and actions? How do ideologies such as the 'back to basics' campaign and the importance of school literacy impact on their views and practice? The way that each school implements government policies will differ as will each teacher's interpretations of policies that they are enacting. The views of the teachers that they work with will work to constrain or encourage the development of new classroom practices. The children in each classroom will have their own unique identities, cultural capital and needs and all of these structures will come together to provide a unique environment. The fact that there are so many variables does not matter. As Archer suggests, what is interesting is the examination of the interplay between agency and structure and how the student teachers and teachers negotiate this complex space together.

Social conditioning involves the interplay between two kinds of causal powers – those pertaining to structures and those belonging to agents. Therefore, an adequate conceptualisation of conditioning must deal with the interplay between these two powers. Firstly, this involves a specification of how structural and

cultural powers impinge on agents, and secondly of how agents use their own personal powers to act ‘so rather than otherwise in such situations (Archer, 2003: 3).

This research will shed light on classroom practice with regards to literacy and digital literacies as well as providing information on how student teachers act when they encounter structural and cultural powers and the constraints and possibilities on offer. Each student teacher assesses the social situation, identifies what they want to do and how they will go about it within the structures that they experience. How do the students make choices in the situations they encounter? From each of the students’ experiences I want to know how agency and structure works itself out in real classrooms. How conscious are they of the structures and the impact on their agency? Do they comply? Knowingly? Unconsciously? Willingly? Reluctantly? Do they reject and challenge routines and structures and why and how do they do this?

3.8 Structures, agency and conscious decision-making

3.8.1 Figured Worlds

Realists believe that there are social structures in place that cannot be seen but nevertheless exist and we act out our social lives within these structures. These structures may be historical, traditions, routines of social life that we learn from childhood and we learn to act within these confines. Gee (2011a) uses the term ‘figured worlds’ based upon the work of Holland et al. (1998) to explain how this process works, how people know what to do in the social world in which they live. He describes figured worlds as a way of looking at the world, explaining that we run simulations in our mind that prepare us for action in the world and we use these simulations to help us to understand what we are seeing or experiencing and what we will experience in the future to enable us to take action and make decisions. This would suggest that Gee believes that we have the ability to think about our actions and make conscious decisions. Holland et al. (1998) claim that people’s identities and actions are formed in these figured worlds as they enter into imaginary worlds where possibilities are modelled. “By figured world, then, we mean a socially and culturally constructed realm of interpretation in which particular characters and actors are recognised, significance is assigned to certain acts, and particular outcomes are valued over others” (Holland et al.

1998; 52). According to Holland et al. although figured worlds are abstracts or extracted worlds, people use them to develop an understanding of their position within the social activity in the real world to provide guidance on how they should act in the world based on the socially accepted outcomes contained within the frame of the figured world. People learn how to be and take action in the world “Materially, figured worlds are manifest in people’s activities and practices” (Holland et al. 1998; 60).

Gee’s figured worlds explain how people learn how to act in society by observing social practices. Through our figured worlds we learn the typical way to behave, think, talk, and dress and we learn all of this through being in the world. We create these ‘ideal models’ in our heads of what it is like to be a teacher, a parent, an academic etc., and we endeavour to behave in appropriate ways. Figured worlds help us in becoming recognised within communities of practice, carrying out recognized social practices. We use our figured worlds to help us to fit into society shaping ourselves into who we want to be in society. Gee links figured worlds to Pierre Bourdieu’s concept of habitus, a concept that shall be examined in greater depth later on. “For Pierre Bourdieu ‘habitus’ mean’s one’s habitual way of being in the world as an embodied social being” (Gee 2011a: 162). Through our figured worlds we are able to find ‘habitus’ in the world; find our place in the world. Bourdieu used the term ‘habitus’ to describe how people have embedded social practices into their everyday lives as ‘embodied’ practices. Practices that have been passed down through time and become taken for granted or shared assumptions that require little conscious thought.

The habitus – embodied history, internalised as a second nature as so forgotten as history is the active presence of the whole past of which it is the product (Bourdieu 1990: 56).

Bourdieu also suggests that the habitus causes us to act in certain ways because of the embodied nature of the habitus and that it helps us to know what we can and cannot do within the structures of the social situations that we encounter.

“The habitus tends to generate all the ‘reasonable’, ‘common-sense’, behaviours (and only these) which are possible within the limits of these regulations and which are likely to be positively sanctioned” (Bourdieu, 1990: 55) and he goes on to explain how “agents

shape their aspirations according to concrete indices of the accessible and the inaccessible, of what is and is not ‘for us’” (Bourdieu, 1990: 64).

This seems rather deterministic but Bourdieu does seem to leave room for some calculation and conscious decision-making within the confines of the situation.

“Through the habitus, the structure of which it is the product governs practice, not along the paths of mechanical determinism, but within the constraints and limits initially set on its intentions” (Bourdieu, 1990: 55).

It is, of course, never ruled out that the responses of the habitus may be accompanied by a strategic calculation tending to perform in a conscious mode the operation that the habitus performs quite differently, namely an estimation of chances presupposing transformation of the past effect into an expected objective (Bourdieu, 1990: 53).

The agency-structure debate and whether our actions are mostly conscious or mostly unconscious will also be discussed in greater depth later on in this chapter as I examine a range of perspectives on the debate.

Having the right habitus means that people possess a set of taken for granted dispositions enabling them to enact the culture that they inhabit. Gee claims that we build our figured worlds from the books that we read, the media, from social practices that we encounter and from people that we engage with. These sources provide the social structures, the socially accepted norms and social practices that shape our figured worlds and therefore in our endeavours to ‘fit in’ with the ‘norm’ people reproduce these social structures through their actions and ways of being in the world and finding one’s habitus. Whereas Gee suggests that we have a degree of choice over what to use to inform our figured worlds, Bourdieu seems to be suggesting that people come with these social structures already in place – a set of dispositions for behaving appropriately. “The most improbable practices are therefore excluded as unthinkable by a kind of immediate submission to order that inclines agents to make a virtue of necessity, that is to refuse what is anyway denied and to will the inevitable” (Bourdieu, 1990: 54).

For student teachers having the right habitus might mean following a dress code, complying with school policies, teaching in accepted ways or using agreed resources and they learn all of this by practically engaging with the social world of the classroom, observing practices and trying out new roles and identities. Bourdieu argues that finding one's habitus and place in the world can only be achieved through engaging with the world.

To do this one has to situate oneself within 'real activity' as such, that is, in the practical relation to the world through which the world, the preoccupied active presence in the world through which the world imposes its presence, with its urgencies, its things to be done and said, things made to be said, which directly govern words and deeds without ever unfolding a spectacle (Bourdieu 1990: 52).

Like Gee, Urrieta's (2007) work focused on identity formation and how people figure out who they are through the worlds that they participate in. Urrieta agrees that we create our identities through being in the world and having social relationships with others in these figured worlds and he uses Holland et al.'s concept of figured worlds as a cultural phenomenon that people enter and where position matters. It is a place where people are organised and sorted according to status and where similar social types are carrying out activities together. In figured worlds, people recognise each other and try hard to be recognized by others by carrying out similar activities and behaving in similar ways to other people in the figured worlds. In the case of this research, the student teachers on placement are with other teachers in classrooms and learning to be recognised as teachers through carrying out teaching activities and behaving like the teachers that they observe. Urrieta recognises that whilst these figured worlds offer up sites of possibility for members to take on roles and exert agency there is also a social reality and participants are operating within positions of power. It is this dynamic that this research aims to examine – how do the student teachers behave in their figured worlds of the primary classroom and why? What possibilities for agency do they exploit and what do they feel are the constraints? How do they reflect on their experiences?

Gee recognises that what is deemed typical or normal can change in society, what was once considered the norm can change and create new 'typical stories' or figured worlds. In a world of rapid change, figured worlds are therefore not static and our understanding

of what is typical or normal is based upon our experiences and as our experiences grow and as society changes, so too does the 'norm' and people's figured worlds. Therefore, one might argue that it is possible for people's figured worlds to be changed or altered, if we can provide experiences that challenge the norm or typical. "These experiences are guided, shaped and normed by the social and cultural groups to which we belong" (Gee 2011a: 76) and if we are provided with new experiences where norms and social practices differ from our previous experiences, then perhaps our figured worlds will change too. In the case of student teachers, observing, learning about and experiencing new practices and ways of doing things may change their own practices. However, in relation to education reform, Gee argues that with school reform (standards agenda and assessment driven curricular) the taken-for-granted nature of the figured world, often stands in the way of change. Thinking about student teachers and providing experiences for them that challenge their idea of what is 'normal' in order to bring about transformational change can be problematic when they are basing their ideas on their experiences and what they see happening in normal classroom situations.

3.8.2 Habitus and the structure-agency debate

There are a number of contributors to the agency-structure debate and many of them discuss their views in relation to Pierre Bourdieu's theory of habitus (introduced above). The debate seems to centre around *how much* agency people have in the world, whether people operate mostly unconsciously according to the social structures linked to the social activities they encounter or whether they have the power to exercise agency and make conscious decisions about their actions. Bourdieu's early work on habitus has led to much discussion and interpretation of structure, agency and conscious decision-making with many different readings of his work. The following discussion explores the various narratives and perspectives on human agency. This exploration will serve to inform how the analysis of the students' experiences shall be framed and interpreted.

Bourdieu suggests that there is more in life than what people perceive, that there is an objective social reality or social structure beyond the social spheres that people inhabit and he uses the thinking tool 'habitus' to explain the effect that these social structures have on people's actions; the habitus disposes people to do certain things and people adjust their actions to the external constraints of the social world. Bourdieu suggests that the habitus is a durable system of structures. What people do is bound by the

generation and pursuit of strategies within an organising framework of cultural dispositions (the habitus) and he emphasizes that people are not bound by specific rules and structures and that social practices are not static and do change over time. 'The habitus, a product of history, produces individual and collective practices – more history – in accordance with the schemes generated by history' (1990:54). He claims that the habitus is the outcome of collective history and people create new practices in accordance with the existing schemes. However, there are many interpretations of Bourdieu's ideas with varying degrees of agreement as to the power of the habitus in relation to agency and the relationship between structure and agency.

Jenkins' (2002) reading of Pierre Bourdieu's work suggests that whilst actors are an integral part of their circumstances, he also recognises that it is not with complete freedom that people make decisions; there are other factors at play that are not always visible that are shaping our actions. Jenkins (2002), discussing Marx, suggests that Marx argued "People grow up learning and acquiring a set of cultural competencies, including a social identity – 'the sense of the position one occupies in social space'" (Jenkins 2002: 70) where people see things simply 'as the way they are' – taken for granted assumptions about the world and their place within it. Bourdieu refers to this as 'doxa' to explain how individuals accept themselves and the way the world works without questioning it. Bourdieu argues that social life would not be possible without the taken for granted assumptions as nothing would be achieved if people were consciously deliberating all of the time. However Bourdieu also posits that whilst practice in social life is carried out "without conscious deliberation most of the time, it is not without its purpose/s" (Jenkins 2002: 71). This would suggest that Bourdieu believed that people have personal goals and interests and therefore exert some level of agency as they make their way through the social world but within certain social structures that make clear their place in the world and what can and cannot be achieved; the possibilities and constraints.

Bourdieu suggests that people are caught between the possibilities and constraints and that practice is a process as we grow from childhood and is neither wholly conscious nor wholly unconscious, people learn what is the right thing to do without 'knowing' – it becomes second nature, routine, 'the logic of practice'; the unconscious nature of how people start to learn the way things are done or happen and 'learn to play the game'.

This can be likened to the concept of figured worlds (Holland et al., 1998; Gee, 2011a) which implies a more conscious learning of the game as people create figured worlds in their minds and try to figure out their place in the worlds that they experience and how they should behave. Bourdieu claims that the social world is reproduced as a result of taken for granted assumptions of how the social world operates as people ‘play the game’. Bourdieu suggests that people can make decisions but within the social structures that exist, arguing that when people make decisions on how to act, they are doing so based on the histories of the social practices. Bourdieu is critical of the belief that human behaviour is governed by rational calculations of costs and benefits.

3.8.3 Reflexivity and agency

Archer (2007) is interested in reflexivity - the ways in which people examine themselves within the situations that they encounter. Just as in the concept of ‘figured worlds’ (Holland et al., 1998; Urrieta, 2007; Gee, 2011a), Archer suggests that people are deliberating and making decisions in their own heads and figuring out their own place in society, asking themselves how do I fit in? What do I need to do? Archer claims that this process is important for people as this is how they determine their future actions. As identified above, for Archer the fundamental question is how people find agency within the social contexts that they find themselves in and she argues that “the answer to this is ‘via the internal conversation’” (2003: 9).

Fundamentally, we cannot account for any outcome unless we understand the agent’s project in relation to her social context. And we cannot understand her project without entering her reflexive deliberations about her personal concerns in conjunction with the objective social context that she confronts (Archer, 2003:131).

Archer argues that this ability to think back on oneself is not a result of habitual action as in Bourdieu’s idea of the habitus but is a more agential process. Archer (2007) is critical of Bourdieu’s emphasis on the structuring nature of the social world and suggests that people do, in fact, act rationally and strategize, making conscious decisions and taking action. She believes that every ‘normal’ person talks to themselves from a very early age, having internal conversations in their heads. Archer concerns herself with the occasions where people are reflexive, examining themselves in the social world

and argues “reflexivity itself is held to depend upon conscious deliberations that take place through internal conversation” (Archer, 2007:3).

Archer defines reflexivity as “the regular exercise of the mental ability, shared by all normal people to consider themselves in relation to their (social contexts) and vice versa” (Archer, 2007: 4) but that it is often disregarded as a useful strategy because it hinders decisive action where it would be easier and quicker to follow routinised schemes. Indeed, Bourdieu also suggested that if all of our decisions were conscious, there would be little time to act whereas unconscious decisions made as a result of routine and figured worlds enable action to take place and quickly. So how much decision-making is conscious and how much is unconscious? Archer argues that Bourdieu does not really answer this question one way or the other. Archer suggests that traditional routines only work when people are faced with regular dilemmas but when confronted with unique situations, people are forced to act reflexively. According to Bourdieu, practice is not consciously organised or orchestrated, it happens as people get ‘a feel for the game’ “the practical mastery of the logic or of the imminent necessity of a game – a mastery acquired by experience of the game, and one which works outside conscious control and discourse (in the way that, for instance, techniques of the body do)” (Jenkins 2002: 10). Again, Jenkins suggests that Bourdieu is making the point that whilst actors think they are making their own decisions toward their personalised goals, they are not. However, Jenkins argues that actors do make decisions which they act upon, formulating and adopting plans to achieve their goals – conscious decision making does happen but Bourdieu suggests that there is unconscious decision making too – the second nature acting. Bourdieu does however suggest that people improvise, that social life is not shaped by rules and normative models. Bourdieu argues that it would be an impossible task to have ‘on file’ a list of rules for every situation that we find ourselves in in everyday social life and that people have to improvise based on the figured worlds that they have developed. Jenkins suggests that ‘improvisatory performance’ is the exploitation of time, when we pause or experience indecision when faced with a novel situation, this allows us time for strategic thinking or strategising enabling us to make a decision about how to act but actors do not choose to improvise but when confronted with a decision to be made, they will improvise. Likewise Archer agrees that some actions do become second nature and embodied “until an emergency occurs” (Archer, 2007: 5) forcing us to make a decision. Reflexivity is the way in which

people make their way through the world where the social world cannot be explained through embodied knowledge 'habitus' or routines alone and Archer suggests that modern society in particular provides many new situations which require new ways of thinking and acting.

3.8.4 Globalisation and the decline of routinisation

Archer claims that globalisation has resulted in the decline of routinisation and people's growing relationship with the wider world (aided by rapid changes in technology) means greater individuality and weaker ties to local cultural and social structures, leading to more unique situations that require reflexivity and which cannot rely on routinisation. Archer questions the applicability of Bourdieu's semi-conscious, automatic, habitus in modern society, suggesting that in a society experiencing rapid change, routines become less powerful. She challenges Bourdieu's idea of habitus as durable dispositions, suggesting that in times of rapid change, what is required in society is quite different to what was required in the past, therefore structural and cultural dispositions are not durable but changing and embodied practices lose relevance and power. "Nascent globalisation rewards an innovative spirit that is the precise antithesis of any form of routinisation" (Archer, 2007: 48).

Archer argues reflexivity makes us 'active agents' able to exercise some causal power over what happens to us as opposed to 'passive agents'. Being an active agent means that people are able to define their own goals based on what they want and plan a course of action, devising a 'project' to achieve the desired goal. Archer's explanation helps to explain the relationship between the individual and their social environment. When we make our way through the world our own causal powers interact with the causal powers in society which either hinder or support our progress (what Archer refers to as constraints or enablements) and this then activates reflexivity where we deliberate on the next course of action. Archer suggests that it is this human power to reflect and have internal dialogues that is mediating between structure and agency. 'It is agential reflexivity which actively mediates between our structurally shaped circumstances and what we deliberately make of them' Archer (2007:16). Reflexivity enables us to act within the situations that we encounter implying that we do have the ability to exercise agency but within the confines of the situation. Archer recognises however that people cannot make what they please of circumstances which would lean towards idealism.

...when a project is constrained or enabled during its execution, agents can act strategically to try to discover ways around it or to define a second-best outcome (where constraints are concerned)... Thus, by their nature, humans have degrees of freedom in determining their own courses of action. (Archer, 2003: 6).

Archer claims that we carry out projects every day; and some become embodied in our everyday social practices, like travelling to work or knowing how to greet people and become taken for granted embodied knowledge or what Bourdieu referred to as second nature but when we encounter social constraints we are forced to be reflexive and design a new project. There are two sets of causal powers in any social practice: those of the subject and the cultural and social structures. For Archer, to be successful in human projects requires reflexivity, adaptability and ingenuity. Vandenberghe (2002), in reviewing Archer's books, interprets Archer's ideas of agency as one where people make adjustments to their projects as they try to achieve their goals based on the structures that they encounter – both to enable their projects but also restrain them. In the action of making adjustments they become 'social actors' within the conditions under which they are operating.

If this is the case do student teachers create their own projects based on what they see as possible after reflecting on the constraints and possibilities? And if so, are they reproducing what is possible and also transforming in certain situations? Student teachers bring their past experiences of the classroom, literacy experiences and what they take from their training course but also then have to mediate between these experiences and the structures that they encounter in schools. Students are navigating their way around a very complex space and often coercive situation when teaching in classrooms on placement. Archer examines how people use internal conversations to mediate between their goals and the structures that affect their agency. Her approach shall be examined shortly when explaining how I selected my research tools.

Social theory posits that cultural and social structures impinge upon people by shaping the social situations but what it does not explain is why different people react in different ways to the constraints or enablements – this would suggest agency, that people's personal powers of reflection and decision making are also playing a part in the social practice. It is these different reactions that I will seek to examine. How does each student

teacher respond to the social structures that they encounter? What are their goals and how do they go about achieving them within the social structures that they experience?

There are however, critics of Archer's stance on agency. Whilst Caetano (2014) is also interested in how the modernisation of society affects how individuals respond to societal changes through reflexivity, Caetano argues that Archer's description of reflexivity reduces the impact of social structures in determining action. Caetano's argument is that Archer has downplayed the significance of social structures whereas Bourdieu at the other end of the spectrum suggests that social structures significantly affect people's actions. Caetano argues that Archer sees structure and agency as separated and disembodied whilst Archer claims that it is important to separate them out in order to see the interplay between the two and criticizes Bourdieu for conflating structure and agency. Sayer (2010) on the other hand believes that Bourdieu under states the role of our inner conversations but Sayer also disagrees with Archer's view that Bourdieu conflates subject and object leaving no room for reflexivity. Sayer criticises Archer's view that modernity has led to a lack of continuity of habitus which increases the need for internal dialogue, arguing that there still exists continuity of habitus and people still develop habitus and a feel for the game. He argues that without habitus how do people learn how to be in the world? Whilst he does believe in the power of the habitus, he also believes that it is important to examine how individuals make their way in the world. "We need to combine analysis of both habitus and internal conversation to make sense of these relations" (Sayer 2010: 121).

Reay et al. (2009), in their research into how social class affects the identities of working class students in universities, explain that despite the tendency for people to behave in expected ways because of their habitus, there is room for agency as people encounter new situations and the structuring fields change/vary. They consider that Bourdieu views dispositions of the habitus as products of the opportunities and constraints that frame people's early life experiences and this leads people to reject improbable actions and to carry out the possible ones. Thus a person's individual history as well as the wider social history creates the habitus and dispositions. Reay et al. describe Bourdieu's habitus as "a complex internalised core from which everyday experiences emanate" (2009: 6) they claim that people can make choices but that they are limited and framed by each situation and the opportunities and constraints that exist. Whilst many criticise

Bourdieu for being deterministic, McNay (2000) cited in Reay et al (2009) claims that when habitus encounters a familiar field where it is comfortable, the individual knows how to behave and what to do but when confronted with a novel situation, they are challenged to react in new ways and engage in an internal dialogue to decide how to act.

Caetano (2014) is critical of Archer for overlooking the role of socialisation in determining action and focussing too much on individual action and internal deliberation claiming that she does not take into account that personal concerns are shaped by social contexts. Likewise, Farrugia (2013) in his critique of reflexivity theories refers to this as ‘uncritical optimism’. Farrugia is critical of Archer’s theory that is based upon the idea that reflexivity is purposive and identities are not shaped by social structures arguing that she has a disembodied view of reflexivity separating subjectivity from social structures. He argues that Archer claims that modernity has led to a decrease in the significance of social conditioning whilst other research shows that family background still does have a significant impact on class, beliefs and aspirations (Reay et al. 2009). “Archer’s view of reflexivity is reduced to a form of disembodied cognitive rationality” (Farrugia 2013: 288).

3.8.5 Habitus and reflexivity working in tandem

Farrugia, in critiquing theories of reflexivity, draws on the work of Elder-Vass (2007) and Sayer (2010) to help to resolve the structure-agency dilemma. Both Elder-Vass and Sayer believe that actually, rather than polarising the two concepts of habitus and reflexivity, they can in fact inform each other and influence each other. Sayer suggests that they can work in tandem and argues that in any social situation, both habitus and reflexivity are at work. Both Sayer and Elder-Vass accept the idea of conscious internal conversation but the idea must be supplemented by Bourdieu’s concept of habitus and to include the unconscious element of people’s actions.

3.8.6 Practical intelligibility

Farrugia offers a way forward to explain the problematic relationship between social identity and reflexivity. He critiques theories that he believes inadequately attempt to explain the relationship. He claims that rather than two opposing orthodoxies that separate out reflexivity from embodied dispositions the two run alongside each other, that it is possible to explain human action and identity formation as both socially

embedded and reflexive. That embodied dispositions and internal conversations run in tandem with each other, influencing each other. He draws upon the work of Brubaker (1993) who describes the relationship between reflexivity and dispositions as one where reflexivity takes place within socially embedded practices and Crossley (2001) who claimed that without practical engagement with the social world and an understanding of the social rules, we would not know how to behave.

Farrugia suggests that reflexivity is in fact continuous with embodied knowledge and that the world is only made meaningful when people actively engage with the social world and this practical engagement leads to a 'practical intelligibility' whereby a subject is able to make sense of the world through being embedded within the social world, using what they already know of the world – their dispositions whilst also responding to the conditions within each context that require reflexivity "reflexivity takes place through active negotiation with different structural environments" (Farrugia, 2013: 294). He argues that both reflexivity and dispositions are linked together by their dependence on the structuring of the field and that there are always embodied actions at work.

3.8.7 Student teachers, structure and agency

As discussed, there is much debate around the structure-agency relationship. Just how much do structures affect people's actions and how much do the internal conversations of reflexivity lead to conscious decision-making? Whilst some suggest that Bourdieu's concept of habitus with its routinisation and unconscious decision-making is the most significant factor in determining action, others, like Archer argue that people are able to make more conscious decisions and are not purely at the will of the habitus. However, neither argument suggests that it is purely embodied decision-making or internal conversations that lead to action but that there are individual circumstances which result in people taking action based on the social situation.

I find that drawing upon Sayer (2010), Elder-Vass (2007) and Farrugia's marrying of the two concepts of reflexivity and embodied decision-making to describe how they work in tandem particularly helpful in helping me to examine the experiences of the student teachers in this study. As already discussed in the literature review, student teachers bring a whole set of dispositions to their training and to the classroom.

Dispositions gained through their personal biographies and early school experiences. They are also subject to a range of structures that structure their classroom experiences and actions. Of particular interest are the ideologies and policies that influence schools and the literacy curriculum as these significantly shape classroom practices and initial teacher training. In the case of this research, what are the beliefs and attitudes of student teachers regarding literacy curriculum and pedagogy and how are they influenced by common-sense ideologies? How do social structures constrain or enable them to make their own way through the world of the literacy primary classroom? And how do they build pedagogical knowledge and agency with regards to digital literacy? These ideas will be examined through detailed analysis and interpretation of their experiences.

Chapter 4

Methodology: Selecting my tools

4.1 Tools for analysis

Finding a satisfactory way to frame the data gained from the student teachers' responses has not been easy but I shall draw upon Farrugia's concept of 'practical intelligibility' to examine how student teachers make sense of their classroom experiences through practically engaging with the situations that they encounter and how they develop a sense of identity through reflexivity and drawing upon their dispositions and habitus in the classroom whilst also considering how they think about their experiences and take action in these complex spaces. I have also made use of Archer's (2007) reflexivity questions which shall be examined later and Gee's (2011a) tools for critical discourse analysis and in particular his views on people's figured worlds. Developing an understanding of how people, and in this case student teachers, make their way through the world is important to this research as it will provide the lens through which the researcher is able to analyse the student teachers' experiences of the world as they describe them.

4.2 Margaret Archer and the role of reflexivity in human agency

Whilst many criticise Archer for downplaying the significance of social structures and emphasizing the role of the individual in decision-making, I argue that she provides a more hopeful explanation as to how people intervene in their own lives, arguing that they do indeed have agency and make conscious decisions towards their goals. I also agree that with modernity and rapid changes in technology, literacy practices are constantly evolving and student teachers and teachers are faced with the dilemma of teaching within the constraints of literacy policy and the possibilities that new technology has to offer in supporting teaching and learning.

I found Margaret Archer's ideas around the role of reflexivity in human agency resonating with my own research into student teachers' decision-making in the classroom. In particular she poses a set of questions for exploring people's actions that I could ask of the student teachers in my study in order to explore their experiences:

Archer identifies 3 key questions to investigate people's agency:

1. **Why do people act at all?** What motivates them and what are they (fallibly) trying to achieve by endorsing given courses of action? This entails an examination of their personal concerns and inner reflexive deliberations about how to go about realizing them

2. **How do social properties influence the courses of action that people adopt?** This involves a specification of how objective structural or cultural powers are reflexively mediated
3. **What exactly do people do?** This requires an examination of the variability in the actions of those similarly socially situated and the differences in their processes of reflexivity

(Archer, 2007: 6)

When reading the work of James Paul Gee and of Margaret Archer I was struck by a similarity in their work. Neither author discusses the other and yet Archer and Gee have a similar interest; examining how people make their way in the world and how they decide on what they want to do in order to become recognised in the social worlds that they inhabit. Whilst Archer provides a set of questions (above) that can easily be applied to the students in this study, Gee provides the tools for analysing the responses to the questions. And it is here that I am making a unique connection between two authors: Using Archer's questions as a lens through which to examine the student teachers' accounts of their experiences and Gee's (2011a) discourse analysis tools (which shall be examined shortly) to ask questions of the language used by student teachers in one-to-one interviews I will provide a deep analysis of the individual student teachers' responses. Gee claims "language allows us to be things. It allows us to take on different socially significant identities"... "to understand anything fully you need to know who is saying it and what the person saying it is trying to do" (Gee, 2011a: 2). Archer's questions also explore what people want to do and why. Both are concerned with how people build identities in the world. People have goals and create plans in order to be recognized within the communities of practice that they are situated in.

I am bringing together two compatible lenses with which to examine the data – making use of 'varifocals' to explore student teachers' experiences and reflexive accounts of their experiences. Archer is concerned with how people make their way in world in order to examine how structure and agency works in different situations. Through the questions that she asks (above) she wants to find out why people act and how they reflect on their progress in the world whilst working on their goals. Likewise, Gee is also interested in discovering people's goals "When we are trying to understand what someone meant, I mean we are trying to figure out what they were trying to say, what their intentions were, and what goals or purposes they were trying to achieve" (Gee, 2011b: 13).

Archer wants to know how people make their way in the world, how they operate when they encounter structures that either constrain or enable their plans and Gee offers a way of understanding how people make decisions about how to act in the world. Gee uses the concept of figured worlds as examined in the previous methodology chapter to describe how people figure out what to do in the social worlds they meet as they work on their projects and goals.

Applying Archer's questions to the group of student teachers leads to the following questions:

- **What motivates the student teachers in this study to use digital technologies in their teaching?** What are their goals in the classroom and why do they set such goals?
- **How do social properties influence the student teachers' courses of action?**
- **What does each of the student teachers do?**

4.3 Reflexivity, action and identity-forming

As already discussed when considering the level of conscious decision-making that humans are capable of, Archer claims that "All normal people talk to themselves within their own heads" (Archer, 2007: 2). Archer explores the idea of reflexivity in humans and how we use it to guide our actions. "Reflexivity is the means by which we make our way through the world" (Archer, 2007: 5). She describes reflexivity as an inner conversation that we have when we are considering what to do and it involves the self 'bending back' on itself to examine how it is doing in relation to society and this process helps us to determine our next course of action in the world. Archer argues that we all have concerns, things that we hold to be important to us, and in order to achieve our concerns we design projects and create a plan of action through reflexivity, planning and redesigning our plans in our heads.

Much more is involved; agents have to diagnose their situations, they have to identify their own interests and they must design projects they deem appropriate to attaining their ends (Archer, 2003: 9) .

Wiley (2010) is also interested in the relationship between inner speech and agency. He describes how our inner conversations guide our actions "We talk our thoughts at least a lot of the time. But we also talk our goals, options, deliberations, plans and moves" (Wiley, 2010: 17). Wiley uses Colapietro's readings of Peirce's work to explore the I-Me-You Triad when

combining Mead's and Peirce's earlier conceptions of the self. Mead's book, *Mind, Self and Society* (1934) explored the concept of the individual subject in terms of the self 'me' and 'I' where the 'me' constitutes the individual acting within a community or in society and the 'I' is how individuals experience themselves. Mead used the terms I-Me to show how the present self 'I' has an inner conversation with the past self 'me' and the past self brings past experiences, results of previous actions, habitus and insights into the culture of the practice to help to determine the course of action. Mead believed the self and the mind to be a social process "we cannot realise ourselves except in so far as we can recognize the other in his relationship to us.....we need others to be able to recognize our 'self' the 'me' in society" (Mead, 1934: 229).

Similarly, Peirce, an American pragmatist considered the role of inner conversation and the significance of the external world on our concept of self. As cited by Colapietro (1989: 115) "When I enter into the inner world, I take with me the booty from my exploits in the outer world." Peirce also offered up the concept of I-You to indicate how the present 'self' discusses plans and options with the future self. Wiley suggests that combining the two concepts helps to explain reflexivity more fully and proposes that the I-Me-You triad "forms the structure of the self, creating a linguistic thinking 'machine'" (Wiley, 2010: 210). Wiley believes that people use inner speech to do a 360 degree turn, looking back 180 degrees on their past 'me' and all of their experiences and knowledge of the world (habitus) and looking forward 180 degrees to their future actions. It is here that Wiley suggests that people integrate structure and agency. Wiley suggests that agency is achieved through examining the possibilities, choosing how to act and then acting.

Whilst all of this is based on inner conversations, taking place inside our heads, connections can be made with Urzua and Vasquez' (2008) research into new teachers' identities and how their identities emerge and develop through reflecting on past events and considering how past events inform future actions. Urzua and Vasquez argue that future projected talk is essential for teachers' identity formation. They built on the work of Sfard and Prusak (2005) who used the term 'designated identity' to describe how people project to their future selves. Urzua and Vasquez were interested in how language is used to depict action and lead to identity formation. They analysed the language used by new teachers to identify futurity, examining the ways in which they projected to the future through the use of the future tense and came up with a taxonomy of functions for future forms – can I examine the future goals of my students in this way? How did they use modal verbs to indicate the possibility, certainty, likelihood and

impossibility of their future goals? As will be seen later on in this chapter and in the data analysis and discussion, Gee's (2011a) 'toolkit' for Discourse analysis also provides consideration of how people use modal verbs in their utterances to support analysis of any discourse.

Cook-Sather (2006) recognises the complexity of modern life and the multiple identities that teachers and student teachers move between, highlighting the struggles that student teachers experience as they reconcile differences between their different identities; that of being a student teacher with that of a 'teacher to be'. Cook-Sather suggests that "through reflecting on what they read, think, see, or experience, student teachers must consider how they will position themselves and be positioned by what they think and see, and they must actively engage in the process of their becoming selves able to take on the identity and responsibilities of a teacher" (Cook-Sather, 2006: 10).

Carrying out our own projects supports us in becoming who we want to be within the social order, establishing social practices within the given environment. Wiley suggests that "We talk our way through our actions" (Wiley, 2010: 18). Throughout our projects we use internal conversations to monitor how well we are doing with our projects adjusting our actions as we meet constraints and 'enablements' (Wiley, 2010; Archer, 2007). Archer argues that "We talk to ourselves about society in relation to ourselves and about ourselves in relation to society, under our own descriptions" (Archer, 2007: 88) and outlines three stages that people go through to achieve what they want to be and do in the world, their 'modus vivendi' and explains the process of mediation between structure and agency. The first stage is identifying the how the powers of structural and cultural emergent properties shape our situations. The second stage is when we carry out our projects and the third stage is when we look back on our project, evaluating progress and adjusting where necessary.

The final stage which completes the mediatory process is concluded through the internal conversation. We survey constraints and enablements under our own descriptions (Which is the only way we can know anything); we consult our projects which were deliberately defined to realise our concerns; and we strategically adjust them into those practices which we conclude internally (and always fallibly) will enable us to do (and be) what we care about most in society (Archer, 2003: 133).

I would suggest that Archer's diagram (figure 4 below) is more recursive than linear and so have adapted Archer's diagram to illustrate how people are continually reviewing their progress through inner speech and revising their concerns and projects based on the constraints and possibilities that they meet whilst carrying out their projects.

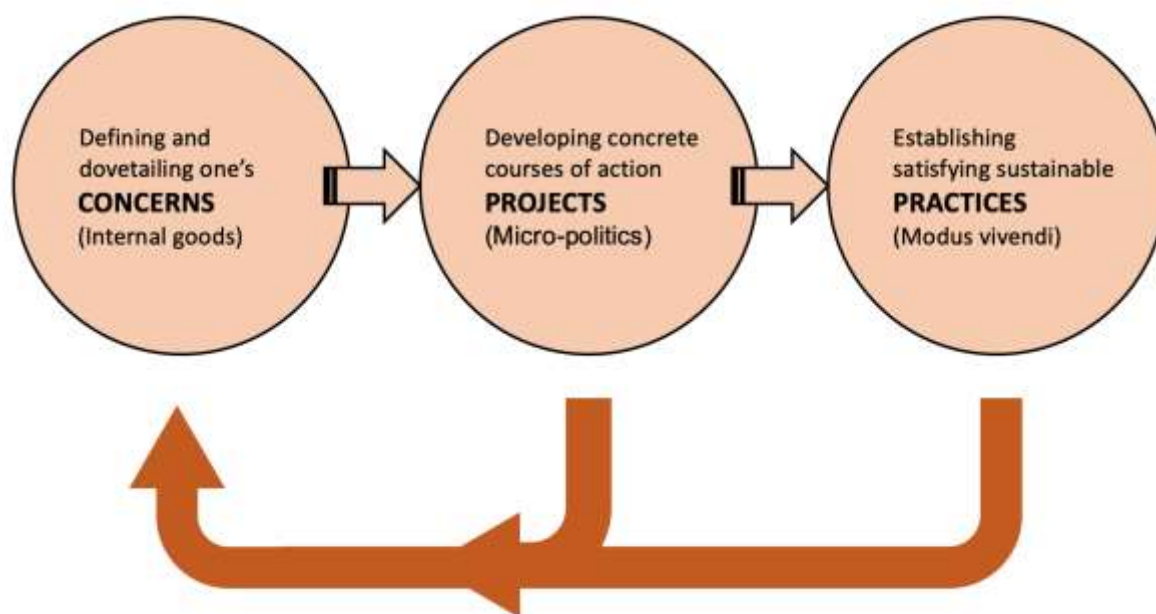


Figure 4. Internal conversation and the pursuit of the good life.

Source: *(Adapted from Archer, 2007: 89)*

Fairclough (2013) argues social institutions provide the frame within which social action takes place and constrains them within that frame and yet claims that “Discourse is shaped by structures but also reshapes them, reproduces them and transforms them” (Fairclough, 2013: 59) suggesting that whilst actions are determined to a certain extent by the external structures that exist, people, in responding to the structures, whilst contributing towards their reproduction, are also responsible for reshaping of the structures over time. This research will examine how student teachers reproduce or reshape the social structures that they encounter during their training. Wiley optimistically emphasizes the agency that we exercise in the world “We choose how dependent we will be of the structure, just as we choose how innovative we will be in action. Just how this balance will work out will depend on the circumstances, the internal conversation and the (slightly in my opinion) free will of the agent” (Wiley, 2010: 37). I would argue that social structures do not allow us to choose how dependent we will be of structures but how we can make choices within the structures that we meet. Student teachers in

particular will be positioned as learners and will be developing their concepts of 'self' in terms of developing their teacher identity. They will be operating within often quite influential and coercive environments and will be teaching according to prescribed Teachers' Standards, judged on assessment criteria and working within school and classroom policies. Wiley implies that there is a balancing act to be achieved, this must surely be between managing the constraints and possibilities on offer to us in each situation. Nobody would argue that we all have total free-will but that we act as a result of the social structures that we find ourselves in. It will be interesting to explore the level of agency that the student teachers in the study experience. How do they view their position in the classroom and how consciously do they make their way through the world? How dependent will they be of the structures in place and how innovative will they be when faced with challenges and constraints?

4.4 Gee's tools for Discourse Analysis

As identified above, applying Archer's three questions to the student teachers' responses in this study will be a useful way to approach the data but Gee also offers further tools to support the analysis of the data gained from asking these questions.

Gee recommends that if you want to understand what people are saying and to explore people's figured worlds it is important to analyse what they say and how they say it, asking the question - what are they trying to do with language? I refer back to Gee's ideas around discourse which were first introduced in the literature review with respect to the discussion around the plurality of literacies and the multiple literacy practices that people engage in during their everyday lives. Gee uses the word discourse in two ways: discourse with a little 'd' and Discourse with a big 'D'. Gee uses discourse with a little 'd' to refer to the actual words and stretches of language being used when people are talking. In the interviews the participants' discourse shall be analysed, paying close attention through applying the chosen data analysis methods (these shall be explained in detail further on in this chapter). But Gee also uses a big 'D' Discourse to explain the bigger picture of language in use. Gee explains it as "Big D' Discourses are always language plus 'other stuff'" (Gee, 2011a: 34). Discourses involve people using language as just one of a repertoire of strategies to create an identity for themselves and align themselves to particular groups. Sounding like, looking like and acting like members of a particular group. In this case, student teachers are working hard to join the Discourse of primary teachers, taking on the identity of a teacher. The student teachers may have multiple identities and join multiple Discourses and move within and between Discourses and identities.

Through examining carefully people's discourse Gee suggests that figured worlds are yet another tool for discourse analysis as they mediate between the micro and the macro and suggests asking the following question:

What figured worlds are relevant here? What must I, as an analyst, assume people feel, value, and believe, consciously or not, in order to talk (write), act, and/or interact this way? (Gee, 2011a: 95).

However, Gee adds that in order to explore people's figured worlds and how they make sense of the world, it cannot be done through analysing people's discourse alone but also requires the analyst to examine the intertextuality of texts that influence their figured worlds such as the media, policy texts and Discourses and Conversations that they are paying attention to. Such texts have been analysed in the literature review and it will be important to see how the discourses of the student teachers in this study link to the Discourse and Conversations found in the range of texts analysed earlier in the literature review.

Gee argues that whilst he uses terms such as Discourse, Conversation and intertextuality as real objects both in the mind and in the world, he primarily uses them as tools for thinking. They are 'tools for inquiry' or 'thinking devices' that can guide us to ask certain questions. These questions shall be examined shortly when describing the discourse analysis methods used to analyse the data collected.

Philips and Hardy (2002) suggest that because social reality is a result of social interactions and discourses, we need to examine social interactions and discourses closely in order to understand social reality. "Without discourse, there is no reality and without understanding our discourses, we cannot understand ourselves" (Philips and Hardy, 2002: 1). Gee suggests that discourse analysis is an effective way of understanding what people are trying to say and do when they use language, it is the study of 'language-in-use'. "When we are trying to understand what someone meant, I mean we are trying to figure out what they were trying to say, what their intentions were, and what goals or purposes they were trying to achieve" Gee (2011b: 13).

Discourse analysis requires paying attention to linguistics, the form and function the language used in order to uncover and explore the structural forces that exist below the surface. "Often in discourse analysis we are using language trying to uncover the workings of Discourse in

society” (Gee, 2011a: 109). But Gee argues that the validity of analysis is not based on how detailed it is but how the transcript works together with all the other elements of the analysis – to create a trustworthy analysis and he suggests four important aspects required for discourse analysis validity but warns that any discourse analysis is only an interpretation and thus a double hermeneutic.

- Convergence –do similar themes appear from asking a range of questions of the data?
- Agreement – do other researchers support the analysis?
- Coverage – can it be related to other data sets?
- Linguistic details – more valid, the more tightly tied to details of linguistic structure

Gee (2011a)

However, one might argue that it is not enough to merely understand people’s behaviour but one must seek to explain behaviour as well as understanding it.

Gee recommends that as well as trying to understand people’s figured worlds, it is important to also examine the things that influence their figured worlds, to move beyond people’s responses to examining the social structures and underlying mechanisms that influence people’s behaviours as it is only by identifying the social structures that cause the behaviours is it possible to create change. As a teacher educator it is important for me to not only examine the student teachers’ behaviours and understandings of literacy but to explore why they think that way.

Through analysis of the literature and through deep critical analysis of the participants’ discourse through the chosen analysis methods, I have gained access to the student teachers’ figured worlds in order to gain an understanding of their experiences and the impact upon their beliefs, values and actions and to identify the underlying structures that are at play influencing their beliefs and classroom practice.

4.5 Critical Discourse Analysis

There are two forms of text analysis: descriptive discourse analysis and critical discourse analysis (CDA). Descriptive discourse analysis explores the content of what is being said examining the linguistic features and seeking to understand how language has been used to

make meaning in a given context. Whereas the goal of critical discourse analysis is not just to describe how language works in specific contexts but to speak to or intervene in social or political issues (Gee, 2011a; Fairclough, 2001). Gee argues that all discourse analysis needs to be critical because language is deeply political as it is used to obtain what Gee terms ‘social goods’ which might include things such as money but also power, status, approval and recognition. Critical discourse analysis can highlight problems in society and inequalities in the distribution of social goods. Examination of discourse allows researchers to explore what is happening in the world in terms of the underlying structures and realities that people encounter.

Fairclough (2013) explains that critical discourse analysis is based on the idea that policy, policymaking and policy analysis is discursive. CDA focuses on the relationship between discourse and other social elements such as power, institution, identities etc., “It does not simply describe realities but evaluates them and seeks to explain them by showing them to be effects of structures or mechanisms or forces which the analyst postulates and whose reality he/she seeks to test out” (Fairclough, 2013: 178). He identifies CDA as based in a realist ontology that views abstract social structures and concrete social events as part of social reality. From a critical realist perspective, he views the site where the two causal powers, social structures and social agents, meet as a social event. These social events are situated. He describes the social process as “The interplay between 3 levels of social reality; social structures, social practices and social events” (Fairclough, 2013: 179). Teaching is a social event. The student teachers in this study are social agents and when they are teaching in classrooms, they are exposed to social structures and their causal powers. The site where they meet are where the students will experience tensions as they negotiate between their personal goals, concerns and projects and the structures in place that frame their decisions and enable or limit their actions. Through Archer’s lens of reflexivity, it is in these sites that the students will be exercising their agency through reflexivity, having inner conversations about how well they are doing, what to do next and how to go about it. It is the site of tension between causal powers, those possessed by the student teachers in this study and those that exist in the classrooms that they experience, that I intend to explore. Through CDA I seek to illuminate how the actions and discourse of the student teachers’ in this study at the micro level are connected to the macro structures that exist in classrooms, schools and government policy.

CDA examines the relationship between language/semiosis and social events. Research methods are varied in CDA but Fairclough recommends that first a general method on

interdiscursive analysis is used, where examination of how the discourse, genre, style are drawn upon to form the text and then he uses linguistic analysis to identify power relations. “Analysis involves both the detailed moment-by-moment explication of how participants produce texts and analysis which focuses on the relationship between the discursive event and the order of discourse. Questions of power may arise” (Fairclough, 2010: 95). Analysis involves linguistic analysis, interpretation of the relationship between discourse and the event and an explanation of the relationship between the discursive processes and the social processes.

CDA seeks to theorise structures and action and their interconnection. Whilst he argues that structures position individuals, Archer argues that individuals do possess their own causal powers and are able to take up their own positions based on their individual sense of self. Fairclough (2013) agrees and claims:

People with their capacities for agency are seen as socially produced, contingent and subject to change, yet real, and possessing real causal powers which, in their tension with the causal powers of social structures and practices, are a focus for analysis. Discourse analysis focuses on this tension specifically in textual elements of social events (Fairclough, 2013: 357).

Discourse analysis involves close examination of the language used in social practices and must include an element of linguistic analysis (Fairclough, 2013; Gee, 2011a).

To support linguistic analysis Gee offers up questions to ask of data being analysed as ‘tools’. Each question encourages the researcher to look closely at what is being said and how it is being said for discourse analysis (Gee, 2011b). “We use language to build things in the world and build the world through language” (Gee, 2011a: 16). When we speak or write we are building seven areas of reality which give rise to seven questions in discourse analysis:

1. Significance – how is this piece of language being used to make certain things significant?
2. Practices (activities) – what practice or practices is this piece of language being used to enact (to get others to recognise what is going on)?
3. Identities – what identity or identities is this piece of language being used to enact (i.e. to get others to recognize as operative)? What identity or identities is this piece of

language attributing to others and how does this help the speaker or writer enact his/her own identity?

4. Relationships – what sort of relationship or relationships is this piece of language seeking to enact with others (present or not)?
5. Politics (the distribution of social goods) – what perspective on social goods is this piece of language communicating (i.e., what is being communicated as to what is taken to be ‘normal’, ‘right’, ‘correct’, ‘proper’, ‘appropriate’. ‘valuable’, ‘the way things are’, ‘the way things ought to be’, high status or low status’, ‘like me or not like me’...
6. Connections – how does this piece of language connect or disconnect things; how does it make one thing relevant or irrelevant to another?
7. Sign systems and knowledge – how does this piece of language privilege or disprivilege specific sign systems (e.g. Spanish vs English, technical language vs everyday language, words vs images) or different ways of knowing and believing or claims to knowledge and belief?

(Gee, 2011a: 16)

Gee also identifies 4 tools of enquiry

- Social languages – which social language do actors use? Vernacular? Technical?
- Discourses – ‘I use the term Discourse with a capital D for ways of combining and integrating language, actions, interactions, ways of thinking, believing, valuing and using various symbols, tools, and objects to enact a particular sort of socially recognizable identity’
- Conversations – Conversation with a capital C – the talk that goes on around a particular theme in a social group or wider society, debates in society – do they allude to any Conversations?
- Intertextuality – does the language text contain language taken from other texts?

(Gee 2011a: 29)

Gee (2011b) explains that the task for the researcher is to be able:

To make things new and strange that we usually see as completely normal and natural. To do discourse analysis we have to see what is old and taken for granted as if it were brand new. We need to see all the assumptions and information speakers leave unsaid

and assume listeners know and will add in order to make communications clear (Gee, 2011b: 8).

I intend to draw upon Gee's discourse analysis tools and questions above to shed light upon the student teachers' responses to the questions posed by Archer in order to investigate my research aim and research questions as outlined in the introduction.

4.6 Tools for conducting the research

Having established my ontological perspective of how the research findings shall be analysed and understood, the next step is to consider the best way to approach the collection of data. Denscombe (2007) explains how the social researcher is faced with a series of decisions to make when choosing how to go about their research study. In the following section I shall not only outline the research methods selected but will explain the decisions that I made.

4.7 Review of the literature

Carrying out an extensive review of the literature enabled me to gain a detailed view of the current landscape with regards the changing face of initial teacher education, literacy, digital literacies, the primary literacy curriculum past and present and wider policy reform. However, conducting the literature review prior to carrying out the data collection can present some difficulties. It is possible that findings from the literature review might influence the researcher's ideas as they examine the data collected from primary research with the findings from the literature in mind, leading to the researcher looking for something specific in the participants' responses rather than allowing their voices to be heard unhindered by the voices of others. The literature review might influence the research methods and the analysis by pointing to themes that the researcher then looks for in the participants' responses.

Alternatively, Bryman suggests that the "Theory provides the backcloth and rationale for the research being conducted" (Bryman, 2012: 20) and a framework from which to interpret the research findings. Examining the literature and theory surrounding the research area to be studied can provide more focussed direction in the design of the research methods, highlighting the areas that the researcher might want to look out for in response to issues highlighted in the literature review, which in this case would be any reference/links to literacy policy that the participants might refer to and the issue raised of the widening gap between home and school literacies. It is also useful to return to the literature to assist in the data analysis through, what

Jackson and Mazzei call, “plugging theory into the data” (Jackson and Mazzei, 2012: 4). They claim that viewing data through theory or plugging theory into the data allows one to cut through to the centre of the data, opening it up to and to see something new. To facilitate this, they suggest the ‘plugging in’ of texts to one another in order to read the data and refer to “reading the data while thinking the theory” as “a moment of plugging in, of entering the assemblage, of making new connections” (Jackson and Mazzei, 2012: 4). They use the term ‘putting theory to work’ suggesting that theorists provide ‘productive provocation’ allowing thought to be opened up rather than closed down. When Jackson and Mazzei talk about ‘folding in the data’, they suggest that the researcher can fold data into theory and vice versa but also as a researcher into the text as the researcher’s own ideas are included through analysis and interpretation. They define assemblages as the process of making and unmaking, arranging, organizing, the fitting together of data and different texts. They recognise that the researcher is not the author of the assemblage but the participants and theorists are inserted in the process. In particular, when viewing the data I shall be making use of Archer’s ideas of how reflexivity mediates between structure and agency, Bourdieu’s concept of habitus and dispositions, figured worlds (Holland et al., 1998; Gee 2011a) and how Sayer, Elder-Vass and Farrugia suggest examining how people use their dispositions and reflexivity in tandem to inform their actions. How do the participants in this study reveal their motivations, their projects and what do they actually do in practice and how this relates to the issues and themes discussed in the literature review?

Clough and Nutbrown (2002) compare the researcher’s process to that of a traveller exploring the familiar closely and this also involves examining the culture and policies of the past in order to explain the present. This can be done through examining England’s literacy policy shifts and considering the influence upon classroom practice and the experiences of student teachers. The first stage in the research process was therefore to systematically review the literature around literacies (including the digital), literacy policy and school literacy. Whilst my aim is to hear the students’ voices to examine what they are experiencing I also want to examine the Discourse that emerges in literacy policy. What is being said about which forms of literacy count?

4.8 Ethical considerations

4.8.1 Following guidelines

I can confirm that I have read and followed both the university’s ethical research guidelines and the British Educational Research Guidelines (BERA). I completed the university’s 9R process

and ethical approval was granted by the university prior to commencing the research in 2011. I ensured that I gained permission to access participants from the university and management team within the department from which the participants were approached. Anyone who needed to know about my research was made aware of what I was doing. I kept my supervisors, the head of school and Course Director informed of my progress and how my research involved students at the university.

4.8.2 Participant consent

All participants were adults and none were vulnerable adults. The participants were informed about the purpose and intended possible uses of the research and were fully informed of what their involvement might entail. This was initially done via a message to the whole cohort via their virtual learning environment (VLE) and explained to each group personally by the researcher. Participant consent forms were completed prior to the research taking place and participation was voluntary at all stages of the research. They were all informed that they could withdraw from the research process at any stage. All participants who completed the questionnaire gave signed consent and the questionnaires were anonymous. At the end of the questionnaire, participants were asked if they would like to take part in the next stage of the research and be interviewed and if they were happy to take part in the interviews, to then give a contact email address.

Before each of the interviews commenced signed consent was gained again and the purpose of the research and their involvement was explained again due to the lapse in time (6 months) between the questionnaires and the interviews. Participants were informed that the interviews will be recorded and they can withdraw at any stage. At the start of the interview participants were informed of the themes of the questions that they would be asked so that they knew what was coming up in order to reduce stress.

I also considered carefully the power relations between myself the researcher and the participants as well the workload of the participants, making clear that participation was voluntary. I did not conduct the interviews until June 2012 once they had finished all modules and assessments to try to reduce the impact on the participants as the researcher is also one of the teaching staff and involved in teaching and assessing this group of students. The questionnaire was administered at the beginning of term before the students started working on assignments. The number and type of questions in the questionnaire were carefully considered

so that participants could complete it quickly and interviews had a time limit of one hour. As much as possible I worked hard to ensure that I did not add to the students' busy workloads or make them feel under pressure because I was a member of staff.

It was not the intention of this research to pry into the private lives of participants other than asking them about how they use digital tools and literacies in their daily life.

4.8.3 Confidentiality

All participants' names were anonymised making use of pseudonyms and confidentiality maintained. No schools or teachers were named in the process.

4.8.4 Storage of data

All data has been stored according to university guidelines. Digital data is stored on OneDrive on a password encrypted laptop and on an encrypted USB and signed consent forms are in sealed envelopes in university secure storage. Data collected will be stored for the lifespan of the research project only.

I shall continue to discuss ethical considerations as they relate to the various research processes in the following sections.

4.9 Sampling

Stage 1 of the research process involved a questionnaire which would be mostly used for statistical analysis and would also be used to recruit participants for the later interview stage of the research process. The questionnaire was administered using convenience sampling via the Core English virtual learning environment (VLE) to a whole cohort of 190 year 2 BAQTS student teachers. I chose this particular cohort as I had easy access as a tutor on their course and could access the students via the VLE and place the electronic questionnaire on their VLE. The software on the VLE also enabled me to carry out statistical analysis. I knew that these students had already had a school placement experience to talk about. I also chose this cohort as I knew that some of them would be studying the multiliteracies module later in the year and originally I was interested to see if the module impacted upon their views and practices. Because convenience sampling has been employed the researcher recognises that the data obtained represents this particular set of student teachers and not all student teachers across England.

However, the course is representative of other ITT courses as regulated by ITT criteria and the students do come from a diverse range of backgrounds.

For the questionnaire I hoped that from 190 students I would get enough responding for statistical analysis. Out of 190 students 87 completed the questionnaire giving a 45.8% response rate and were a fair representation of the cohort.

A smaller number of participants was required for the interviews as these would be more in-depth than the questionnaires and would provide a richer, lengthier set of data for analysis with the aim of creating in-depth case studies that would explore the social situations that each student teacher encountered and how they responded and why. The interviewees were drawn from the students who had indicated in the questionnaire that they would be willing to participate in an interview later in the year. Whilst for the questionnaires all the students had had the same taught input, by the time of the interviews some of them had also studied the optional multiliteracies module, the significance of which will be explained below. 23 students were interviewed in total. At the end of the year 2012 I had 14 participant interviews. I decided to increase the number of interviews in order to gain a wider data set and the following year I repeated the interviews at the same time of the year (with the students having the same taught input at the previous cohort) and gained 9 more participants giving a total of 23 interviews for analysis. Of the 23 students, 13 had studied the multiliteracies module. This provided me with a large set of data for analysis.

Of the 23 students, only 1 was male with 22 female. This was representative of a typical cohort on the course. For example, of the 87 who completed the questionnaire, only 7 were male from a cohort of 175 females and 15 males. In terms of the age of the data set 78% of the participants who completed the questionnaires were between 19 and 24 years of age. In the interviews the majority were young student teachers with 14 out of 23 aged 19-21, 2 were aged 21-29 and 8 were 30+. This provided a wide range of ages for analysis with the majority at either end of the spectrum. On the whole, students are mostly young and female and whilst in the questionnaire I did manage to get a range of ages and both male and female, the male population was under-represented in the interviews. The make-up of the participants shall also be examined further in the following results section.

4.10 Questionnaires

A mixed methods approach has been used beginning with a questionnaire which has been used to provide an overview of the students' digital lives and classroom experiences followed by a qualitative study of the student teachers' classroom experiences. The information gained from the quantitative data was used to inform the next, qualitative stage of the research. From the questionnaires I was able to see the extent of the students' own experiences of digital literacies, confirming the varied experiences and highlighting a range of competencies and confidence with digital literacy but also gave an insight into what they had seen happening with regards to the use of digital technologies in literacy classrooms which helped to refine the research questions and the interview questions.

4.10.1 Trial Run

I decided to carry out a pilot study in order to evaluate the effectiveness of the data collection methods and to use a questionnaire to gain a broad picture of the student teachers' experiences of literacy (see appendix IV). One of the first decisions was to consider who would my participants be? As a teacher educator I had access to all the student teachers on both the undergraduate and the postgraduate teacher training programmes. As I was teaching English to the whole Year 2 BA (QTS) cohort (180 students) for a whole term, this provided me with easy access to a whole cohort of students during the autumn term. This group of students had already experienced their first school placement in the previous term and so had some recent literacy classroom experiences to share. I could easily distribute and collect participant consent forms myself and administer a questionnaire via the university VLE to the whole cohort.

Questionnaires are useful instruments for collecting survey information as they can give a broad overview of people's experiences and views without the researcher having to be present. Amongst the many advantages of using questionnaires is the fact that it removes the interviewer effect however, there remains the fact that the set of questions have been devised by the researcher and the questions will direct the participant to give responses to specific questions based on what the researcher wants to know. It is quick to administer and convenient for the students to complete in their own time, however this can lead to a low response rate as the researcher is not present as a reminder. They are good for administering to larger numbers of participants in order to gain numerical data, which can be more easily analysed than qualitative data. And whilst questionnaires can establish a broad picture they are not able to provide a more in-depth picture as the researcher cannot prompt or probe. Whilst the questionnaire removed

the interviewer effect, I could not totally remove my influence on the students as I was one of their tutors on the course and I must therefore recognise how this position of power positioned both the students and myself and may have influenced their responses. I tried to address this by making the questionnaire anonymous and voluntary.

Questionnaires take time to create, pilot and refine and this questionnaire was discussed first with a colleague before piloting it with a group of student teachers. This was to ensure that the questions were a) easy to understand and answer, b) would give useful information and c) not too onerous for the participants. Questions were selected to try to gain a picture of the student teachers' digital lives by asking them about what they use, their self-perception of their competence with technology and experiences of technology being used in school literacy lessons.

It took some time to settle on the questions that I would ask. Closed questions including dichotomous questions and multiple-choice questions and rated questions were included in order to obtain quantitative data to gain an overview of trainees' digital lives and experiences. This enabled me to observe patterns and make comparisons relatively easily. However three questions were included that allowed the participants to add further comments or explanations. Whilst questionnaires are easy to administer, and relatively easy to analyse in terms of the quantifiable data that can be collected, they cannot give any great depth or rich detail (Clough & Nutbrown, 2002). The open-ended questions will give richer data but will make it more difficult to analyse accurately or truly reflect the participants' views due to my own views and interpretations of what has been said (Cohen et al., 2007).

As already mentioned an important aspect to consider before administering the questionnaire were the ethical issues involved. As their tutor and assessor, the purpose of the questionnaire was discussed with the students and consent gained through the use of participant consent forms. The questionnaire was made anonymous so the participants would not worry about their responses being viewed and used for other purposes by their tutors. In this way it is hoped that the researcher influence would be limited with the participants feeling comfortable to give honest responses.

At the end of the questionnaire the participants were given the option of volunteering contact information should they be interested in taking part in follow-up interviews, making clear that

the interviews would be carried out at a later stage once the assessment of the core module has been completed and the trainees have returned from teaching practice in order to reduce the researcher impact and to reduce pressure on the students' already busy workloads.

The questionnaire was then refined before administering with another cohort of students in the following autumn. Changes included clarifying the terms used in the questionnaire. For example, changing work to 'employed work' so that they would not confuse work with study. A question was changed slightly by providing an additional option for them to choose from. For example, when asked if they had used technology in their teaching they could originally choose from two options 'yes' or 'not yet' but I felt that this might not accurately reflect some of their experiences so gave a third option of 'yes a bit', 'yes a lot' and 'not yet'. Some questions were replaced in order to gain a clearer picture of their views on digital technologies being used in schools, which would help to answer the original research questions about their views of literacy. At the end of the questionnaire students were asked if they would like to take part in the interview stage of the research and to provide their email address if they were happy to be contacted.

4.11 Interviews – mining and travelling

Whilst the questionnaire was useful in providing quantifiable data and some general background data on the participants and their experiences, it does not provide the detailed description of each of the student teachers' experiences of teaching literacy in classrooms and of the structures that they encountered which is required to address the research aims and questions. I therefore decided to interview student teachers in order to gain a richer and personalised account of their experiences. "If you want to know how people understand their world and their life. Why not talk with them?" (Kvale, 1996: 1). Kvale (1996) uses the term '*inter – view*' to describe the interchange of views between people and he uses two metaphors to describe the interviewer's role: 'a miner' and 'a traveller'. Firstly as a miner, the interviewer is digging down for buried metal hoping to uncover meaning that is as yet unaffected by the interviewer's ideas. The second as a 'traveller' is used to describe how the researcher is on a journey that leads home to tell a tale of that journey, having listened to many people's stories and experiences along the way. The journey leads to new knowledge and a change in the traveller's understandings of the issues through a process of reflection. I shall use Kvale's metaphors when thinking about my own research. To mine each interview for valuable

information and to use the information received to tell a story about student teachers' literacy lives and classroom experiences.

4.12 Interviews and ethical considerations

Something that I was very aware of in my research was the tutor: student relationship that existed between myself and the participants. I was interviewing students who I taught or interacted with on a regular basis and could potentially be involved in further assessments both academic and practice-based. Whilst it is impossible to remove the researcher's influence on the participants, I ensured that I only interviewed the students at the end of the year when all of the modules had been taught and assessed and all practice-based elements had come to an end. This not only minimized the power relations and researcher impact but also took place once their academic year had finished and would therefore not interfere with their studies and any coursework or assessments. I also made sure that I explained the purpose of the research clearly through the participant consent form and again before the interviews were conducted. Taking part in the interviews was totally voluntary and students had the option of withdrawing at any stage. The participants who took part in the interviews were those students who initially indicated their interest in taking part in the interviews at the end of the questionnaire. Each participant in the interview stage has been given a pseudonym and anonymity has been maintained. All hard copy data that might identify the participants has been stored securely in university storage and electronic data is anonymous and stored securely on an encrypted hard drive.

Not only were the ethical aspects important to consider but so too were the practicalities such as: where will the interviews take place? How should the room and chairs be arranged to provide the best conditions? How should I dress – more formally to help to separate myself the researcher from myself, the lecturer or more informally? What time of day is best? How would I start the interview? What tone do I want to set in terms of establishing the interviewer: interviewee positioning? How to manage the power relationship during the interview was really important and this was achieved through all of the above considerations. I did not want the students to feel that they had a duty to me or the university or the schools that they were describing but to talk to me about their experiences and their beliefs as openly as they felt comfortable with. I made clear the purpose by explaining the research and going through the consent form once again and answering any questions that they might have. I also explained that they were free to withdraw from the interview and the research at any point and that all

names will be anonymized and data confidential. I decided to hold the interviews after they had received all their assessment feedback and the academic year was coming to an end but was careful to invite them in on a day when they were already in faculty so as not to burden them with additional travelling. The interviews were conducted in a small teaching room that was not one that they would associate with their taught modules and I tried hard to balance giving them the opportunity to say as much as they wanted to without keeping them for too long.

I wanted the students to feel that they were providing me with a useful insight into their beliefs and experiences so I outlined my research aims to begin with and gave them an idea of the topics that I would like to ask them about, also highlighting that if at the end, they felt that there was something that they wanted to mention but didn't at the time, then they could do so at the end. Kitwood (1997) cited in Cohen et al. (2007) views interviews as 'social encounters' and not simply a place for knowledge exchange. Kvale describes the interview as "a specific form of conversation and more than a simple social encounter; it has a structure and a purpose" (Kvale, 1996: 6) with the aim of obtaining knowledge about a social context – which in this case is the classroom experience of the student teachers. Whilst Kvale sees the research interview as a conversation between the interviewer and the interviewee, he does recognise that there are differences between everyday conversations and the professional conversation of research interviews. He maintains that professional conversations have a methodological awareness of question forms, distinct dynamics between the researcher and the interviewee and a critical awareness to what is being said as well as a power dynamic whereby the researcher is largely in control of the conversation, with one-sided questioning, which is unlike everyday conversation where power is more equal. It is neither an open conversation nor a highly structured questionnaire.

Denscombe (2007) suggests that some researchers might assume that interviews are quite easy to conduct as they draw on our existing ability to conduct a conversation, something that we all do almost every day and that this can lead to poor planning and preparation. With this being my first encounter of interviewing participants, I was working hard to establish a professional conversation of this kind as suggested by Kvale. Oppenheim (1992) and Dyer (1995) cited in Cohen et al. (2007) support Denscombe in arguing that interviews are not an ordinary, everyday conversation in that they are not a naturally occurring conversation. Oppenheim suggests that conducting research interviews is not straightforward because both parties have to learn new roles. For the interviewee they learn how to be 'the good respondent' (1992: 66). Of course,

this is more complex as it could involve the participant trying to give the researcher what they think they want to hear or they may not understand the researcher's questions in the same way as the researcher intended. So too does the interviewer have to learn how to take on a new social role. Regardless of the fact that for some, semi-structured interviews may be viewed more like conversations than interviews, it must not be forgotten that the informal interview is an unusual situation for most people (Hitchcock & Hughes, 1995). An interview is essentially a one-way process and has to be, otherwise, if there is equal distribution in the conversation, too much of the interviewer's bias and judgments may be revealed and influence the respondent. Oppenheim suggests that "The researcher 'switches off' their own personality and attitudes in order to reduce the interviewer effect" (1992: 66). This was something that I was very aware of as these were the first interviews that I had conducted. I have to say that switching off my own personality and attitudes was not easy and I think was only partially achieved.

I opted for a set of questions that were grouped into topics but tried to allow the participants some space to explore the topics in an order that made sense to them. The questions were grouped under the following topics: their personal literacy lives and digital literacy experiences. Their views on literacy, their classroom experiences of literacy and their university training. Often they would move from one question into another topic which was to be asked later on. In these cases I allowed them to talk about their experiences and make the links themselves. Some required more prompting than others and I asked the questions in the order that I planned whilst others talked more freely, making their own connections. Oppenheim identifies two kinds of interviews: standardised and exploratory or depth interviews. Oppenheim suggests that depth interviews can broaden and deepen the research, throwing up new themes and dimensions and new hypothesis to be studied that were not anticipated. "The purpose of the depth interview is to collect percepts and ideas and to improve the conceptualisation of the research problem" (Oppenheim, 1996: 70).

Cohen et al. (2007) group interviews into three main types: Formal, standardised interviews which tend to have set questions, semi-structured interviews which allow the interviewer more flexibility with the questions asked and completely informal interviews with just a few areas for discussion. The interviews that I conducted fall between the interview guide approach according to Patton (1980) cited in Cohen et al. (2007) where topics to be discussed are identified in advance and the standardised open-ended interviews where the wording and sequence of questions are decided in advance of the interviews. The main advantage of using

standardised open-ended interviews is the comparability of responses. More open interviews, whilst allowing for greater flexibility and providing the researcher with the possibility of delving more deeply into individuals' responses, reduce the comparability of responses.

Cohen et al. (2007) discuss the 'fitness for purpose' of interviews, where the researcher considers what they want to find out and the kind of data needed and design the interview to meet their requirements, suggesting that the more one wants to be able to compare data, the more structured the interview, the more one wants to have unique, individual information, the less structured the interview. Oppenheim (1992) uses the term 'stimulus equivalence' and suggests that it is more important that participants understand the question in the same way rather than have exactly the same question. This was applicable in this study as I sometimes found that I needed to rephrase a question or I moved to a later question because it naturally linked to something that the participant had talked about and it was important that I had the flexibility to be able to do this.

Whilst the questionnaires allow me to be able to compare data and provided me with an initial picture of the students' experiences, from the interviews I want to capture each person's unique experiences and understanding of their lived worlds. I want to be able to highlight the differences and uniqueness of situations. With more formal, standardised interviews, it is easier to analyse the data as the categories for analysing the data have already been decided whereas with open-ended interviews, the researcher has to identify the categories as they emerge and analysis may take much longer. Kvale (1996) talks about 'deliberate naiveté' to describe how important it is for the researcher not to have preformulated questions and categories for analysis before the interview and have no presuppositions in order to encourage "an openness to new and unexpected phenomena" (Kvale, 1996: 33). This would be in line with hypothesis finding rather than the interviews being driven by the hypothesis. However, Kvale argues that it is important to have some direction. As a result, my interview questions were shaped by the theory and findings unearthed within the literature review but did allow for individuals to provide unique accounts and responses which would allow for new insights to be explored that may not have been captured by literature review or anticipated in the questions posed. There was also space at the end of the interviews to allow the participants to reflect on their responses after a brief recap and to add or change anything. I always asked them if there was anything else that they wanted to say about the topic that I had not given them the opportunity to say. Whilst I had

some predetermined questions, there was still an element of Kvale's 'deliberate naiveté' as I did not have any preconceived ideas about what they would say.

As suggested by Cohen et al. (2007) the semi-structured interviews that I have designed have the following:

- A topic to be discussed
- Specific possible questions to be put for each topic
- The issues within each topic to be discussed, with possible questions for each issue
- A series of prompts and probes for each topic, issue and question

(Cohen et al. 2007: 361)

In order to address the research aims, the questions for the interviews were grouped under four themes: personal digital literacies, views of literacy, use of digital literacies in the classroom and experiences in ITE with some questions as prompts for each theme.

4.13 Interview questions:

Personal digital literacies

1. Are you digitally literate? What does it mean to you? How important is it for you to be digitally literate? What are your key pieces of technology and how/why do you use it/them? Is your use of digital technology for pleasure or is it functional? Or both?
2. How confident are you when using digital technologies? Why is that? What would help you to become more confident?

Views of literacy

1. What does it mean to be literate today? What do you think it means to be digitally literate? Is it important? Why/not?
2. How do you feel about children using and developing their digital literacy skills in schools?

Using digital literacies in the classroom

1. What are your experiences of digital literacies/new technologies in the classroom?
2. What have you seen being used? How effective was it? Why do you think it was taught this way?

3. If you have not witnessed digital literacies being developed in schools why do you think this might be?
4. How confident are you when using digital technologies to support learning? Why is that?
5. What would help you to become more confident in the classroom?
6. What digital literacies have you drawn on or developed in the classroom? Why did you use them? How effective were your lessons? Why do you think this was?
7. If you have not used digital technologies in the classroom – why not?
8. Have you any ideas about how you might integrate digital technologies in your teaching and why you would do it?

Trainees' experiences of technology in ITE

1. Where in the curriculum are you encouraged to take risks with technology?
2. What are your experiences of technology on this course?

The questions are all open ended and intended to allow the participants to talk about their own understandings and experiences and whilst this means that I will have a range of individual and unique responses, there should be some comparability of experiences. As my research is essentially qualitative, seeking to explore individuals' unique experiences of digital literacy, some of the interview questions were more open-ended rather than highly standardised. Having some structure to the questions was important to both answer the particular research questions and for there to be an element of comparability to enable themes and underlying social structures to be identified and to make links between the students' responses. However, it will be just as important, if not more so, to note the differences between their responses and analyse them within a theory informed framework to provide a deep analysis and 'thick' descriptions of the students' experiences. As highlighted earlier by Archer, whilst social theory posits that cultural and social structures impinge upon people by shaping the social situations, what it does not explain is why different people react in different ways to the constraints or enablements – this would suggest agency, that people's personal powers of reflection and decision making are also playing a part in the social practice. It is these different reactions that I will seek to examine, how each student teacher responds to the social structures that they encounter. Differences in the data will highlight the individual nature of decision-making and the relationship between the individual and their social environment as each student will have different backgrounds and

experiences. What is it about their individual backgrounds and experiences and their situated classroom experience that opens up or closes down opportunities for them to try out their literacy ideas?

I have also identified follow up questions for each question if needed as prompts and probes to help participants understand the question and what it is that I want to find out about from them which as Morrisson (1993) cited in Cohen et al. (2007) argues can provide a richness, comprehensiveness and honesty to the responses and data collected. Whilst there is an order to the interview questions, I am comfortable with moving around the questions in a different order depending on the participants' responses. It is the intention that through having open-ended questions, I will be able to probe their responses to explore responses in more depth or to clear up any misconceptions or clarify responses and therefore having a degree of flexibility is essential. Cohen et al. (2007) argue that through open-ended questions being used, unforeseen themes and connections and relationships can emerge. Effective interviewing is clearly a skill and Oppenheim (1992) uses the term 'traffic management' to describe how the researcher, when a respondent has touched upon many interesting themes, needs to remember what has been said in order to follow it/them up later.

Because the participants are students of mine, I have designed questions that I think they will be comfortable with and capable of answering, questions that involve them sharing their experiences and putting them in the position of expert as they are talking about themselves and their personal experiences; something that they are familiar with.

I carried out three interviews in the first round of interviews in 2011-2012 and carried out some initial analysis in order to see how effective my questions and questioning were before continuing with the rest of the interviews. I realised that I needed to allow the participants to do more of the talking in the interview and to make the questions more open ended to allow for more spontaneous themes to emerge and to use follow-up questions rather than stick to the list of questions I had designed. This allowed me to probe their responses and clarify what they were saying. Because I wanted unstructured responses where possible (rather than structured responses – e.g. can you give me two reasons why...). Although the researcher has less control over unstructured responses it does allow the participant to express their ideas more freely and with less constraint but this leads to data that is more difficult to code and quantify. The researcher needs to consider what kind of data they are looking for as this will influence the

kinds of questions that will be asked. Also, in this case there was one interviewer, which should reduce the variables.

After analysing the effectiveness of the initial three pilot interviews and amending the questions slightly to provide opportunity for the participants to add anything else at the end of the interview, I went on to interview eleven more student teachers in order to explore in greater depth their digital lives and experiences of teaching literacy and of using technology in literacy classrooms. These participants were those students who had indicated at the end of the questionnaire that they would be interested in taking part in the research interviews. Whilst a larger number had volunteered at the time of the questionnaire in autumn, by the summer time when the modules had come to an end many of the students were no longer available, having returned home. At this stage I had fourteen interviews which ranged from 20 minutes long to 45 minutes, and a large amount of data to transcribe before analysis.

I taped each interview and made brief notes to enable me to briefly recap their responses at the end of each interview and allow them the chance to add or amend anything. Making notes also served as a reminder of anything that I wanted to explore further. I was aware that making notes might distract the participants particularly if they were anxious so I explained why I was making brief notes and tried to keep them as brief as possible so that I could maintain eye contact and show that I was listening to them and what they were saying as much as possible. At the end of each interview I read back my notes to them to check that I had gained an accurate record of their responses. I did not show them the transcript afterwards as it was quite a long time after the interviews that they were all transcribed and I felt that they might not have remembered accurately due to the length of time passing. Also, after the summer break, as soon as the students returned to university, they were preparing for their final school placement and I did not want to add to their workload at this crucial point in their training.

4.14 Transcription

I transcribed each interview myself over the summer and whilst this was time consuming, it enabled me to familiarise myself with the responses and to start analysing almost instantly as themes and patterns starting to emerge. It enabled me to get to know each participants' responses in detail, word by word, which would then prove to be very useful when I later decided to use discourse analysis as a way into the data analysis as I was very familiar with what each participant said and how they said it.

I used Gee's (2011b) guide on '*How to do Discourse Analysis: a toolkit*' to support me in transcribing the interview data. Gee recommends that the researcher starts to organise his/her thinking about a piece of language through representing the interviewee's text in lines and stanzas using the grammatical demarcations of clauses to lay out the transcribed text. He suggests that this serves two functions: to represent what we believe are the patterns in the person's speech and to represent an initial picture of our analysis and what meanings we attribute to the text. In separating out the participant's speech into lines and stanzas where each line contains a different subject and/or topic of the sentence and paying attention to any emphasis and stress that the participant places upon words when speaking enabled me to pay attention to the linguistic nuances of the utterances and pay attention to the salient points.

In the next two chapters the results of the questionnaire and the interviews shall be presented before moving into the more detailed discussion of the analysis.

Chapter 5

Questionnaire Results

5.1 The questionnaires

As outlined in the previous chapter, an electronic questionnaire was administered via the VLE to the Year 2 cohort at the beginning of core English module on the BA (QTS) course in September 2011 (see appendix IV). Participation was voluntary. The aim of the questionnaire was to gain an overview of student teachers' digital lives, classroom experiences and views on using new technologies in their role as teachers. This data provided an initial picture of the context that student teachers were experiencing and of how technology was being used in classrooms to support pupils' digital literacies. This picture was then used to inform the next stage of the research process.

A mixture of closed questions (including dichotomous questions) and multiple choice and rated questions were included in order to obtain quantitative data. This enabled me to observe any patterns and make comparisons relatively easily. Three questions were also included that allowed the participants to add remarks or explanations. Whilst questionnaires are easy to administer, and relatively easy to analyse in terms of the numerical data that can be collected, they cannot give any great depth or rich detail (Clough & Nutbrown, 2002). Whilst the open-ended questions will provide richer data, they will make it more difficult to analyse accurately or to truly reflect the participants' views due in part to my own views and interpretations of what has been said and because there is no opportunity for the researcher to ask for clarification (Cohen et al., 2007). However, the next stage of the research design involved interviewing student teachers in order to gain a much richer data set for in-depth qualitative analysis and the interview questions were informed by the analysis of the quantitative data. The quantitative data alongside the literature review was then used to refine the research questions.

- How and why do student teachers use digital literacy in their own lives?
- What are student teachers' experiences of digital literacy in schools?
- What are the key influences that shape student teachers' views of literacy and their classroom practice?
- What factors impact upon student teachers' confidence and competence in the use of digital literacies in their teaching?
- How do student teachers build pedagogical knowledge with regards to teaching digital literacy in classrooms?
- How do student teachers develop agency in their classroom practice?
- What are the implications for teacher training?

The questionnaire was designed around these questions. However, as the research progressed, whilst it was still relevant to find answers to these questions, other areas of interest were piqued and explored as the student teachers' interviews were analysed and themes were identified for further examination. For example, the significance of social structures in the form of government policy and how this affects literacy classroom practices, ITE and student teachers teaching literacy in classrooms became important to this research.

5.2 The findings

Out of 190 students in the cohort 87 responded = 45.8% response rate

5.2.1 Question 1: Gender

80 female, 7 male

This broadly reflects the overall gender make-up of the cohort which was 175 females and 15 males.

5.2.2 Question 2: Age

The majority of the students were under the age of 25 and the range was 19 – 50 years of age. The number of students over 25 was significantly less than those between 19 and 25 years of age and this is reflected in the way I have created the age brackets:

19-25 year old – 78%

26-30 year old – 8%

31-35 year old – 6%

36-40 year old – 5%

Over 41 years - 3%

The average student in this cohort was female and aged between 19 and 25.

5.2.3 Question 3: Write a short statement about the use of digital technologies in your life
(just one or two sentences about what you use and why they are
important to you or why you don't use digital technologies very often)

The significance of daily interactions with new technologies became evident as almost every participant identified a range of technologies that they use on a daily basis. Their use of new technology spans all aspects of their lives including study, work and personal. The majority of this group of students is dependent on new technologies. Amongst the comments some interesting comments were:

"I don't think we realize how much we rely on technology for communication purposes".

"I use modern technology every day of my life. I have the most up to date mobile, TV, laptop, satnav and MP3 player. All of these items either facilitate my daily life and make things easier or they are enjoyable to me. 99% of the time it is possible for someone to contact me via a piece of technology."

In their digitally-filled lives, the significance of one particular piece of technology emerged; the role of the mobile phone in students' lives:

"My life seems to revolve around my iPhone"

"I use my smartphone daily but not my laptop as often as everything I need is on my phone!"

"I tend to use my laptop and smartphone everyday as it helps me to organize my life a little better, gives instant access to emails, enabling me to respond and act upon it almost immediately."

Mobile phones seem to be an essential item, helping students to organize their lives through using the alarm function, calendar, emails, shop and pay bills. But it is also significant in helping students to maintain contact with friends and family, important for those in particular who are living away from home.

"I use my mobile phone as a substitute for my home computer when out and about. I see it as a lifeline to emails and social networking sites and for contacting people."

Here, the word ‘lifeline’ is an interesting word choice. Indicating the perceived need for contact with others. In fact, many of the participants stressed the need for being able to keep in contact with people:

“I also use my mobile every day to have easy access to my friends and family”

“I use digital technology and my phone every day to use the Internet and check Facebook to keep up to date with what my friends are up to.”

Mobile phone technology is multi-purpose and mobile, enabling these students to do almost everything that they need to do in their daily lives when they are on the move.

There were a small number of comments, which indicate that some students are not confident users of technology or do not like using new technologies. Examples are:

“I am not a confident user of technology. It is mainly out of necessity.”

“I tend to use my laptop for work, aside from that I don’t often use it. I don’t like having my phone out/on me as I find it unsociable.”

“I try to use it wherever possible but need more experience.”

“I don’t ever use computers to play games or games consoles. I don’t enjoy these.”

There would appear to be a gap between the majority of students and this group. Confidence in using technology shall be explored further at the interview stage.

5.2.4 Question 4. What digital technology do you use in your everyday life?

USE (%) DEVICE	Daily	Weekly	Monthly	Yearly	Never
PC	14.9	31	20.9	9.2	24.1
Laptop	85.1	8	2.3	3.4	0
Smartphone	77	1.1	2.3	2.3	17.2
Mobile phone	62.1	1.1	2.3	4.6	28.7

iPad	3.4	3.4	8	1.1	75.9
Digital camera	0	33.3	60.9	3.4	2.3
Video camera	0	6.9	18.4	21.8	47.1
Portable music device	46	24.1	13.8	5.7	9.2
Online gaming	5.7	8	21.8	9.2	54
Computer games (offline)	4.6	6.9	19.5	13.8	51.7
Satellite navigation	2.3	11.5	48.3	8	27.6

It is interesting to note that the most frequently used devices are laptops and mobile phones at 85.1% and 77% respectively and portable music devices at 46%. Mobile technology is most frequently used and this is most evident in responses to question 3 above. This is supported by more recent research by Ofcom (2016) which showed the increased usage of mobile phones by young people. Usage of certain devices such as video cameras and cameras may be used for special occasions only and therefore used on a monthly or yearly rate.

75.9% of participants have never used an iPad and this may be due to the recent access (at the time) to this device, cost, or that I did not use a generic term such as tablet computer. Quite a large percentage of participants have never used online games – 54% or computer games 51.7% or video cameras 47.1%. It is interesting to note that everyone has used a laptop. Another interesting result is that 28.7% have never used a mobile phone/17.2% never used a smartphone. This contradicts responses given to question 3 where mobile phone usage is significant but perhaps not everyone has access to a mobile phone or there is confusion between mobile and smartphone.

5.2.5 Question 5: List other digital technologies that you use that are not in question 4.

There were none.

5.2.6 Question 6: What do you use digital technologies for?

Employed work	22
Pursuing hobbies	73
Study	85
Socialising	84
Gaming	30
Finance	61
Shopping	72
Listening to music	81
Creating music	7
Watching TV/film	65
Editing/publishing photographs/videos	58
Sharing	33
Others (Booking events/holidays, reading)	3

Technologies are most commonly used for study, socializing and for listening to music and reflect the devices used in question 4; laptops for study, mobile phones for communicating and portable music devices for listening to music. Pursuing hobbies is also a common use of technology and only 30 students admitted to using devices for playing games. Technologies are also used frequently for ‘getting things done’ such as shopping and managing finances.

5.2.7 Question 7: How confident are you when using digital technologies?

CONFIDENCE (%) DEVICE	Very confident	Confident	Not very confident	Not at all confident
Computer	59.8	40.2	0	0
Smartphone	57.5	27.6	10.3	4.6
Mobile phone	77	21.8	0	1.1
Digital camera	65.5	29.9	2.3	2.3
Video camera	33.3	31	23	12.6
Portable music device	65.5	24.1	5.7	4.6
Online gaming devices	18.4	26.4	33.3	21.8
Computer games (offline)	19.5	23	36.8	20.7

Apart from computer games, the majority of students are either very confident or confident using the range of digital technologies. A large number of students are not confident using online or offline computer games and 1/5th of all students are not at all confident with gaming devices or playing computer games.

All are confident users of computers and only a small number not confident when using mobile phone technology or digital cameras, which again could be attributed to access.

12.6% were not at all confident using video cameras. This might reflect their lack of access to or lack of experience of using video cameras in their daily lives.

5.2.8 Question 8: What do you do when you want to learn how to use software/device/applications?

What do you do?	Number of trainees
A friend helps me	35
A family member helps me	38
I read the instructions	41
Look on the internet	48
I play with it	66
Other	Help from children

Most students learn from playing with the technology. Seeking help from other people was less common.

5.2.9 Question 9: Why do you want to learn how to use new digital devices/software/applications?

Reason	Number of trainees
Need to know for work/studies	63
Interested in how something works	37
Like to be able to master it/be an expert	14
Other:	
Convenience	1

Personal use	2
I don't	1
I just like to use them	1
I like to be up to date with new technologies	3
To keep in touch with people	1
Only if it interests me	1
Only if I own it – not because it is new	1

Most students want to learn how to use new technologies because they need to. And yet, in question 3, many wrote about how they use new technologies for pleasurable activities such as communicating with friends and family and playing games.

5.2.10 Question 10: What digital technologies have you seen being used in schools?

New technology	Number of trainees
PC	82
Laptops	78
iPad	3
IWB	85
Microsoft Office	84
Internet	86
Visualisers	20
Control devices	38
PSPs	2
Digital cameras	78
Video cameras	41
Voice recorders	45
Social networking sites	3
eMail	57
Music creation software	21
Games software (offline)	19
Virtual worlds	20
None	0
Other: Lego robots, databases, Nintendo DS, handheld device, Apple Macs, virtual learning centre	6

All students have seen some form of digital technology being used in classrooms, however limited. There is a wide range of technologies being used with PCs and laptops being most commonly used.

It is interesting to note that what is observed in the classroom reflects the students' own experiences of digital technologies. Computers, laptops and digital cameras are commonly used but computer gaming technology is rarely used and reflects their confidence levels in using such technologies. Whilst most students use technologies to socialize, this is not necessarily reflected in classroom practice with 57 seeing email being used but not clear for what purpose and only 3 students seeing the use of social networking sites with a number of comments regarding e-safety and views on social networking.

5.2.11 Question 11: Write a short statement explaining your views on children using digital technologies in school and at home

From the statements provided by the participants it would seem that they support the idea of incorporating new technologies in the classroom and most demonstrated an awareness of the role that technology plays in contemporary society and the need for children to be prepared for the future workplace. However, this may have been influenced by the topic of the survey, with students guessing what they think I want them to say. This may be caused by my role of tutor and researcher. A common concern voiced by many is the importance of teaching e-safety regarding social networking sites and harmful or inappropriate content of websites.

A number of students suggested that some teachers and students rely too much on new technologies: *“There is an over reliance on technology but teachers are only using PowerPoint to present”*, *“Digital technology in schools can be seen as an easy way out of lessons”*, with many suggesting that it is *“great in moderation”* and that *“a balance is needed”*, *“teachers should be using a variety of resources including paper based and new technology”*. Several students thought that using new technologies in the classroom is fun and engages children as well as enhancing learning through encouraging independent learning.

5.2.12 Question 12: Have you used any digital technologies in your own teaching?

	% trainees
Yes, a bit	61
Yes, a lot	36
Not yet	3

It is reassuring to see that only 3% have not used any form of technology, with the majority having used it a bit. At this stage of their training many have had limited experience in the classroom so far. Reasons given for not using it were:

“The host practitioner would not allow me to use the whiteboard/technological advances unless she thought they were necessary to the lesson, she thought it would distract the children despite my insistence that it could be used where appropriate as a good focal point”

“The IWB did not work and I wasn’t allowed to take pictures”

“The school didn't have the equipment”

“There have not been any iPads or digital books in school as yet - but I imagine (if funding is available) this will become more common”

There were some interesting comments here and worth exploring in more depth during interviews. However, the questionnaire data would indicate that teachers are using new technologies in classrooms and trainees are seeing it and using it themselves but to what extent and how is it used? Using the IWB for displaying texts on a daily basis is using new technologies but does it really reflect the possibilities for using it in other, more interesting ways that reflect students teachers’ and children’s everyday uses of new technologies?

5.2.13 Question 12a: If you have used any digital technologies in your teaching, please describe briefly what you used and why/how it supported teaching and learning

From the individual responses it would appear that the students collectively have been using a wide range of new technologies in their teaching including: the IWB, PowerPoint presentations, PCs, laptops, visualisers, voice recorders, digital cameras, video cameras (flip cameras), internet games, internet websites YouTube videos, Lego robots, educational software on the IWB and laptops, music composition software, Photo story software to create videos and

graphic programs. The most commonly used technology has been the IWB which has been used to display instructions, learning objectives, examples, visual images and videos and to model processes. Digital cameras have been used to capture images and educational computer games have been used to support teaching and learning.

Some of their comments included:

“I used a laptop, PPT and IWB to produce images that supported my lesson or to show the learning objectives and extension work on screen.”

“The IWB is great for making work interesting and colourful. The children seem more engaged when learning from the IWB than the normal whiteboard.”

“I used an IWB for every lesson I taught as a visual aid to support my teaching.”, or

“I have used laptops and digital cameras to record progress.”

The students are very much focusing on technologies to support teaching and pupil engagement and less on the learning, some however did explain how the technology supported learning in their class:

“I used the IWB for many of my lessons, some just showing presentations, but I found it especially useful in Math’s, getting children up to show their calculation methods to each other.”

“I used many activities on the laptops including an art program so the children could produce digital versions of Pollock’s work.”

Whilst new technologies certainly do have a very important role to play in supporting student teachers and teachers in the classroom, are they being used in ways that reflect how people use them in real life? Do the way trainees move seamlessly through their day interacting with new technologies use their experiences fully in their professional roles? Or do their experiences simply reflect the stage at which they are at in their training and some skills need to be developed and things understood before they can move on to more complex reflection of pedagogy? Does the multiliteracies module help trainees to make that step forward?

5.2.14 Question 13: How well has your training so far prepared you to use digital technologies in the classroom?

How well	%
Very well	13.8
Quite well	50.6
Not very well	33.3
Not at all	2.3

At the time of completing the questionnaire the students had completed one year of their course with one school placement experience. This data will be explored further in the interviews to find out what had contributed towards their evaluations of the training.

5.2.15 Question 14: What support would you like to have to enable you to feel more comfortable using digital technologies in the classroom?

The overwhelming response to this question was a request for more IWB training and to be shown appropriate educational programs and software. A small number would like training on how use music creation software or how to make and edit films. Two students were particularly confident already:

“I am already confident so I feel that there is not much more that can make me more confident.”

“None, I just need to practice to develop confidence.”

5.3 Summary of the questionnaire results

Having examined the data obtained from the questionnaire it is possible to begin to get a picture of the ways in which student teachers make use of digital technologies in their personal lives and of their experiences to date of how new technologies are being used in primary classrooms. Already I am able to get a feel for the data and gain some ‘impressions’ and ‘intuitions’ (Clough and Nutbrown, 2002). However, it is the open-ended questions and the next stage of the research process that shall illuminate the experiences of student teachers and allow for deeper analysis of the social structures that these student teachers experienced.

From this questionnaire it is possible to gain an insight into the digital lives of this group of student teachers as a whole. The majority (but not all) seem to be interacting with new technologies throughout their daily lives, seamlessly moving across all aspects of their lives; personal, social, study and work. Using mobile technology and the internet to organise their lives, manage finances and shopping, support their studies, play and communicate with family and friends.

The majority rate themselves as either very confident or confident users of most technologies apart from computer gaming and video cameras. They understand the significance of digital literacy practices in their own lives and for children but do they make the connection to classroom practice? There are a small number who are not using new technologies very much in their lives and there appear to be different reasons for this and these are areas that could be explored further.

Whilst the majority has seen new technologies being used in schools, the data might suggest that this is mostly the IWB, PC, laptops and the internet and extensive use of Microsoft Office software with fewer experiencing a full range of technologies such as virtual worlds, social networking sites, PSPs and video cameras. This is reflected in their suggestions for further training, which focused heavily on being taught how to use IWBs. This early analysis reflects the findings of other research, namely Reedy's (2008) research into the dominance of a visual culture in Secondary schools where the IWB is used heavily and Tufte's (2004) concerns surrounding the presentational style of teaching encountered in schools.

5.4 Student teacher profiles

As well as the quantitative data gained from the responses to the questionnaires it was also possible to begin to piece together a more detailed picture of the student teachers' digital literacy experiences, classroom experiences, confidence and beliefs and create profiles of some of the student teachers in this cohort by combining all of the questions to provide an initial picture. To do this I created case studies of three different student teachers using their responses to the questionnaire. I decided to choose students from 3 different age groups and to include one male to reflect the range of students in the cohort and they each represent a different level of confidence with technologies.

5.5 A Comparison of three student teachers' digital lives

5.5.1 Student 'A'

Student 'A' is aged 19, female and rates herself as a very confident user of a range of digital technologies. She is an extensive user on a daily basis:

"I use modern technology every day of my life. I have the most up to date mobile, TV, laptop, Satnav and MP3 player. All of these items either facilitate my daily life and make things easier or they are enjoyable to me. 99% of the time it is possible for someone to contact me via a piece of technology."

She uses technology for work, study, socializing, hobbies, managing finances and shopping and downloads music, TV and films.

She rated herself as a very confident user in all technology and confident in gaming. She uses the internet to find out how something new works and likes to be able to master new devices. She considers it important to teach children how to use digital technologies for future careers. She has seen quite an extensive range being used in schools including: PCs, laptops, IWB, the Internet, software, digital cameras, video cameras, voice recorders and email. She has already used digital technologies a lot in her teaching, using the computer for presentations, for getting children working independently on laptops to research topics and used digital cameras with children to record final products. She considers her training to have prepared her very well in using digital technologies in the classroom and has not identified a need for further training.

5.5.2 Student 'B'

Student 'B' is aged 50, female and overall rates herself as not at all confident in using a range of digital technologies apart from her laptop computer and mobile phone where she is very confident.

"I use a mobile phone for sending and receiving texts and making standard phone calls. I use a laptop for Internet banking, paying bills, buying products, access to social networking, education and research."

The two key devices used by student B are her laptop and her mobile phone, which she uses to study, manage finances, shop, pursue hobbies, socialize and listen to music. She usually gets

advice on how to learn about new technologies from her teenage children and is interested in finding out about new technologies for many reasons: needs to know for work and studies but also because she is interested in how things work. She has observed laptops, IWB, the Internet, Microsoft office and email being used in school. She has used technology a bit in schools, particularly the IWB to show animation and interactive websites. She does not feel the training has prepared her very well and would like more training on using the IWB.

5.5.3 Student 'C'

Student 'C' is aged 33, male and rates himself as a confident user of most technologies apart from digital and video cameras.

"I use the PC for email, research and for word processing assignments/notes. I also use it to stream TV and music as I never get to watch or listen to programmes at their original airing times."

He uses his laptop and mobile phone daily, plays computer games once or twice a week and other technologies are used less frequently. He uses technology to study, manage his finances, shop, pursue interests and listen/view music and television/film.

"As technology advances it is important for all children to understand the ways we can utilize technology to enhance many differing aspects of our lives, not merely for entertainment. It does worry me though that many teachers/students rely too heavily on technology for every usage in schools many lessons are simply teachers reading out a PowerPoint that the pupils will have read before they have finished talking, this will lead to monotony in class and therefore loss of excitement and innovative thinking."

He has not witnessed new technologies being used other than the IWB, digital cameras and the internet and he has not yet to use new technologies in his teaching and cites the following reasons:

"The host practitioner would not allow me to use the IWB/technological advances unless she thought they were necessary to the lesson, she thought it would distract the children despite my insistence that it could be used where appropriate as a good focal point."

He does not feel that his training has prepared him very well for using digital technologies in the classroom. In terms of what support he would like he suggests:

“Practice. I have yet to be instructed in any sort of IWB use as my groups ICT session was canceled and never reinstated despite my queries, I have though used the ICT suite to have a try on my own and learnt through trial and error.”

5.6 Initial analysis of the student profiles

These three trainees represent the range of trainees that have taken part in this survey.

From the three student profiles it was possible to identify some questions and themes for further study at the interview stage. It is evident that there is a difference in personal uses of technology. The mature student (aged 50) stresses how she uses technology devices to get things done in her daily life such as managing finances, shopping and studying. *“I use a mobile for sending and receiving calls”*. Does she prioritize functionality over pleasure and why is this? Is it related to an individual’s values and beliefs or simply the need ‘to get things done’ when modern day lives are busy. Trainee A (aged 19) however, comments on both the functional and enjoyable aspects of using new technologies. *“All of these items either facilitate my daily life and make things easier or they are enjoyable to me.”* Is this how technology use is viewed by other students – that games and social networking are for pleasure whilst other technologies are for supporting them in their teaching/professional roles or day-to-day organisation? This would certainly support other research where student teachers do not make use of their personal digital literacies in their classroom practices (Robinson & Mackey, 2006; Burnett, 2009).

There is a wide range in levels of technological confidence from student A who rates herself as very confident to student C who is generally confident to student B who is not very confident. This raised further areas for inquiry: Is confidence related to age? Experience? Interest? Perceived competence? What leads to confidence? Does confidence lead to competence? Does being a confident user in one’s personal life lead to confidence in using digital technologies in the classroom to help children learn? Just how do student teachers develop their pedagogical knowledge of teaching digital literacy in primary classrooms?

Experiences of observing technology in school on teaching practice was varied amongst the three students with student A who had a wide range of experiences and student C who not only

did not see much going on but also did not feel encouraged by the class teacher to use it himself. Are the attitudes and the experiences of the class teacher significant? Are many teachers and students using technology to simply replace the traditional way of doing something – using the IWB to share learning objectives and show pictures and films instead of using the chalkboard or TV? Student C seems to be questioning the use of the IWB and PPT merely to present information but then links it to pupil engagement. What does he mean by loss of innovative thinking?

One thing that unites the three student teachers is that there is a common understanding of how technological changes in society impact on lives and how this should be reflected in the classroom.

5.7 Conclusions and next steps

5.7.1 Overview of the themes emerging:

- There is an extensive range of digital experiences in their daily lives across all aspects of their lives – social, personal, study, work
- Most rate themselves as confident users of most forms of technology (but not games) with a minority rating themselves as not very confident.
- Trainees view technologies as a support for teaching and classroom management and not necessarily understanding the benefits for pupils' learning other than increased engagement as a route to increased learning. Technology is mostly used for presenting information, showing visual images or recording pupil progress. There appears to be a lack of pedagogical understanding
- The key piece of technology which the trainees focus their attention on is the IWB
- Some trainees however are questioning the use of PPT and the IWB merely to present information (however, nearly everyone still wants more training on how to use the IWB but this may be in order to fully exploit the resource)
- Few 'play' with technologies for pleasure? And many make the distinction between 'work' and 'pleasure' "It is a way to 'waste' time."

Whilst the questionnaire was useful in providing me with a broad overview of the student teachers' experiences, the limitations of the questionnaire must be recognized. For example,

did all the participants fully understand the questions being asked, were they responding honestly and if not, why not? With regards to gaming and using technology for pleasure, might they consider that they might be viewed negatively if seen to be 'playing' too frequently? I have to recognize that as the students' tutor, I will have inevitably influenced their responses. However, it has been useful in not only providing a broad picture of the student teachers' digital literacy lives and experiences of digital technologies being used in classroom but it also identified further questions that could be explored in the interviews in order to delve more deeply.

Chapter 6

Discussion of the Interview Data

6.1 Introduction

The literature review examined a number of key areas relating to student teachers' conceptualisations of literacy and the external structures and mechanisms that influence their conceptualisations, beliefs and practices. It highlighted the significant power that policymakers have in establishing a dominant form of literacy in schools where practice is shaped by international and national literacy policy. It also examined student teachers' professional identity building and the factors that influence them in this process exploring how their own experiences of school and the literacy curriculum, the policies and practices that they experience in schools and classrooms during their training and their university training all impact on their becoming selves as teachers (Britzman, 2003; Sfard and Prusak, 2005; Cook-Sather, 2006; Labaree and Warford, 2011, Vratulis et al., 2011).

A number of earlier studies found that whilst in their personal lives student teachers' engaged in rich and varied literacy practices that incorporated literacies of the digital, they did not make use of these experiences and knowledge in their own classroom practice. It was found that this was because they were working hard to fit in with existing classroom practices and be recognised as developing teachers (Marsh 2006, Burnett 2009) and were therefore reluctant to challenge established classroom practices. As Gilster stressed in 1997, digital literacy is more than the skills and competencies with digital technologies and is more about how one uses the tools in everyday literacy practices and Burnett (2009) suggested that one of the roles of teacher education is to encourage student teachers to evaluate how technology is used in schools. The student teachers' representations of what was used by their teachers and themselves and how it was used will be examined below.

This research will explore further what happens when student teachers encounter the social structures and mechanisms that constrain or enable their journey to becoming teachers, and teachers of literacy in particular. How they struggle, contest or comply as they navigate their way through these encounters and how they use reflexivity to assist them along the way will be explored through analysing the interviews putting Archer's reflexivity questions and Gee's Discourse Analysis tools to work. The students' conceptions of literacy, their goals, projects and actions with regards to their classroom practices when teaching literacy and making use of new technologies to support pupils' developing literacies will be analysed and framed by the existing literature and the methodological decision-making undertaken.

This chapter is divided into two parts. Part one examines the student teachers' representations of their own digital literacy practices and presents how they made use of their digital literacy experiences and practices in their classroom practice. The student teachers were also asked to reflect on what they saw happening in classrooms with regards to the forms of digital technologies used and how they were used. The data has been represented in a series of tables and charts below as part of the initial analysis. Part two will present the in-depth analysis of the student teachers' accounts of their classroom experiences in order to explore the social and cultural structures that shape the student teachers' professional identities and practices and their developing conceptualisations and pedagogical understandings. It explores what were they thinking when they rubbed up against the structures and discourses in each situation and examines how they acted.

6.2 Part One

Part one begins with an overview of the students and their experiences followed by a comparison of two groups of students: firstly, where both teacher and student use of technology was low and secondly where teacher use was low but student use was high in order to begin to identify reasons for why some students incorporated digital tools into their teaching and some did not. What I want to be clear about is that whilst digital literacy is about the literacy practices and activities that employ digital tools, it is not about the tools themselves or the digital skills that people acquire however, it is useful to examine whether or not a person's familiarity and competence with digital tools also impacts on their willingness to incorporate digital tools and digital literacy practices in their classrooms. Ultimately the aim is for teachers and student teachers to be able to move beyond integrating technology and start to focus on the practices and activities that make use of such tools rather than on the tools themselves (Borsheim et al. 2008, McLean & Rowsell 2013).

Finally, there will be a discussion of three specific case studies to illustrate the differences between the students' experiences with regards to how much their teachers and the students themselves made use of technologies in their classroom practice. One student from each of the following groups was selected to provide an introduction to the experiences of the group: teacher use of technology low, student use low; teacher use of technology low, student use high; teacher use of technology high, student use high.

6.3 The student teachers: An overview (Table 1)

Twenty-three student teachers were interviewed over two years in the second stage of the research study as discussed in the methodology chapter: '*Selecting My Tools*'.

An overview of the students who completed the questionnaire was provided in the previous chapter: *The Questionnaire Results*. This showed a diverse group of student teachers of different ages, different experiences of using digital literacies in their personal lives and a range of classroom experiences. Below is an overview of the students who participated in the interview stage of the research. Table 1 presents an overview of the age range, gender, digital confidence, self-perceptions of digital competence, how they learned to use digital technologies and whether they selected to study the optional Multiliteracies module.

6.3.1 Table 1: The student teachers

The table follows on page 156.

6.4 Student teachers' digital confidence

The students range in age from 19 to 44 with the majority of students in the 19-21 age range. 8 out of 23 students however, were in the 30+ age range. To categorise the students according to their confidence with digital technologies as interpreted from their interview responses I made use of the typology provided by Currant et al. (2008) as presented in the literature review (page 38) where they identified four digital types: the digitally reluctant, the digitally inexperienced, digital socialites and the digitally experienced. This typology is useful in providing an indication of the student teachers' digital experiences and levels of confidence in order to see if experience and confidence with digital tools and literacy practices impacts upon their classroom practice. Interestingly only one student in the 30+ age range could be considered as digitally inexperienced and 4 out of the 5 digitally inexperienced were in the 19-21 age range suggesting that age is not a key factor in digital competence and confidence and which supports earlier research findings (Bennet et al., 2008). No student in this part of the study could be classed as digitally reluctant but maybe that was to be expected given that they volunteered to take part in research exploring student teachers' digital lives. Most of them can be classed as digitally experienced as they appear to move comfortably through digital worlds in their daily lives using a range of devices and platforms for varied purposes.

Student	Age	Age groups			Digital confidence Currant et al. (2008)	Self perception of lack of ICT skills	Graham's (2008) categories: self taught, school taught, playful social	Selected the multiliteracies module
		19-21	22-29	30+				
Connie	31			✓	Socialite	✓	Self taught	✓
Christina	39			✓	Inexperienced		Self taught	✓
Georgina	19	✓			Inexperienced	✓	School taught	✓
Petra	19	✓			Inexperienced	✓	School taught	✓
Elizabeth	20	✓			Experienced		School taught	
Ben	25		✓		Experienced		Playful social	
Ann	35			✓	Experienced		Self taught	
Lorna	19	✓			Inexperienced	✓	Self taught	
Zara	20	✓			Experienced		Self taught	
Bea	44			✓	Experienced		Self taught	✓
Lisa	21	✓			Experienced		School taught	✓
Sarah	37			✓	Socialite		Self taught	
Natalie	20	✓			Inexperienced	✓	School taught	
Judy	19	✓			Experienced	✓	School taught	
Lynn	25		✓		Experienced		School taught	✓
Kay	30			✓	Experienced		Self taught	
Leanne	19	✓			Experienced		School taught	✓
Lara	21	✓			Experienced			✓
Jane	21	✓			Experienced			✓
Linda	23		✓		Experienced		Self taught	✓
Aliya	35			✓	Socialite		Self taught	✓
Lauren	20	✓			Experienced	✓		✓
Lois	19	✓			Experienced			
Totals		13	3	7		7		13

6.5 Student teachers' representations of their digital lives

The student teachers in this study have varied digital experiences and participate in a range of digital literacy practices in their personal lives. Five of the student teachers are presented below to illustrate how varied their digital lives are both in terms of the variety of ways in which they each use digital technologies in their everyday lives but also how digitally competent they feel they are. Again, age does not seem to be a significant factor.

Ben, male, aged 25, loves to play computer games and in particular computer games that allow him to connect with other players online to play collaboratively and achieve common goals.

Sarah, female, aged 37 describes herself as *'I'm a tech geek. I'm not one of these people, I mean I was born in 1975 and I'm not one of those people stuck in the eighties. I love up to date music, tech, I have an Apple TV, Apple phone, a smart TV, DVDs, an X-Box.'*

Lorna, female, aged 19, thinks she is 'quite' digitally literate *'I don't think I'm as digitally literate as I should be. I don't know how to make podcasts or make short animations. I think I should be more digitally literate but I can use what I call the basic digital things.'*

Natalie, female, aged 20: *'I have a laptop, a phone and an iPod. That is all the technical stuff that I have'* (laughs). When asked how digitally literate she feels *'not massively, more so than some but I wouldn't say that I'm really confident.'*

Elizabeth, female, aged 20: *'I would say I'm probably more confident than most people. I was brought up with it really so and I did it at A level ICT. I know that's not the same as digital literacy but then it is all part of it isn't it?'*

6.6 Student teachers' digital journeys

Seven out of twenty-three students felt that they lacked the digital skills required for their professional roles. Three out of the seven students who felt that they did not have sufficient digital skills were relatively digitally experienced when speaking about their own digital literacy practices and this suggests that they are not seeing the relevance of their personal literacy practices for their professional practice in the primary classroom and which again, is supportive of earlier research (Robinson and Mackey, 2006; Burnett et al. 2009). Four out of the seven students did not feel sufficiently skilled because they did not possess much

technological hardware of their own. Graham's (2008) research into young teachers' digital journeys and classroom practices identified two different routes to learning about digital worlds: serious solitary journeys which included self-taught or school taught and playful, social learners who have experienced learning about digital worlds through online collaborative experiences. I used Graham's categories to group the student teachers in my study because in the early stages of my research whereas Graham explored young teachers' digital journeys I was interested to see if student teachers' digital journeys also impacted upon their conceptualisations of literacy and their classroom practice. I was interested in seeing if student teachers who engaged in online collaboration and play could make use of their experiences to apply to their understanding of how children develop literacies in the classroom. However, whilst only one of the participants claimed to engage in online gaming and collaborative play, identifying their digital journeys was helpful alongside Currant et al.'s typology in gaining a picture of the student teachers' digital lives and digital confidence. Ten of the student teachers were self-taught, eight were school-taught and only one was what Graham called a 'playful, social' learner. For four of the learners it was not possible to categorise based on their interview responses as not enough information could be gleaned from what they said. In part two of this discussion chapter I will be examining the reasons why for some of the student teachers their self-perceptions of their digital skills are low and the impact this has on their classroom practice.

Thirteen of the twenty-three students had selected the Multiliteracies module (as outlined in the thesis introduction) as their area of subject study.

6.7 Student teachers' experiences of digital literacies and digital tools in primary classrooms

Amongst the group there is also a range of comfort when it comes to employing digital technologies in their classroom practice and professional roles. They described a range of experiences in the classroom in terms of what they observed in practice and how they made use of their personal digital literacy experiences in their own classroom practice. For student teachers to be able to integrate digital literacies into their classroom practice it is clearly more complex than simply being young or possessing a range of digital tools or engaging in digital literacy practices in their personal lives. As discussed in the literature there are other factors affecting what student teachers do and how they act in the classroom. Similarly, previous research has warned against making assumptions about young student teachers' abilities to transfer the knowledge and understanding gained from their personal digital lives to their

professional roles in the classroom (Robinson and Mackey 2006, Burnett 2009) and in part one of this discussion chapter I will explore some of the constraints made visible in the students' accounts of their experiences.

Some of the students in this study demonstrated an awareness of the issue of transferring what they know from their everyday literacy experiences to their classroom practice and they expressed this concern for themselves. Ben, the only male student teacher to take part in the interviews and the only participant to talk about his experience of online gaming, voiced his own concerns about the difficulties that he was experiencing in understanding and explaining the tacit knowledge that he has gained from participating in online computer gaming communities in relation to classroom practice.

Even though I know it in my head that you can, getting to grips with it and how you actually do it in the classroom I think it's a very grey area. The actual skills that you get out of playing a game. Even though I think I could probably sit here and say you get these skills. It's how you reinforce to the children that these are the skills that they are learning.

Linda made a similar point:

I can use an iPad, a laptop but I'm not confident on how I can bring that into the classroom. It's different when you are trying to then put that into teaching to do things on the iPad, so making this transition from personal to teaching I suppose.

Zara considers herself to be a confident user of technologies in her personal life and yet:

Erm, I think it's important but I'm not so confident teaching it. I think if I had to teach 30 children how to make a video I would not be very confident with that.

These student teachers recognise that it is not enough to be confidently engaging in digital literacy practices and activities in everyday life or to be a confident user of digital technologies but that it is much more complex than that when developing children's literacies in school. They require pedagogical understanding of how to bring their own experiences, knowledge and understanding, as well as that of their pupils, to effectively support pupils' literacy learning. It requires an understanding of the unique relationship between the tools, the curriculum content and the pedagogical knowledge (TCPK) (Koehler et al., 2007). Even with this understanding it

is not enough, one has to recognise that, as argued in the previous chapters, there are also other powerful social structures at work that influence student teachers' ideas, beliefs, values and classroom practice and that these structures present both possibilities and constraints for classroom practice.

6.8 Student teachers' observations of digital technologies in classrooms

I begin by presenting and examining the student teachers' experiences of seeing new technologies in the classrooms that they were working in. The students had completed two school placements by the time the interviews took place. Table 2 below shows what the student teachers witnessed being used in schools. When asked about what technology they had seen teachers using in schools, of the 23 students interviewed, three of the students reported seeing no technology being used, three said that they only saw one form of technology being used (Interactive Whiteboard (IWB), digital camera, tablet computers) and five saw just two pieces of technology being used (PPT, internet, digital camera, software, film). The most commonly used item in classrooms was the IWB with 10 students out of 23 mentioning seeing teachers using the IWB. This also reflects the questionnaire data (85% of participants had seen the IWB used in schools, 84% saw software being used and 86% saw the internet being used for research). No one said that they had seen social media used in classrooms.

Overall, most of the students did not report seeing much technology being used in classrooms and what was observed was mainly the IWB, PowerPoint presentations and numeracy and literacy software or internet games to support pupils' literacy and numeracy skills. This reflects Reedy's earlier study of secondary teachers' uses of the IWB and the dominance of what she called 'a visual culture of technology in schools' (Reedy, 2008: 143) and Tufte's (2004) concerns about the dominance of PPT in educational contexts. This would suggest that their concerns remain relevant today. All of the forms of technology reported by this particular group of student teachers are presentational or used to support the learning of subject skills and knowledge rather than developing a more complex range of pupils' literacies that reflect the ways in which pupils use technology in their everyday literacy practices where technology is used to engage in more social literacy practices. This further supports Vratulis et al. (2011) in their argument that often digital technology is used in classrooms as an additive pedagogy, where the technology is used to support existing classroom practices and pedagogies rather than demonstrating transformative practice as suggested by the NLG who used the term transformative to describe how pedagogy and classroom practice can be redesigned. Similarly,

Hedberg and Freebody (2007) used the term ‘disruptive pedagogy’ to suggest that digital technology has the potential to transform classroom practice because digital technology can encourage teachers to think differently. And Koelher et al. (2007) suggested a way forward by encouraging teachers to develop a clearer understanding of the interrelationship between new technology on offer in classrooms, pedagogy and curriculum content. Student teachers also need an understanding of the ideological and cultural dimension of literacy and that without having the opportunity to witness disruptive pedagogical practices in classrooms, student teachers are not exposed to the ways in which technology can be used in ways that transform classroom practice to reflect contemporary literacy practices and the ways in which technology is used in people’s everyday lives. Without this ‘disruption’ of ideas new approaches to literacy teaching practices are hindered as student teachers reproduce what they see happening in classrooms. In this way they continue to maintain the dominant practices due to the habitual nature of classroom routines. The routinisation of classroom practices is an important area that will be explored later on.

Three students mentioned that the schools were just starting to use iPads and mentioned how anxious the teachers were to use them. Here is an example of an issue raised in an OECD (2015) report into technology use in schools and also concerns raised by Selwyn (2011) of how it is a taken for granted assumption that technology will benefit and even transform teaching and learning as expressed by Hedberg and Freebody above and yet a poll conducted by the Telegraph in November 2015 showed that nearly half of teachers taking part in the survey rarely used the technology in their classrooms and that a lack of training was to blame reflecting earlier concerns raised about how new technologies are introduced in schools without guiding teachers on how to integrate it effectively to support learning (Ham, 2010; Reedy, 2008; Munroe, 2010 and Selwyn, 2011) in order to develop more transformative pedagogies as called for by the NLG and discussed in the literature review (pages 20-27) .

6.8.1 Table 2: Student teachers' observations of digital technologies in classrooms

Student	Internet research	Film/video as starting point	IWB	Digital camera	Tablet computer	Laptops	Computer	Film making	Word processing stories	Internet /website games	Internet news	Maths/literacy software	PPT	Comic strip	Visualiser	Nintendo DS
Connie	✓ TP2							✓ TP1 (NQT)	✓ TP1 (NQT)							
Christina	✓												✓			
Ben	✓ TP1 Children given free rein (NQT)	✓ TP2 Moved quickly to paper (15-20 years teaching experience)														
Elizabeth			✓									✓				

Student	Internet research	Film/video as starting point	IWB	Digital camera	Tablet computer	Laptops	Computer	Film making	Word processing stories	Internet /website games	Internet news	Maths/literacy software	PPT	Comic strip	Visualiser	Nintendo DS
Petra																
Georgina			✓		Teacher assessment tool. One iPad only ✓					✓						
Leanne					School just bought iPads ✓											
Zara				✓								✓				
Bea				✓ TP1			✓ TP1	✓ TP1	✓ TP2		✓ TP1					

Student	Internet research	Film/video as starting point	IWB	Digital camera	Tablet computer	Laptops	Computer	Film making	Word processing stories	Internet /website games	Internet news	Maths/literacy software	PPT	Comic strip	Visualiser	Nintendo DS
Lorna			✓	✓ To stimulate discussion	✓ One iPad to support SEN pupil. Numeracy and create an iBook		✓ For ICT lessons only									
Lisa			✓							✓ Laptop to play games			✓	✓		
Ann			✓					✓		✓						
Sarah			✓	✓		✓									✓	

Student	Internet research	Film/video as starting point	IWB	Digital camera	Tablet computer	Laptops	Computer	Film making	Word processing stories	Internet /website games	Internet news	Maths/literacy software	PPT	Comic strip	Visualiser	Nintendo DS
Natalie			✓									✓				
Judy			✓ TP1 (NQT)					✓ ICT Teacher		✓ TP1 (NQT)						
Lynn		✓											✓			
Kay			✓													
Lara					School just bought iPads ✓											
Jane				✓												
Linda																
Aliya																

Student	Internet research	Film/video as starting point	IWB	Digital camera	Tablet computer	Laptops	Computer	Film making	Word processing stories	Internet /website games	Internet news	Maths/literacy software	PPT	Comic strip	Visualiser	Nintendo DS
Lois					✓											
Lauren	✓ Teacher was ICT coordinator	✓	✓		✓	✓		✓				✓				✓ Spellings and Maths
Totals	4	3	10	5	6	2	2	5	2	4	1	4	3	1	1	1

6.9 How did the student teachers make use of digital technologies in their own practice?

Amongst the group of student teachers in this particular study the student teachers used a variety of digital technologies but again, as can be seen in table 3 below, the most common piece of technology used by the students was the IWB for PowerPoint presentations. Eighteen students used the IWB and eight used PowerPoint presentations that would have been shown on the IWB. One student did not use any technology at all and 3 used just one piece of technology (either a computer or a tablet for research on the internet and the IWB). The students' descriptions of how they used the IWB to present information, structure learning and display the learning objective or to play games to support numeracy and literacy basic skills reinforces earlier concerns surrounding the use of technology as an additive pedagogy where the IWB is used to support existing classroom practice rather than in any transformative way that changes classroom practices (Vratulis et al.). The internet was used for research on computers and tablet computers with few students making use of other applications or tools to support children's developing literacies. Use of film/video and cameras has been observed and has been used by students. This may be a result of the revised PNS units introduced in 2006 which included film literacy units which are now more confidently used as part of the literacy curriculum and practice in classrooms. It would be interesting to carry out this research again to see if classroom practices have developed to harness technology in more innovative ways since this study was conducted.

The student teachers in Burnett's (2009) study also showed that where they incorporated digital literacy into their teaching it was to fit in with the existing classroom discourse around the production of digital texts and creating PowerPoint presentations rather than more transformative pedagogies as recommended by the NLG. She suggests that student teachers learn what is possible through seeing teachers modelling transformative practice and if they are not seeing it in practice, they are less likely to try it out for themselves. *How* the technology was used in the classrooms that they experienced will be examined later on as it is important to remember not to focus on the tools themselves but on how they are used in literacy practices. However, an audit of what the student teachers saw and what they used themselves is useful as it would seem to indicate a more additive pedagogical understanding of digital tools for supporting pupils' developing literacies rather than a transformative one.

6.9.1 Table 3: Student teachers' uses of new technologies in schools

Student	The internet for research	Website/internet games	Video camera/flip cams/film making	Digital camera	Digital stories on headsets	Voice recorder	Video/film	Sound buttons	Tablet computers	Laptops	Comic strip software	Created own games	Visualiser	PPT	IWB
Connie	✓														
Christina															
Ben	✓			✓		✓	✓								✓
Elizabeth		✓								✓		✓		✓	✓
Petra	✓								✓						
Georgina				✓				✓			✓				✓
Leanne									✓						
Zara													✓	✓	✓
Bea															✓
Lorna									✓						✓
Lisa										✓				✓	✓

Student	The internet for research	Website/internet games	Video camera/flip cams/film making	Digital camera	Digital stories on headsets	Voice recorder	Video/film	Sound buttons	Tablet computers	Laptops	Comic strip software	Created own games	Visualiser	PPT	IWB
Ann		✓							✓					✓	✓
Sarah			✓										✓	✓	✓
Natalie	✓									✓					✓
Judy		✓	✓			✓	✓								✓
Lynn														✓	✓
Kay				✓											✓
Lara			✓						✓						✓
Jane			✓						✓		✓				✓
Linda							✓								✓
Aliya											✓			✓	✓
Lois									✓		✓				
Lauren	✓	✓								✓				✓	✓
Totals	5	5	4	3	1	2	3	1	8	4	4	1	2	8	18

6.10 Student teachers' personal digital competence and digital confidence in their classroom practice

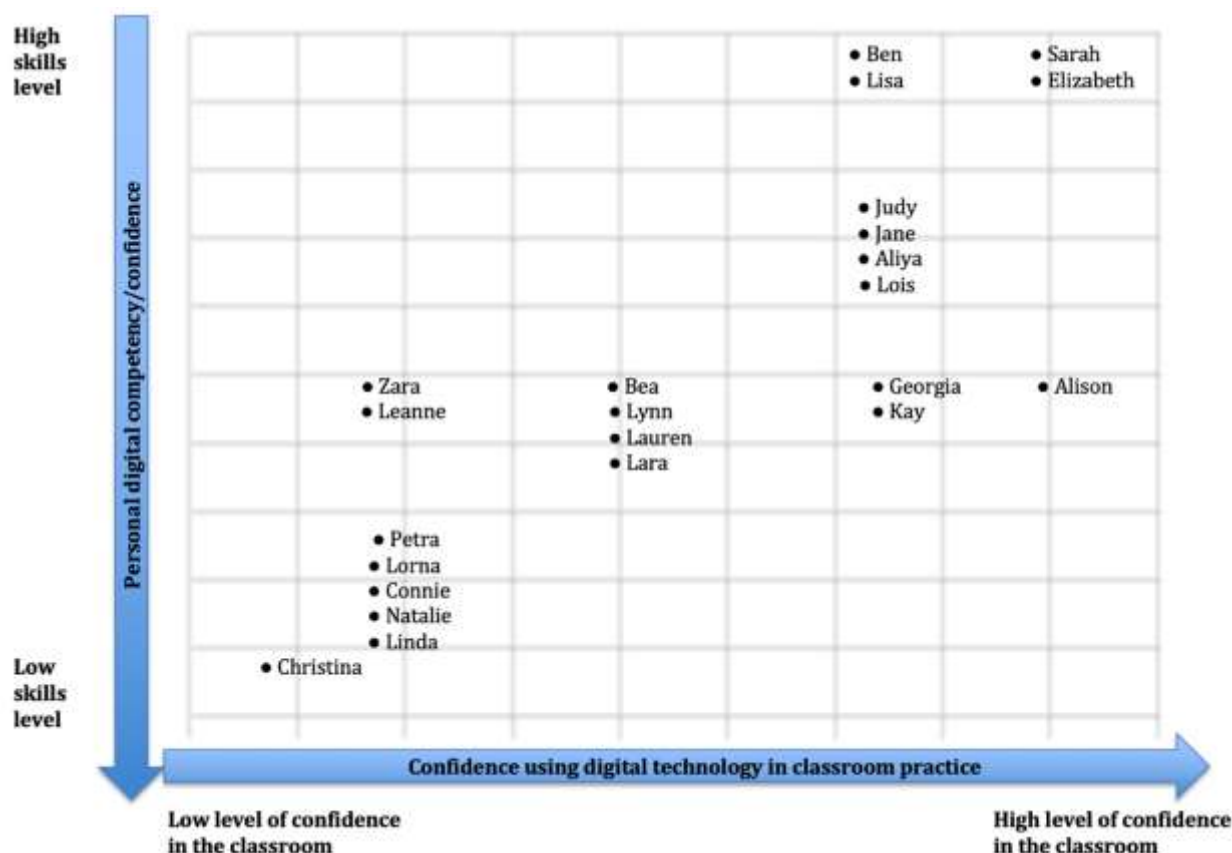
The next section will examine the student teachers' personal digital competence and digital confidence in the classroom and how these two factors might relate to each other but importantly, whether digital confidence affects the way in which student teachers employ their personal digital literacy practices in their professional roles in classrooms. Chart 1 below helps us to see if there is a correlation between the student teachers' digital competence and their confidence to apply their knowledge of digital literacy practices in their classroom practice.

The students range from students with high levels of personal digital competency and skills gained from their everyday literacies along with high levels of confidence to use technology in their teaching to students who feel that they are neither confident users of technology in their personal lives nor in their classroom practice. Those students who presented themselves as the more confident users of digital technologies in their personal lives also demonstrated a greater level of confidence in how they made use of the skills and experiences in their classroom practice. So students, Ben, Elizabeth, Sarah, Lisa, Judy, Jane, Aliya, Lois and Ann all described themselves as confident users of technology with either formal ICT qualifications as in Elizabeth's and Lisa's cases (these were the only two students to talk about their formal qualifications in ICT) or were self-taught (Ben, Sarah, Judy, Jane, Aliya, Lois and Ann). All of these students integrated technologies into their teaching even if their teachers did not (see chart 2 further below), suggesting that a level of confidence gained through feeling competent in their personal lives might act as an internal enabler, giving students the confidence to make use of technology in their teaching.

On the other hand, those students who claimed to be the least confident in their own digital literacy skills (even if in reality they had a range of daily digital literacies in their personal lives) including Petra, Lorna, Connie, Natalie, Linda and Christina also showed the least confidence in integrating technology into their classroom practice. Whilst personal confidence may be a factor affecting the student teachers' use of technology in their classroom practice, it is just one factor amongst others. If the students feel that they have the necessary skills to use technology with confidence, then, alongside the other factors involved, it might help to develop their confidence to use it to support teaching and learning. However, as Ben highlighted earlier, making use of the knowledge from his personal digital experiences in his classroom practice was not necessarily a straightforward process and cannot be taken for granted. Other factors

that might have influenced the students' practices will be examined in greater depth further on in the discussion when analysing the discourses that make themselves visible in the students' accounts of their experiences as they faced constraints and possibilities.

6.10.1 Chart 1: Student Teachers' personal digital competence and digital confidence in the classroom



6.11 Teacher and student use of digital technology in the classroom

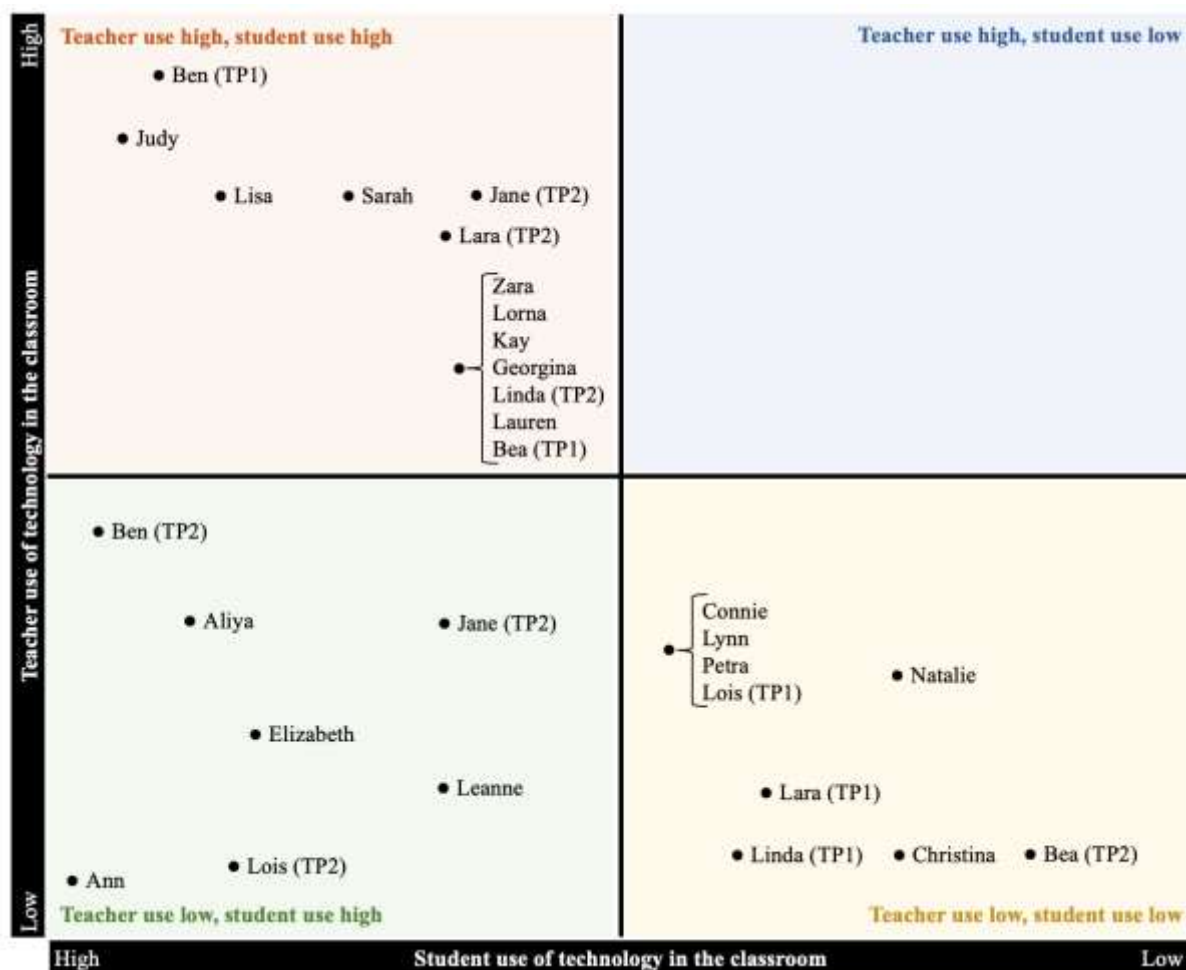
Reading through the student interviews it is possible to categorise the students' classroom experiences according to how much they themselves used technology in their teaching and how much the teachers that they worked with used technology in their everyday classroom practice (see chart 2 below) and enables us to see if there is a relationship between the teacher's use of technology and the student teacher's use of technology and whether teachers using technology in their classroom practice can influence student teachers' practice and if so how it influences their practice. Some of the students talked about their different experiences on each of their two placements: teaching placement 1 (TP1) and teaching placement 2 (TP2). There are four categories: Teacher use high and student use high, teacher use low and student use high, teacher use low and student use low, teacher use high and student use low.

To illustrate:

- Teacher use high and student use high – there were 13 students in this category
- Teacher use low and student use high – there were 7 students in this category
- Teacher use low and student use low – there were 9 students in this category
- Teacher use high and student use low – there were 0 cases

For example, Ben is positioned in the top left quadrant in the teacher use high and student use high category as he talked about how his teacher on teaching placement 1 (TP1) used technology a lot in the classroom and Ben also integrated technology as often as he could in his own practice. He is therefore positioned in the top left of that particular category and quadrant. Whereas Bea is placed in the bottom right quadrant and in the bottom right of that quadrant as she spoke about how her teacher on TP2 did not use technology very much at all and neither did Bea because she felt like she couldn't.

Chart 2: Teacher and student use of digital technology in the classroom



In order to illustrate the difference in the students' accounts of their experiences depending on whether their teachers used technology a lot or not a lot and how this correlated to the students' own uses of technology Chart 3 below contains quotes from some of the students' narratives. I have positioned the quotes to where in each quadrant the student best fits, placing them on the axes to indicate whether their use of technology was higher or lower in relation to the axes. For example, Judy's quote is in the top left hand corner of the chart because her teacher modelled using technology in lessons and then Judy used the technology herself on a number of occasions and therefore both teacher and student use of technology was high. Whereas Christina's quote is positioned in the bottom right corner of the chart as neither her teacher nor Christina made much use of technology in their practice.

Chart 3: Teacher and student use of digital technology in the classroom



As identified in earlier research (Marsh, 2006; 2003; Burnett, 2009; Vratulis et al, 2011) student teachers tend to reproduce the practices that they see in classrooms or by what they experienced in their own school experiences (Britzman, 2003; Labaree and Warford, 2011) as in their roles as student teachers they are working hard to fit in with the existing practices because they want to be recognised as becoming teachers and is part of their new identity building. If that is the case it is therefore easier to comprehend why if the teacher's use of technology is high, then the student's use would be high too as teachers are modelling acceptable practice and the students are all working hard to develop their becoming identities as teachers and will be keen to emulate what they see their teachers doing in the classroom as suggested by previous research (Gee, 1999; Sfard and Prusak, 2005; Cook-Sather, 2006).

In the same way, if the teacher's use of technology is low, then it is unsurprising that the student's use of technology will be low, as again, they are trying to fit in with the existing practices of the classroom. There were no instances where the teacher's use was high but the student's use was low. But where the teacher's use was low and yet the student's use was high, this poses some interesting questions. Why did these students do something different? Why did they use technology more than their teachers? What are the factors that led to some student teachers finding the space to use technology where their teachers did not and how do the experiences of these students differ to those for whom both the teacher's and student's use was low? What are the enabling factors? What are the constraining factors at play? To try to answer these questions the students' accounts have been analysed in a number of ways and will be discussed in greater depth in part two of this discussion chapter.

6.12 Case Studies

Following on from chart 3 above, I have provided a case study of one student from each of the quadrants to illustrate their situations.

6.12.1 Case study 1 - Petra: An example of where both the teacher and the student's use of technology was low

Petra is a 19 year-old student teacher who took both the Multiliteracies module and the English Personalised Learning module so she had two opportunities to work in classrooms exploring children's home literacies and digital literacy experiences. This learning experience would support Rogers and Trigos-Carillo's (2017) recommendation that teachers extend their gaze beyond the classroom in order to gain an understanding of contemporary literacy practices. In

the Personalised Learning module Petra used cameras with a group of children to support the development of their storytelling skills with a focus on developing their spoken language skills and engaging them in collaborative and authentic literacy activities by working in a group to create a film for an audience. The films created were shared with the rest of the class. Petra's pedagogical aims were a result of the discussions held with her peers when planning the class activity and reflected the module and the group's shared concerns, project and practices (Archer, 2007). She had therefore had the opportunity to reflect on children's home literacy practices in relation to school literacy and had experience of evaluating how technology can be used in the primary classroom to support pupils' literacies through exploring the tools but also how the tools related to the curriculum content and pedagogy as she planned and reflected on a series of lessons and is an example of what Koehler et al. (2007) recommended with regards to teachers developing an understanding of the relationship between the tools, users and practices. She had also completed two teaching practices.

Petra:

On my placement, they seemed to be using these iPads. They were like 'The head teacher has said we've got to use them, we've got to do it' and it was almost a tick box and they did it as part of their ICT lesson and I was just a bit like, I didn't say anything but I was thinking you could use it in literacy, a bit in maths, there's so much potential for it across the whole curriculum, the teachers were sort of seeing it as a bolt on extra and they were having to do it to tick a box to keep the head happy. I think perhaps because she wasn't confident in using it herself.

I'm just a trainee teacher (laughing), my teacher, she was quite old (laughing), she said it herself, she said, oh I don't know how to work this, I don't know what to do with it, but I thought well, neither do I really but I'm willing to sort of try and see....

...Yes, they did like a big write on Fridays, the other literacy was Ruth Miskin so (started to laugh) but on the Friday one, if I'd had more time maybe, it would have been nice to get them to do some drama and film it on the iPads maybe.

I'd love to have my own class Twitter thing but again it's like the confidence thing to when you say it to anyone, people on the course about a man came and talked to us about using Twitter in the classroom and everyone goes 'oh, you can't, you can't, you're not allowed!' (Laughs) that's everyone's immediate reaction and I'm like oh no he's written in journals on it and things, you are allowed to. I think I need to develop a lot more confidence before I'll do anything like that.

Despite Petra having the opportunity to explore children's literacies beyond the classroom and having planned and evaluated how she made use of technology to build upon children's home literacies, there would appear to be a disconnect between Petra's experiences and learning gained from the university modules, her own literacy experiences and how she views and experiences literacy in the primary classroom highlighting the complexity of the situation and reflecting Williamson's (2013) concerns explored earlier over the disconnect that can exist between university training and school practices. Whilst Petra's university modules were encouraging her to develop a more ideological understanding of literacy and literacy practices as promoted by Street (1984) and to conceptualise literacy as more than a set of basic skills, encouraging her to recognise and draw upon children's out-of-school literacy practices to support schooled literacy learning, she found it difficult to apply this understanding to the literacy curriculum in the context of the classroom. The concept making around literacy promoted in university was not recognisable to Petra in the context of the primary literacy curriculum. Petra is either not recognising or utilising her own experiences of literacy and her recent learning or she is experiencing some challenges that restrict her from drawing on her experiences and learning.

One reason for this might be as Burnett et al. (2015) suggest (as discussed on page 75 in the literature review) that student teachers find it hard to relate their own literacy experiences to that of the classroom because of three particular literacy binaries: fluid/fixed, social/individual and paper based/digital. The student teachers' own experiences are fluid, social and digital but school literacy is often fixed, individual and paper-based. There were a number of other issues visible in Petra's account however that echo some of the issues discussed in the literature review. Petra explained how she did not have much opportunity to use the experiences gained through the university modules in her own practice despite having new technologies available to use in literacy lessons because she experienced a lack of space in the curriculum for her to bring this learning to her teaching. She talked about having to follow the published literacy scheme that was used daily. As discussed in the literature review (pages 55-57), the published scheme, Read, Write Inc. that Petra describes was written in response to the standards agenda and the desire to raise literacy standards in schools and focusses on the English skills of reading and the transcriptional skills of writing. It comprises of a teacher's resource book and children's reading and workbooks and involves reading and writing paper-based texts and is very much about individual pupil progress and is therefore further evidence to support Burnett et al.'s findings above regarding children's experiences of school literacy being at odds with their home

literacy practices which often involve reading and writing on screen and working collaboratively. Providing teachers with prescribed curriculum and materials also impinges on teachers' professionalism and creativity as it prevents teachers from solving problems themselves as discussed earlier in the literature review (Ellis, 2011 in literature review page 62) and is disempowering for teachers and for student teachers who may never have the opportunity to experience planning creatively if they are to follow published schemes during their training and beyond. It is another example of how teachers and teaching as a profession are viewed, suggesting a lack of trust in teachers' ability to support pupils to reach the required standards and as a result of high levels of surveillance this leads to performativity and compliance (Gorur, 2016; Menter, 2016; Simpson, 2017) and a lack of professional development (Ellis 2011) as well as a lack of deeply held views about literacy as a result of implementing policy unthinkingly (Ofsted 2009). Petra's example of how the iPads were viewed and used in school provided an example of how such performativity was at work in her school. The teachers were struggling to comply with the direction to incorporate the new iPads into their classroom practice. If teachers don't get the opportunity to develop their own pedagogical thinking and build new pedagogies that incorporate new technology in innovative ways, teachers end up repeating their usual classroom practices and use the technology in additive ways. As a result, student teachers will not witness disruptive pedagogies.

There appear to be a number of factors affecting Petra's ability to integrate the new technologies available in her classroom practice including how she views her own digital competencies as well as how she views herself when on placement in schools, viewing her role as student teacher and learner and not wanting to do anything that is not viewed as normal practice as she is seeing it in school. Petra is caught between wanting to suggest how the iPads could be used in the classroom and wanting to be recognised as a teacher in that particular social context. She is demonstrating her awareness of the social structures that she is working within as she is caught betwixt and between (Turner, 1970) being a student and her becoming self as a teacher and her desire to be recognised as a teacher. She thought reflexively on her situation as she considered herself in relation to the teachers and decided not to say anything about how the iPads might be used even though she was willing to try using them in the classroom. Or perhaps, as Urietta (2007) suggests as explored earlier in the methodology, she is mindful of her position within the school and having ascertained her status and the positions of power, she preferred to align herself with the teacher who is in a position of power as it is the teacher, and not the head teacher who has the ability to control the successful outcome of Petra's placement.

Petra's use of the term 'not allowed' is interesting and further evidence of how student teachers evaluate what is and what is not accepted practice in classrooms and perhaps illustrates her developing figured world of the literacy classroom. As recognised by Vratulis et al. (2011) it is not enough to expose student teachers to disruptive pedagogies if they are not seeing them in practice. Although the head teacher had recently introduced iPads into the school for teachers to use, the teacher's lack of willingness to incorporate the new iPads may have led Petra to think that she should not be using them in her own practice either and may have contributed towards her thinking that certain practices might not be 'allowed' or might be problematic.

Normalised literacy classroom practice in this context involved teaching literacy through the adoption of a prescribed literacy scheme of work and is further evidence of the dominant form of literacy that is promoted in policy discourse. Thinking back to Gitlin's argument, as explored in the literature (page 32), teachers are exposed to powerful ideology and common-sense beliefs through training and curriculum materials and teachers' common-sense in classrooms is based on the dominant discourse of the time and things become normative and 'the way things are done here'. Gitlin claimed that "Teachers' thinking and action are not individual choice but part of local and dominant discourses and contextual influences that motivate and influence teachers even if the teacher doesn't view it as common sense" (Gitlin, 2006: 173). And here is an example of how Petra, despite the conceptualisations of literacy promoted in her training, when she rubbed up against the dominant discourse and reflexively deliberated, she did not feel able to integrate her experiences and learning about children's digital literacies into her literacy lessons. Her experience of teaching a prescribed curriculum was at odds with the possibilities that she had explored as part of her university training and classroom experiences as part of the literacy modules. Here is evidence of Petra identity building and working hard at being recognised as a becoming teacher. The need to be recognised as a teacher and to be accepted within the community of practice and her experience of power in terms of viewing how the teachers model performativity and compliance is more influential than her experiences and desires at this point and is further evidence of Ball's 'terrors of performativity' and of others' findings of how student teachers comply (Burnett et. al. 2009; Hall, 2013; Ellis and Moss, 2010).

At one point Petra reflects on her thinking at the time and in imagining how the iPads could have been used Petra showed evidence of thinking reflexively on her situation by drawing upon one of Archer's suggested mental activities of 'imagining'. She considered what would happen

if she used the iPads in literacy and talked about how the children might have been able to film themselves but that at the time she did not think that it was a viable option for her. Her understanding of her place in the classroom ‘I’m just a trainee teacher’ prevented her from voicing her ideas with these experienced teachers or from trying out her ideas. She did however reflect on how she used the iPads in an ICT lesson and is another example of how she used reflexivity to help her in deciding on what she could afford to do and that was to try and use the iPads in an ICT lesson to trial their use and model for the teachers. This might also have been the only legitimate space in a full timetable and prescribed literacy curriculum that she could see where she could possibly use the iPads. Here is evidence of how Petra uses her internal conversation when faced with difficult decisions to help her to decide on her next course of action which might involve not acting upon her desires/goals. In fact Archer (2007) claims that inaction is also a decision. Petra’s pursuit of a successful placement meant that when she encountered structural mechanisms that acted as constraints, she continued to have an internal conversation about the best course of action to realise her goals and make deliberate decisions about what would be the best course of action. In this way she exercises agency in the classroom as she deliberately navigates the constraints as she experiences them.

Petra encountered a number of key constraints during her time in the classroom that hindered her use of digital technologies to support literacy learning: a prescribed literacy programme; her own perception of her position as a ‘trainee’; what she sees as ‘allowed/not allowed’ practice and teachers who were lacking in confidence to integrate and model the use of the new digital tools. On the other hand the enablements that she encountered were her previous learning experiences at university and her familiarity with the iPad.

Petra’s example is one where the student teacher’s low use of technology reflected the teacher’s low use despite Petra’s own diverse literacy practices, her learning and her personal beliefs about literacy. However, this was not always the case. If we examine one of the student teachers from the third quadrant, ‘*Teacher use low, and student use high*’ it is possible to see that some students were able to integrate digital technologies into their classroom practice even though their teachers did not.

6.12.2 Case study 2 - Leanne: An example of where the teacher's use of technology was low but the student's use of technology was high

Leanne has a very similar profile to Petra in the case study above. They are both 19 years of age and both chose to study the Multiliteracies module and the English Personalised Learning module and neither were very confident with regards their personal digital literacy competence. In both contexts, the schools had recently bought iPads for use in the classrooms and both students talked about how reluctant their teachers were. So how was Leanne's experience different to Petra's and why might that be so?

Leanne reflected and suggested that it was because of the experiences that she was exposed to in her university modules that she developed her thinking about the value of incorporating digital literacies in the classroom. This then gave her the confidence to explain the value to the teachers that she worked with, validating her ideas by talking about her university experiences and modelling some practice.

It was also something that I wasn't very familiar with, digital technology in the school, and I think without doing the Multiliteracies I wouldn't be inclined to use it to be honest other than standard ICT lessons. And I found it really opened my eyes to the variety of things that you could use. I know from my second practice experience, they just brought tablets for the school so they were just introducing them and the teachers were very reluctant. Because I had done the module I was able to help them along and start introducing some things and sort of experiment with that but I'm definitely more inclined to use it in my practice because I thought it was really, really interesting and beneficial.

I sort of, initially I modelled how to use them because they were all very wary of it. But I explained my experiences especially with the Multiliteracies module and the meeting with the teacher and I explained what he said and I just emphasised how valuable it is if you can incorporate it and just sort of modelled a few things and they sort of obviously put their own stamp on things but because I had shown them how to use it they were more comfortable with it.

Interviewer: What did you think of Martin Waller? – you mentioned him

Yes! I thought he was brilliant because I definitely thought, I enjoyed going into school and using it but I was still a bit hmmm, would I be able to use this with my class and he really put it into context because he was saying 'this is what I am doing right now.' 'This is what you can do' and just his experience of how the children responded to it as well, he really demonstrated how valuable it was and just to see him modelling was really useful because it sort of increased my confidence that I could do it in a classroom and it isn't just a fad, it's something that you can definitely do.

I think for me personally, I'm quite comfortable in it purely because I've done the Personalised learning module and the Multiliteracies module, the Multiliteracies especially....and I think especially as a teacher or even as a parent you've got a responsibility to be aware of what children are using now and I think because they are so digitally literate, I think it's important that we develop our skills so we are not restricting them in their learning

There were a number of factors influencing Leanne's use of technology in her classroom practice but importantly it is possible to see how Leanne developed her ideas around literacy and literacy pedagogy and of what is possible and used her experiences and learning to make choices about how she integrated new technologies into her teaching despite her teacher's low use of technology in the classroom. Leanne talked about how the university modules made her more aware of children's home literacy practices and the digital experiences that children bring to the classroom and her belief that it is her responsibility as a teacher to not restrict pupils' experiences of literacy in school. Leanne appears to be developing not only her understandings of literacy as a social practice but also her beliefs and values as a teacher when she articulates what she believes to be her responsibility as a teacher. Leanne's reflections would seem to support concerns raised by others as discussed earlier regarding the narrowing of the English curriculum and the lack of recognition of pupils' funds of knowledge and because of this she felt compelled to have a go whereas for Petra, whilst she was able to articulate such beliefs and understandings, she did not feel in a position to be able to be agential in her classroom situation. Despite Leanne's experiences of the modules and her developing understanding and beliefs, she thought reflexively about how she felt during her learning experiences in university explaining that whilst she found the learning interesting and it was shaping her understandings of children's literacy practices and of the complexities of literacy, she was still mulling over

and imagining whether it would work or be possible in her own professional practice ‘would I be able to use this with my class?’. Again, here is another example of how student teachers need to see what is possible in practice with regards to integrating digital technologies in their teaching to support pupils’ literacies (Burnett et al., Vratulis et al.). It was not until she met a teacher who explained his own multiliteracies’ approach to teaching literacy and modelled how he used social media and film-making to develop his pupils’ school literacies that she began to see that this is actually an approach that is possible in classrooms. This teacher disrupted Leanne’s conceptions of classroom literacy teaching and learning and offered her an example of ‘disruptive pedagogy’. However the idea that something might not be possible is reinforced when Leanne talks about how some of her peers were sceptical about teachers using social media in primary classrooms and she suggested that because they themselves hadn’t witnessed it, then they remained sceptical. In light of earlier research and recommendations, it is clear that student teachers, in order to develop their conceptualisations of literacy and literacy pedagogy, need to be given the opportunity to reflect on contemporary conceptualisations of literacy through examining their own and children’s home literacy practices but need to see how that relates to pedagogy in the classroom alongside opportunities to observe and learn about disruptive pedagogies that challenge normalised classroom literacy practices. Leanne’s case study illustrates earlier recommendations (Donaldson, 2015; Cochran-Smith, 2016; Peiser, 2016) of the importance of student teachers making strong links between theory and practice and the importance of how students are supported to make these links as it calls for a greater synergy between university training and school based training. They need to see in practice how teachers build upon pupils’ digital literacy experiences that they bring to the classroom.

Whilst both Petra and Leanne were exposed to the same university experiences and were the same age, their classroom experiences were different: different schools, different teachers, different children, different resources and all or some of these factors may have impacted upon the students’ classroom practice and their ability to integrate new technologies into supporting pupils’ school literacies. In Petra’s case the teacher felt that the iPads had been imposed on her by the head teacher’s mandate and was seen as an ICT tool and used as a bolt on extra and she was reluctant to use it whereas in Leanne’s case, it sounded more like the teacher’s lack of confidence in using the new tool led to the teacher feeling reluctant to use the iPads and may have led to her being more open to Leanne’s suggestions for how the iPads could be integrated into their practice. In this instance, Leanne might have been seen as a source of support. In this situation Leanne’s internal conversations assisted her in her next move. She confronted the

objective social context and reflexively deliberated on the constraint being experienced – that of her teacher’s reluctance to make use of the new iPad and she chose to explain to her teacher how she had used them previously in university modules and of how she had seen technology being used by others in order to be able to persuade the teachers that using the iPads would be worthwhile and possible. In doing so Leanne provides an example of what Archer (2007) describes as reflexivity as she deliberated about her circumstance in relation to her own concerns and devised a strategy for accomplishing her concerns even though there were constraints to be negotiated proving that as a result of her internal dialogue she was active rather than passive in that particular classroom situation. Archer claims that as agents reflexively mediate between the social situation and their personal concerns, they will evaluate the same situations differently and therefore their actions may differ and might explain the different responses of Leanne and Petra who despite having similar prior experiences, acted in quite different ways. Through her strategy Leanne managed to gain the trust of the teachers with whom she was working unlike Petra who did not feel that she could say anything. However there may also have been differences in personality and confidence levels of the two students and the teachers that they worked with that may have affected the students’ actions and agency. Petra also commented on the age of the teacher, which a number of other students have also done suggesting that older teachers are less confident and more reluctant to make use of the new technologies in schools and this may have been a contributing factor. These factors shall be further explored in part two as we examine the wider data set.

The key constraint experienced by Leanne was the reluctance of the teachers that she was working with as she described them as ‘wary’ of incorporating the iPad. However, their reluctance might well have been a result of not having previous experience of using iPads in their classroom practice. Despite this, Leanne’s capacity to deliberate reflexively enabled her to draw upon her university experiences and her developing beliefs in order to gain the trust of the teachers and persuade them to let her have a go.

6.12.3 Case study 3 – Judy: An example of where both the teacher’s and the student’s use of technology to support teaching and learning was high

Judy, also 19, is the same age as Leanne and Petra but she did not choose either of the university based literacy modules. She described her own literacy practices as diverse and felt quite confident in her use of digital technologies. When talking about her first teaching placement Judy explained that she used technology a lot in her lessons and so did the teachers that she was

working with. Whilst Judy is not referring to literacy or digital literacy in the ways that I have been describing it, she clearly integrated technology on a regular basis and felt confident and encouraged to do so. Her use of the technology in the examples provided would again support Tufte and Reedy in their concerns around technology as a teaching tool, being presentational in nature rather than to support pupils' digital literacies but there are also some important points raised by her account too.

Despite the focus on the technology and the tools themselves, she does go on to describe how she developed pupils' multimodal literacies through film-making after having seen the ICT coordinator modelling it in his classroom practice and in terms of her pedagogical practice, she talked about how much she enjoyed teaching that project and how much it engaged the children and she made use of this approach again. It would appear that Judy makes use of technology for a variety of reasons: to engage pupils, as a teaching tool to present information and knowledge to pupils, to support learning of skills across the curriculum but is also experimenting with more innovative ways when she has the opportunity, resources and support. She also made some theory-practice links when talking about her experience of digital texts discussed in university sessions and how her English university sessions encouraged creative approaches to teaching literacy. She is building up her pedagogical understanding of how and why to incorporate technology from the ideas gained from both her university training and the teachers that she has been working with and her experiences of planning and teaching. It could be argued that she is simply reproducing the practices seen in school so that she is able to fit in with the existing practices and develop her professional identity. As Gee would argue, she is 'seeing, doing and being' a teacher who in the specific case of her classroom experience, is a teacher interested in technology and who integrates it into daily classroom practice.

Every day I would use the IWB for everything, from displaying learning objectives to interactively getting the children to come up and do an activity. Using interactive websites, counting, ICT, maths, display it up on there and the children would come up and do whatever they needed to do on there.

I used the flip cams and Dictaphones that you plug into the computer because they were a much more technology-based school. For one of the PSHE lessons they were looking at people's opinions so we had them dress up as interviewers and they took round a Dictaphone to members in their class to find the information and then uploaded the

information to make tally charts with that and with the flip cams they were doing gymnastics so we had certain members in the group record the sequences and the ICT teacher he slowed them down and they turned them into Charlie chaplain films and they made them black and white and put a background on like an old style film and then because they really enjoyed that we did another film with them where they made a slapstick film so they planned it all in the lesson and they had the flip cams again and the ICT teacher slowed it down and they grasped that there should be no sound so they went online and found their own music to it, they were brilliant, they made these whole films.

For Judy the teachers that she worked with were significant in impacting upon her use of technology in her own practice as not only did they model its integration but also provided her with the resources and opportunity to try out the practices for herself so that she could experience it in terms of planning, teaching and evaluating the effectiveness of the tools and the pedagogical approach and provides an example of what Burnett (2009) recommended student teachers do to enable them to develop their understanding of the pedagogical implications involved in using technologies in classrooms. They provided feedback on her planning. Even though she says that they did not explicitly encourage her to make use of the tools available, she felt encouraged about what is possible by seeing their classroom practice and again this echoes earlier research and the experiences and thoughts of Petra and Leanne above.

Interviewer: How did you know what to do?

I had the idea and then I spoke with the DH about the resources available but then I don't know how I knew. I think it was from the uni sessions they are always teaching us to use alternative styles such as using film to write a story and then because I had such a good time I wanted to use it more. The gymnastics one was when I was on my prelims so I had seen it done anyway and they enjoyed it as soon as I started teaching I tried to use it myself.

They didn't specifically encourage me to do it but any idea that I had were encouraged so it wasn't try using this. I'd say I'm thinking of using this and they would say that it would be okay to use it. If they thought it would work they would say try it and see.

Judy reflexively deliberated during the planning process as she considered how she might make use of the effective practice that she had witnessed on her previous placement in her current setting. Her strategy was to discuss her idea of making a film with the deputy head, checking on the available resources before going ahead. Here is evidence of Judy being agentic as she also seeks approval of her ideas from the teachers in school before proceeding. She carefully planned her project and negotiated her way forward.

Judy experienced a number of enabling factors that supported her in integrating technology into her teaching: there was technology available; there was time and space within the curriculum to incorporate it; there was someone there to support her with not only the technological ‘know-how’ but also to model how it can be used to support learning effectively and providing the student teacher with the opportunity to consider the pedagogy required when incorporating technology. Confidence to try out new ideas when training also requires encouragement from teachers. In Judy’s case, she was able to talk to her teachers about her planning ideas and gain support and guidance. In this case there were a range of enabling factors for Judy.

All three students above highlight the important role that teachers play in modelling for student teachers what is or is not possible and how this shapes their conceptualisations of classroom literacy and of how technology can be used in classrooms and whether technology is used as an additive pedagogy or in more innovative ways through the use of disruptive pedagogies that present new ways of thinking about the relationship between technology, literacy and pedagogy. Even when they have had the opportunity to explore and develop contemporary understandings of literacy and children’s home literacy practices, if they are not seeing how it relates to practice, they are unable to make the links between theory and practice that many argue are essential for student teachers’ to build pedagogical knowledge (Donaldson, 2015; Cochran-Smith, 2016; Peiser, 2016) of how to build upon the more complex literacies that children bring into classrooms. As discussed earlier, each of the student teachers respectfully navigated the classroom, aware of their position as learner and becoming teacher and worked hard to fit in with the classroom practices of the classrooms that they were teaching in.

6.13 Examination of the external and internal enablements and constraints of students where teacher use of technology was low but student use was high and where both teacher and student use was low

The next step was to move on to comparing the two sets of students' accounts from the groups where the teacher use of technology was low and yet student use was high and compared this group's experiences with the second group where both the teacher use was low and the student use was low in order to identify factors that may have contributed towards enabling students in the first group to integrate technology into their teaching and factors that may have inhibited the use of technology in the second group. Table 5 (Appendix I) identifies the themes found in all of the students' accounts for whom teacher use was low and yet student use was high and Table 6 (Appendix II) identifies the themes found in all of the students for whom both teacher and student use of technology was low.

There were seven students where the teacher's use of technology was low and yet the student's use of technology was high and there were nine students in the teacher use low, student use low quadrant. The themes arising are summarised below:

Teacher use low, student use high

- The teachers encouraged the students to use technology and share their expertise and provided the opportunities, resources and space for the students to try out their ideas. Even though the teacher's use of technology was low or their own confidence was low, they encouraged the students to use technology and some of the students talked about how they were able to model how to use the technologies available and shared their expertise with their teachers.
- Four of the seven students studied the university multiliteracy module and talked about how their university training enabled them to know what might be possible in practice even though they did not see it in practice when on placement.
- All of the students talked about how they felt more confident than their teachers because of either their personal competency, their university training or they had seen it on practice on their first school placements

Teacher use low, student use low

- They didn't see their teachers modeling the use of digital technologies and/or digital literacies in their classroom practice
- They expressed their own lack of confidence with digital literacies
- They described how their teachers were lacking confidence with digital technologies
- They talked about a lack of confidence to suggest new practices and chose to reproduce existing routines
- They described how they felt that they had to stick to a planned programme of lessons leaving little or no scope for change
- They described a feeling that there were external pressures that affected classroom practice
- A need to focus on pupils' basic skills where pupils' literacy skills were low

6.13.1 Making Theory and Practice Connections

One of the differences in the experiences of the two groups of students is that whereas four out of the seven students in the teacher use low, student use high group talked about how their university based experiences helped them in validating their uses of technology, disappointingly, five of the nine students in the teacher use low, student use low also studied the same university module but they did not feel able to draw on their university experience in their practice. So what might be causing the difference? Whilst four of the students did feel able to draw upon the possibilities and practices explored in their university module, this exposure to 'disruptive pedagogy' (Vratulis et al.) which challenged taken for granted pedagogies was not always enough for a student teacher to feel that these are possible in reality. Knowing what is possible is helpful and enlightening but seeing it in practice confirms the possibilities that they can take up in their own practice. Here is an example of what others have recognised as essential in supporting student teachers' developing understandings of effective classroom practice (Hobson et al., 2006; Donaldson, 2010; Goodwin, 2010; Peiser, 2016) that students need to be able to make strong theory-practice connections through universities and schools working more closely together (Vratulis et al.). But this also suggests that student teachers reproduce the practices they see in classrooms as a way of identifying themselves as teachers.

6.13.2 Time/space/resources/encouragement

However, in the teacher use low, student use high category, the students said that they felt encouraged by their teachers to try out their ideas regardless of whether their teacher was a confident user themselves or whether they saw it being modelled. They also talked about their own confidence with technology and/or their university based experiences and therefore this would suggest that it may be the combination of more than one of these factors that acted as enablers for this group of students suggesting that there needs to exist a more complex arrangement of enablers for students to be able to feel confident enough to use technology in their teaching practice. Enablers include teachers providing them with the space and resources to try out their ideas, students feeling confident in their own digital practices and students exploring new pedagogies in university based training and in classrooms. When all of these enabling conditions are in place, the student teachers feel enabled to explore the technology available to them.

6.13.3 Teacher and student teachers' confidence to use technology

In the teacher use low, student use low category all nine students reported that they did not see their teachers using digital technologies in their teaching and five out of the nine talked about a lack of confidence in their own digital literacy skills. If neither the teacher nor the student are confident, exploring digital literacy and using new technologies is also less likely to occur. One of the constraints therefore is when both the teacher and the student teacher lack confidence to utilise technology in their classroom practice. If the teacher is confident, the student teacher is encouraged and feels supported.

6.13.4 Routines

Another important theme that arose from the students in the teacher use low, student use low group is that of the impact of the existing classroom routines and curriculum/planning and how these features did not allow the students the scope or space to branch out and try out their own ideas as seen above in Petra's case study. Six of the nine students in this group talked about how the existing routines and planning did not allow them to plan their own lessons. The issue of routines is strongly linked to the next issue below.

6.13.5 The Standards Agenda and Performativity

The need for such embedded routines and planning is linked to other constraints, for example, three of the nine students in the group talked about how there was a need to provide evidence

of writing in children's books and Bea described how she felt that 'there was pressure from the top, targets to meet'. This point was also raised by other students in the study as they provide further evidence of Ball's (2006) description of Barber's 'Deliverology' which led to the creation of a meta-language for describing school productivity, a meta-language already found within the student teachers' descriptions of their classroom experiences. Further evidence of the extent of this issue raised by some of the students was in how they felt restricted from developing children's digital literacy skills because they had to focus on the basics of handwriting, spelling and writing sentences due to the children's poor basic literacy skills. This is a very real issue that reflects the challenges that teachers face in their classrooms. Teachers need to ensure that children have basic literacy skills not only because of the standards agenda and the pressures placed upon schools and teachers to raise standards in literacy but also because school literacy is a specialised form of literacy that represents the dominant form of literacy but is contained within a larger set of literacies (Green and Cormack, 2015) and there is a strong argument that says that acquiring this dominant form of literacy provides learners with access and power to goods needed to be successful in adulthood. But being literate also involves a wider range of literacy practices than school literacy (Livingstone and Sefton-Green, 2015; Bearne, 2017; Sigporsson, 2017).

All three of these points are representative of the issues discussed earlier in the literature review and signify the pressures that teachers and schools face with regards to the government's standards agenda and reforms and the impact that this is having on classroom practice, affecting schools, ITE, student teachers and pupils and the student teachers in this study voiced their awareness of these pressures.

6.13.6 Student Teachers' perceptions of status and power

Another constraint that the student teachers felt was their own positioning of themselves as 'trainees' or 'students'. Lara, Petra, Connie, Christine and Bea all talked about how they were 'afraid of messing up' or 'I'm only a trainee teacher' and 'I didn't have the confidence to say shall we try this?' or Bea, who wanted to try out her new learning but didn't think they would let her.

All of the above constraints made visible in the students' accounts are further evidence of the complex context that student teachers face in classrooms (Burnett et al., 2015). Others have also researched the complex space that student teachers inhabit 'betwixt and between' being

inexperienced and experienced (Turner 1970) and the multiple identities that they experience and manage (Cook-Sather, 2006) in their roles as students/learners at university and as teachers when in classrooms.

Part one of the discussion of the interviews has identified some key issues to be explored further in the next part of the discussion. Whilst part one primarily focussed on the level of technology use in classroom practice and involved comparisons of three key groups, the next section will explore further the constraints and enablements raised above by examining evidence from across the entire set of interviews, examining the discourses, constraints and possibilities that the student teachers made visible in their accounts of their classroom experiences. It will explore not only the constraints and enablements as encountered by this group of students but importantly, how they used the process of reflexivity to build their personal pedagogies, values and beliefs and ascertain their next course of action to navigate through the social and cultural powers that they encountered in classrooms. How did these student teachers draw upon their past experiences and their current situations to decide on what to do and how to take action?

6.14 Discussion of the interviews: Part two

Part one of the discussion above examined the student teachers' perceptions of their own digital literacy practices and their experiences in terms of what technology they saw being used in classrooms and what they, the student teachers themselves used. The students were categorised and compared according to how much they and their teachers made use of technology in their teaching and examples of students from each category were examined to begin to analyse any common conditions experienced and how these conditions resulted in the different responses and outcomes as a result of the constraints and possibilities on offer. From this initial analysis some initial themes arose from the data:

- The influence of the class teacher and ICT coordinator
- Students making theory-practice connections
- Confidence and competence with digital technologies
- The power of routines in schools and classrooms
- Student teachers' perceptions of power and position in classrooms and identity building
- The standards agenda and performativity

The next part of the discussion will continue to explore these themes as well as others that arise by looking across the whole data set and boring down into each account to examine in depth the students' accounts of their experiences using Gee's discourse analysis tools and framed by Archer's three questions as outlined in the methodology chapter '*Selecting My Tools*'. How the students used reflexivity in different situations to take action will be explored.

Archer describes the act of internal dialogue or reflexivity as mediating between our personal concerns (what we want to achieve and who we want to be) and the social and cultural powers that we encounter.

We survey constraints and enablements, under our own descriptions (which is the only way we can know anything); we consult our projects which were deliberately defined to realise our concerns; and we strategically adjust them into those practices which we conclude internally (and always fallibly) will enable us to do (and be) what we care about most in society (Archer, 2003: 133).

and states that

Courses of action are produced through the reflexive deliberations of agents who subjectively determine their practical projects in relation to their objective circumstances (Archer, 2003: 130).

The first step was to identify from the interviews examples that showed how the student teachers were surveying their individual situations and to identify the discourses and constraints and possibilities both internal and external that were made visible in each of the student teachers' accounts of their experiences. These can be found in table 4: External and Internal Constraints and Enablements (Appendix III) and are summarised below:

Constraints	Enablements
Personal biographies – own experiences of school	Personal biographies – IT skills, digital competence and interests
Fear of failure – positions of power and privilege and identity building	Seeing teachers incorporating and modelling the use of digital technologies and the role of the IT coordinator in schools
Feeling of disconnect – between schools and universities	Teachers and student teachers engaging in knowledge exchange
Not seeing technology used in classrooms to support pupils’ contemporary literacies	Exposure to disruptive pedagogies and Opportunities for developing their own disruptive pedagogical approaches
Lack of pedagogical knowledge to teach digital literacy	Ideas explored in university - developing a broader conceptualisation of literacy - Looking beyond the classroom and making theory-practice connections
Standards agenda, performativity and accountability and the English curriculum	Having a range of school experiences, working with different teachers
Routinisation of classroom practice as normalised and embodied practices	

The findings were analysed and organised using Archer’s three questions. From this table and the analysis in part one above, a number of significant themes emerged including: the role of the class teacher and ICT coordinator in schools, how student teachers are ‘becoming teachers’ and building their professional identities in classrooms; the influence of ‘the good routine’ in classrooms; the impact of ‘thinking like PISA’, the standards agenda and educational reform in England, the influence of personal biographies and the role of universities in training teachers.

How did these student teachers use internal dialogue to survey their situations and what were the constraints and possibilities that they rubbed up against? What did they do when faced with constraints and possibilities? These are some of the questions that will be explored below.

6.15 Constraints, Enablements and Possibilities

6.15.1 Personal biographies

I have selected three students from the data set to illustrate how the student teachers in this study brought their personal biographies with them to inform their decision-making in the classroom. Connie brought her own experiences of school, her developing conceptualisations of literacy and her thinking about learning and teaching since starting university, Elizabeth brought her formal ICT qualifications and skills and her personal interest in technology and Ben brought his enjoyment of online game playing to his thinking about literacy learning.

6.15.2 Connie

Connie was a mature student who had delayed going to university in order to bring up her children. During the course she was a reflective student who became interested in the ideas around literacy teaching to include digital literacies. Connie's interest in digital literacies was evident in the taught sessions of the Multiliteracies module, through her high level of engagement in discussions and a high quality, thought provoking presentation based on Prensky's (2010) ideas of 'partnering' and collaborative learning which she refers to when talking about her own school experiences. She also continued to read widely and use social media as a source of information outside of the module.

In her interview Connie talked about the people that have motivated her and influenced her thinking. People such as the class teacher who came to talk to the Multiliteracies' students about his use of Twitter in the primary classroom to support boys' writing. She also talks about the teachers that she engages with on Twitter and she is also motivated by the ideas that she has been introduced to during her course as she talks about the author Mark Prensky as well as articles and books that she has read as part of her own personal research. Connie is motivated by her developing ideas about literacy practices, her classroom experiences and by her 'significant narrators' (Sfard and Prusak, 2005) as she drew upon others' ideas when talking about her experiences.

Connie was enthusiastic about wanting to use social media in her own classroom practice and in the interview her developing beliefs and understandings of literacy become visible as she talked about literacy needing to have a purpose and how she views literacy as a social practice 'sharing literacy through literacy'.

I think it helps them to see literacy has a purpose. That's the main thing and they're sharing it with other people. I don't think I would worry too much about their spelling. The fact that they're sharing and they want to share. They're sharing literacy through literacy if you like so I think that's the most important thing. It's exciting isn't it?

Here is evidence of Connie's thinking about literacy and how enthusiastic she was about how literacy could be taught. Connie demonstrates a more ideological conceptualisation of literacy as described by Street (1984) and discussed in the literature review (pages 17-19) as one that is embedded in social contexts rather than literacy as a decontextualized set of skills. Connie supports this through not being overly concerned about spelling but is more focused on the process and authenticity of the literacy experiences that she wants to provide for children. She stresses the sharing element of literacy, again emphasizing her belief that literacy is social.

In the extract below taken from Connie's interview, Connie's repetition of the word 'think' is evidence of Connie thinking reflexively on her situation, helping her to clarify her own conceptualisation of literacy through having to articulate it in the interview and highlights how interviews may also facilitate reflexivity through providing the context for the student teachers to reflect on their experiences and clarify their own thinking in the process.

Connie talks about how she is motivated to use what she has learned from her university course and her wider reading to inform her classroom practice but that it is not easy as she recognises how she is influenced by her own experiences of schooling. These early experiences of schooling have helped Connie in forming a figured world of classroom practice, of what is 'typical' in how teachers teach and children learn. However, this figured world of teaching and learning is now causing some conflict and hesitation as it does not match up with the ideas that she has been exposed to, researched and been thinking about since starting the course. Again, as Connie is beginning to develop a more ideological view of literacy, a literacy that has purpose and is inherently social, she finds that her developing conceptualisation of literacy is in contrast to her own experiences of school literacy and her experiences of school literacy on placement which she describes as representing a more autonomous skills-based model as described by Street. Connie used the word 'difficult' nine times during the interview when she was talking about her literacy lessons. She talks about how, when in the classroom and having to make decisions, she tries to think about her own ideas about literacy and learning. She uses some

strategies suggested by Archer to think reflexively on her position, providing evidence of how she mulls over the problem or situation.

When I go on teaching practice I try to keep that in mind. It's difficult because obviously the examples are when I was a child it was a long time ago and you sit and listen and teachers impart their knowledge but I think from the things I've read and the lectures I've had over the two years that's the way forward I suppose and the social learning and so on.

Again Connie emphasises the social aspect of learning. Although Connie is talking about how she would like to bring more 'social learning' into her practice based on her new learning, there is a suggestion of uncertainty in Connie's use of 'I suppose' which might suggest that Connie, quite reasonably, is still in the process of developing her ideas and beliefs of literacy and is unsure of what is effective teaching of literacy as her new ideas do not match up to her past experiences of classrooms. She is building up her own pedagogical understandings of how to teach literacy through her developing conceptualisation of literacy, her theoretical learning and her past and recent classroom experiences.

Connie demonstrates how she brings her own biography and experiences as a learner to inform her classroom practice as discussed earlier (pages 69-70) (Labaree, 2000; Britzman, 2003; Warford, 2011; Smith and Ellis, 2017) as well as the thinking and learning that has taken place in university and at times these ideas might be in conflict causing her to pause and reflect on what she should do rather than simply conforming and acting according to the 'norm'. These moments of pausing to think reflexively on her practice is how Jenkins (2002) suggests people are able to think consciously and strategically, what he calls 'improvisatory performance' and Connie shows that at times, she was thinking consciously and making conscious decisions about her practice. Gee (2011a) and Urrieta (2007) suggest that people create figured worlds in their heads of how things work and what is considered typical practice from their experiences of being in social worlds and this information helps them to build social identities and know what to do within the social worlds they encounter. Whilst Connie's figured worlds will be shaped by her previous classroom experiences as she herself recognises, Gee suggests that our figured worlds are also shaped by what we read in books, the media, social practices and the people we engage with. Connie has clearly been engaging with other sources of information and although she is influenced by the ideas explored in her university training and personal research, she is

also aware of the disconnect between her past experiences and new learning as evidenced above where she is reflecting on this conflict of ideas.

Beginning to emerge are the implications for the ways in which teacher education supports student teachers in developing their pedagogical understandings. It is clear that the interview provided Connie with the opportunity to reflect on her experiences and to clarify her developing understandings. Teacher education can facilitate meta-reflexivity by encouraging student teachers to be reflexive in articulating their decision-making. Teacher education also needs to consider how to address the disconnect between universities and schools that students like Connie are experiencing in order for student teachers to make those important theory-practice connections as called for by BERA and RSA in order to lead to what Donaldson (2010) identified as a more integrated relationship between theory and practice and between the academic and the practitioner.

There is evidence of how Connie thinks and acts strategically to determine her course of action when she meets constraints (Archer, 2003; Jenkins, 2002) as she talked about the times that she was able to be active in making plans and decisions and carrying them out. Whilst she was not always able to do as she would have liked, sometimes she navigated her way around the constraints. She found spaces within which she could be agential despite the constraints that she felt (some of these constraints will be dealt with later on in the discussion when examining school literacy). For instance, in the example below she explains how when she wanted to use the internet, she went ahead anyway despite being advised not to by her teacher. She clearly shared her plans with the teacher and deliberated on what she should do but still decided to go ahead with her original idea despite her desire not to ‘mess up’ the existing classroom ‘routine’. Here is evidence of Connie’s reflexive processes during a particular situation where she was clearly mulling over the problem and prioritising in terms of what mattered to her most – what the teacher advised or what she felt would be more beneficial for the children.

I didn't want to mess up anything. The teacher had a good routine going with them but we did look at non-fiction explanation texts. I don't know - it was advised not to but I went ahead anyway and let the children pick their own subject to explain and some kids (laughing) were picking out how robots work and really complicated things and I thought well I've said that they can do it so I'll have to go ahead and do it.

Connie attempted to make links between children's passions and interests (Millard 2003) and the aims of the school curriculum through allowing children to select the subject of their explanation texts. She carried out her project and then proceeded to create leaflets rather than get the children to write their explanations into their exercise books (as she suggests would have been normal practice in that classroom) because she believed it was important for the children to have an audience and purpose for their writing and this also influenced her decision to stick to her plan. Even though Connie referred to causal powers that restrict her agency in the classroom and she couldn't always do what she wanted to do, she still found agency in this classroom context. She challenged the typical practice of children producing a piece of writing in their exercise books because of her belief that the writing should be 'relevant' and purposeful rather than an exercise to be recorded in their books as evidence of their learning. Here is evidence of Connie addressing Lankshear's (2006) earlier concerns over teachers trying to make literacy learning relevant but sometimes through creating inauthentic learning experiences as she is aware of making learning authentic.

And then to present the work we made leaflets. It was relevant otherwise writing an explanation in your book isn't really there's no purpose to it so I thought they would have some sort of purpose and could do that on the computer which was quite difficult (laughing) to do but I thought if you give them the freedom to try and show what they can do.

Connie went on to explain how in providing the children with some freedom to explore the internet based on their interests and drawing on the digital literacy knowledge that they brought with them into school, one boy in particular benefited from a less structured approach:

Because this boy he knew where to look for information. I wouldn't know where to look for how robots work. I would just Google how robots work and would probably come up with loads of complicated information but he knew where to go and he knew the kind of robots he wanted to look at. He taught me some things.

Interviewer: Your role was quite different in helping him. What was your role?

I was facilitating more than anything. I mean obviously we did a lot of preparation into what explanation texts are but I suppose that's where the teaching - sharing the

knowledge came in but as far as producing his own as long as he understood how to set out an explanation text the criteria that he needed to tick the rest was up to him.

Here Connie seemed to be making a connection between the learning that she has gained from university and her research into Prensky's notion of 'partnering' and collaborative learning as mentioned earlier with her classroom practice. As discussed in the literature review, it is important for student teachers to make theory-practice connections (Donaldson, 2015; Cochran-Smith, 2016; Peiser, 2016) and here is evidence of Connie making sense of her practice through reflecting on the theory. Connie also recognised that despite the less structured approach, the pupil still met the learning criteria (evidence of another constraint becoming visible – that of the standards agenda and will be examined later on), providing further validation that drawing on pupils' interests and funds of knowledge are effective strategies and which might help to refigure her figured worlds of classroom practice.

Connie recognises that children have funds of knowledge (Gonzales et al., 2005) that they bring to school and especially with regards to digital literacies. This is evident when she explains that she felt that the teacher on her second placement did not appreciate children's existing knowledge of using the internet to search for information. She talks about how she felt that the teacher was not aware of the children's funds of knowledge and Connie seems to be explaining how the children in this situation knew more than the teacher realised and is further evidence of recommendations made by the NLG (1996) as examined earlier in the literature review (pages 13- 18) in that 'classrooms need to recruit rather than erase the knowledge that children bring with them to their classroom learning'. Connie could see that the children were more competent than the teacher appreciated and that too much structuring of the learning activity actually led to the children becoming confused. Although Connie did not articulate it in this way, she is aware of valuing children's cultural capital in a way that the teacher appeared not to in this situation and perhaps is further evidence of how schools and what is valued as legitimate knowledge. The children's knowledge of searching the internet and their personal interests was not recognised as legitimate knowledge by their teacher but Connie recognised the knowledge that the children brought with them to the lesson and considered how it could have been harnessed and this is what she chose to draw on in her lesson. Connie's account provides an example of the issue of children's cultural capital still not being recognised in schools as discussed in the literature review (page 42).

And children are already going onto Google and things in their literacy classroom. But when I was on TP they were not really when the teacher asked them to do something specific they were not sure what they were doing but given a bit more free rein they knew exactly what they were doing. They were clicking here and there and they knew exactly where to go but when the teacher gave them the instructions to click on Google they were all a bit confused so I think the teacher wasn't aware of the children's competency.

Evidence of Connie consciously strategising again came later on in her interview when talking about how she would like to try using social media in her classroom. She suggested how she might be supported to do this. Connie suggests what could be done to provide more effective support in carrying out her plans to use social networking sites so that she could reassure teachers and schools that she would be using it responsibly. Connie is consciously strategising through her suggestion of how she could feel more confident to try out practices that do not fit with the normal classroom practice. She suggests that if university tutors could support her by explaining to teachers how the students would be using social media in the classroom in responsible ways to support learning, then this would help to convince teachers that her ideas are valid.

As far as teaching practice it's difficult because it's down to the school or your teacher as to what you can do but support from, I'm not saying there isn't any, but support, you know, from your FLT (faculty link tutor) to say it's going to be used responsibly. It would help I think for things like Twitter and so on.

Connie makes a good point here. If schools are aware of the content of the training that students are receiving in university and there is effective partnership between universities and schools where universities work with schools on shared aims and goals, and where students can share with schools their personal goals, this could help to validate the students' practice and she provides evidence for Donaldson's (2010) call for a greater synergy between universities and schools.

It was evident from Connie's account that she was bringing her personal biography into the classroom context and that she experienced a disconnect between her own experiences of school, her university training and the expectation of school literacy practices. Whilst this

disconnect caused problems and forced her to be reflexive in her decision-making, she was consciously acting for much of the time. In deciding not to disrupt the existing equilibrium in the classroom and when she decided not to follow the advice given are examples of Connie's conscious decision-making.

6.15.3 Elizabeth

Elizabeth also talked about how she used her past experiences to inform her projects and actions in the classroom. Elizabeth brings her formal qualifications in ICT, her interest in digital technologies and her identity as 'a technology person' to her classroom practice.

Elizabeth was 20 years of age. She did not select the Multiliteracies or the English subject study modules. She came with an 'A' level in ICT and she described herself as probably more confident than most people with regards to her digital literacy skills and experiences. She is surrounded by digital technologies in her daily life and she described how she is immersed in technology 'all day from the moment I wake up'. She is keen to share her expertise with others, supporting her family members to access information, working as a mentor to GCSE ICT students in her spare time and supporting teachers when on school placement. She describes herself as 'quite a technology person' and explains 'I have the latest Garmin, I've got the latest phone'. She uses a Blackberry phone for a variety of purposes and always carries her laptop around which she uses 'mainly for work'. Elizabeth spoke with confidence throughout the interview and appears to have a genuine interest in digital technologies. Drawing on Currant et al.'s research into HE learners in 2008, Elizabeth could be considered 'digitally experienced' as a learner for whom digital technology plays a major part of her life or even a 'new millennium learner' (CERI, 2009).

Interviewer: Can you describe for me your digital life and how you use digital technologies in your daily life? What do you use? How do you use it?

All day (laughs). I do it all day from the moment I wake up. It sounds silly but I use my phone for an alarm and then straight away for like all my emails whether it's uni emails, personal emails even things such as Facebook which is important because I use Facebook not necessarily just for social but I've got groups on there - my friends at uni and we are meeting up and things. Someone Facebooked me earlier to say what time we are meeting via Facebook but that's still important. I use technology - my car uses

a Garmin to get places. I've always carried my laptop around with me. I use it all day long (laughs).

Elizabeth is also identity building when she talks about her competence with technology and describes herself as 'a technology person' 'Because ICT is my subject' and validates this with providing evidence of how other people describe her 'the thing that a lot of people say to me is that I know a lot of shortcuts' and when in school 'I always get noticed for that'. It is clearly important to Elizabeth that she is recognised by her friends, by teachers, and by herself as her tutor and researcher, as someone who is 'a technology person'. Gee (1999) suggests that in identity building we are using language plus 'other stuff' to enable ourselves to be recognized as members of a community – using an 'identity kit'. Elizabeth is building her identity as 'a technology person' not only through her behaviour but also through the tools that she uses 'I have the latest Garmin, I've got the latest phone'. She is 'saying, doing, being' (Gee 1999) a person who is interested in technology. Through these digital artefacts Elizabeth illustrates Holland et al.'s (1998: 61) claim that 'Figured worlds are evinced in practice through the artefacts employed by people in their performances'. Elizabeth uses these digital tools to show how she is a member of the 'technology' community and it is perhaps this strong identity and sense of self alongside confidence gained through the ICT qualification that enables her to use technology more successfully in her classroom practice than other students in this study.

Elizabeth talked openly about her concerns and projects. Elizabeth appears to have acted with agency in her early career path decisions, through her subject choices at school, the purchasing of the latest technology devices and when making decisions in the classroom. Elizabeth has clearly spent time considering how to make her way in the world and what position in society she would like to hold.

She has demonstrated a clear sense of agency when in schools, actively seeking out the technology in schools

And I'm always looking, like you know, when I'm on teaching practice I do have a full scan on the computer. I always get noticed for that.

When asked if she felt encouraged to integrate technology when in schools, she stated

I think I sort of encouraged it more than they did but then that was something that I was confident in.

Elizabeth's confidence with technology is obvious and she openly stated her confidence and skills and how she helped the teachers in school.

The teacher that I was last with, she was 50 so you know she's the same age as my mom and I know that she wasn't taught it at school. She hasn't got a qualification in ICT or anything like that. I helped her do everything on the computer.

Elizabeth brought her confidence with digital technologies to her classroom practice. She suggests that it is her formal ICT qualification and schooling that contributed to her confidence level as well as her use of digital technologies in her everyday life and she suggests that older generations may not be as confident as they have not all studied computing or ICT when they were at school.

However, unlike Connie above who was thoughtful and articulate in her description of her developing conceptualisations of literacy, stressing the social embeddedness of digital tools in children's lives and of the importance of providing authentic and relevant learning experiences, Elizabeth tends to focus on the digital tools and her skills in using them to support teaching and learning and even though she did not make use of the tools in what some might consider ways that reflect contemporary literacy practices that include using digital tools in transformative ways, she was proactive and found agency in the classrooms that she worked in because of her confidence in her IT skills. This might suggest that if student teachers are supported in becoming digitally confident through exploring digital tools and practices with a focus on how they are used alongside developing a broader understanding of contemporary literacies and children's home literacy practices, this might contribute towards student teachers feeling more competent in developing pupils' digital literacies through their literacy planning and pedagogical decision-making and might be able to address Koehler et al.'s (2007) recommendations that teachers develop technological, pedagogical content knowledge (TPCK) in order to develop more effective literacy teachers.

6.15.4 Ben

Ben draws on his experiences of online collaboration, his personal experiences with digital technologies and his university training to try to see how it might apply to his role in the classroom but struggles to see the relevance of his knowledge for his professional role.

Ben was the only male student teacher to be interviewed. He was 25 years of age. He did not select the Multiliteracies module or the English personalised learning module. Like Elizabeth above, Ben describes himself as digitally literate and a confident user of technology and is surrounded by technology in his everyday life. Based on the fact that he is surrounded by technology and identifies himself as a confident user, he could be described as digitally experienced (Currant et al. 2008).

Mobile phone, Texting, in fact I read a lot of articles on my mobile phone as well in terms of research for assignments so I use eBooks and ejournals. There's my laptop same kind of things but I play a lot of games.

All the time. If I'm at home my laptop's on and is connected to my CD so I've got two things going on at once. If I haven't got my TV on my iPod's playing music if I'm not listening to it I'm playing games I'm always using some form in some way or another I'm never far away from it (laughs).

Unlike Elizabeth, Ben did not learn computer skills at school. Ben talked about how he didn't acquire a computer until he was at middle school so has not been surrounded by the world web and computers since early childhood but he described how 'I just got on it and away I went'. He talked about how he learns to use new digital tools and software through 'just practice really. Just trial and error'. 'I don't read the rules. No rule books, nothing. I just turn it on and have a go. I learn through experience'. Ben's confidence with technology has been acquired not through being formally taught as in Elizabeth's case or shown by others but has been self-taught through experimentation.

Interestingly, Ben was the only participant to talk about gaming. In fact some of the other students interviewed even distanced themselves from gaming. So why didn't Ben? Ben admits 'but I play a lot of games'. I was interested to find out more about Ben's enjoyment of computer games.

A lot of the time it's Football Manager because I'm male (laughs) but I do play things like the SIMS as well and that's about it in terms of games. I play lots of games but a lot of the same kinds of things really. I have PlayStation 3 which is football based again or Call of duty.

Interviewer: these games that you play, are they games to play on your own or are you playing online?

I play online a lot of the time. I talk to other people and work as a group to achieve the objective.

Interviewer: Can you see that as a literacy experience?

Yes. I mean in the assignment that we've not long written in English. I've touched on that - how you can use games. The group work, the team work and the speaking and listening that can be used online and how that can be used so yes, definitely.

However, although Ben knows that online, collaborative gaming experiences involve people using literacy he shows how he is acting reflexively and voicing his concerns about the relevance of such knowledge. He is experiencing a constraint in that he has knowledge but not the practical knowledge that he can make use of in his classroom practice. Here Ben might be referring to the pedagogical knowledge required to bring his personal knowledge of digital literacy to his classroom practice and is again further evidence of the TPCK required, as mentioned above, to effectively incorporate digital tools to support pupils' literacy learning.

Even though I know it in my head that you can, getting to grips with it and how you actually do it in the classroom I think it's a very grey area. The actual skills that you get out of playing a game. Even though I think I could probably sit here and say you get these skills. It's how you reinforce to the children that these are the skills that they are learning.

Graham's (2008) research into young teachers identified two different routes to learning about digital worlds: serious solitary journeys which included self-taught or school taught and playful, social learners who have experienced learning about digital worlds through playful, social experiences. It is not so easy to separate Ben into either of the two categories provided by Graham as whilst Ben was self-taught, he also takes part in online computer games where he

experiences ‘playful, social learning experiences’. Graham was particularly interested to see if young teachers who learned through playful digital experiences were able to utilise their experiences of learning in their own classroom practice. Graham argued that teachers who learned through participating in communities of practice such as playing computer games with others would be able to better understand and transfer a socio-cultural theory of learning to their classroom practice to support children in learning through social participatory learning experiences. Ben might also be considered a ‘playful, social teacher’ as a result of his gaming experiences. Ben talks about how he reflected on his own experiences of online gaming when completing his English assignment where the task was to create a database of texts for children, outlining how each text could be used to support literacy learning. In that assignment he was, in theory, transferring his understanding of the social learning that takes place when playing online games to classroom practice but in an academic way. For Ben, in reality however this proved to be problematic and is further evidence of the need for a greater synergy between university training and classroom practice to enable student teachers to make strong theory-practice connections as discussed earlier (Donaldson, 2010; Williamson, 2013).

Gee (2007) suggests that it is important to understand literacy in a broader sense than simply reading and writing and when we interact with other people in different sorts of practices, we are participating in different literacy practices. Ben appears to understand this notion, stressing the role of ‘the group work, the team work and the speaking and listening that can be used online’ through playing collaborative online computer games within a community of practice; a community of online gamers. Ben has insider knowledge of the skills used within such a social practice. Gee (2007) argues that computer games build into their designs effective learning principles based on problem solving and collaborative learning that leads to deep learning. Graham (2008) suggested that young teachers who have insider knowledge of such practices through their own experiences of learning and ‘playing’ computer games with others, might be better placed to transfer these effective principles of learning to ‘school’ learning and classroom practice and Gee (2007) recommends that we use these powerful forms of learning to engage people with education. And whilst Ben was able to recognise that he possesses such insider knowledge of the literacy practices involved in such communities of practice, towards the end of the interview he demonstrates an awareness that he does not know how to put this knowledge into practice or fully explain it and reinforces the need for a greater focus on developing student teachers’ pedagogical knowledge for effective literacy teaching and learning.

Each of these student teachers brought their personal biographies to their classroom practice. They brought their own experiences of schooling which acted as either a constraint or an enablement. Connie saw it as a constraint as it did not match with her new thinking and understanding and caused her to reflect on the disconnect whereas Elizabeth thought it was an enablement as she drew on the confidence it gave her in terms of using her IT skills to support her teaching and to share her knowledge with her teachers. Ben drew on his personal interest in computers and online gaming and whilst he knew that online collaboration found in gaming is a literacy practice, he was struggling to see how he could make use of his experience and knowledge in the primary classroom.

The next section will examine the important role that teachers play in influencing student teachers' classroom practice.

6.16 'I just followed the example': The role of teachers in providing constraints and enablements

6.16.1 Positions of power and privilege

The student teachers made visible their understandings of how power and privilege work in schools and classrooms. In light of Lave and Wenger's (1999) ideas around communities of practice already discussed, student teachers are the apprentices and the teacher is the experienced mentor supporting them to become a member of the teaching community by 'showing them the ropes' – the way things are done. Becoming a teacher means acting like one which involves talking, doing and being like one (Gee, 1999). Doing includes using the right kinds of tools – the tools that teachers are using and emulating how they use them so that they are recognised within the community they are trying hard to join. This is a project shared by all of the students in this study. In their endeavours to becoming teachers they have to be successful not only in being recognised amongst the community but there is always the possibility of failing a placement if they do not meet the required teachers' standards. There are high stakes involved and the students talked about how this positioning often framed their decision-making. Many of the students' world figuring of classroom practice is based on observations of classroom practice and of course, their own experiences of classrooms as explored through Connie's account above. They followed their teachers' examples to ensure that they would be recognised as teachers, doing what teachers do to successfully pass each of their school

placements, avoiding potential conflict along the way by entering and making sense of the social world of the classrooms they encounter (Ellis, 2010).

Lorna exemplified the way the students were thinking:

I think you use kind of what everybody else is using. I just followed the example.

And some of the students expressed fears about using technology in lessons, worried that if it goes wrong, then it would affect the success of their lessons and the impact that might have on how they are assessed by their teachers and tutors. They used words such as ‘fear’, ‘scared’, ‘fail’, ‘worried about failure’ and ‘you’re not allowed’. Georgina and Linda expressed their fears about using digital technologies in the classroom because of the perceived risk of failure ‘if it goes wrong’ and the impact on the success of their school placement which is graded as pass or fail. Ellis (2010) also voiced concerns over the issue of relative power and the concerns that student teachers have over potential conflict with those who have power over their success on the course, arguing that they find this aspect of their training difficult.

Georgina: And I think technology is that big fear especially if it was an observation you sometimes steer away because you think if it goes wrong my whole lesson goes wrong.

Linda: I think if you’ve got it and can understand it or you can teach yourself, and you are interested then I think it’s fantastic and then you because you’ve got a sound understanding of it, then your children will, but because I haven’t got a sound understanding of it if I was to then go into a classroom, like let’s have a go at this. You are setting yourself up to fail.

Bea, Petra and Christina talked about how they felt that some practices might not be allowed. They showed how they were thinking when planning their lessons, always conscious of failure and whether their ideas are acceptable – aware of what you can and cannot do – of what is and is not possible.

Bea: It’s like you learn something and you go on placement and you’re eager to try it out and then you think they won’t let me.

Bea's comment again highlights the importance already noted of the need for a more effective partnership between universities and schools so that student teachers are not experiencing a disconnect between the two and are better able to make theory-practice connection in classrooms and in university training.

Or Petra who also raised the point that there is a feeling that some practices are simply not allowed.

Oh, you can't you can't, you're not allowed! (laughs)

Or Christina who talked about how when she was in the classroom she was thinking of possibilities but felt constrained by the need to follow the existing practices and was afraid to do anything different that might jeopardise her placement. Here she shows evidence of how she used what Archer refers to as mental activities to help her to decide on what to do: mulling over, deciding and prioritising.

Yes, I think, in your head you are thinking of opportunities when you could use that but the problem on your TP if you have like 'follow this' you are still a bit nervous with like thinking 'can I try this with ICT?

Again, it's your tutor who's observing you, what their thoughts are and I think a lot of it is more for when you are out teaching it's a shame you can't always put the things that you find out into your TP but I think you are always worried about failure on TP and you do think that I'll stay away from that.

6.16.2 Teachers' confidence – enabler or constraint?

As introduced in part one, the teacher's confidence and competence with using digital technologies in their classroom practice provided the student teachers in this study with a range of contexts in which they had to be reflexive and consider carefully how they would act. For some of the student teachers the teacher's lack of confidence acted as a constraint and closed down the possibilities with students not wanting to do things differently to current classroom practices but for others it opened up possibilities for the students to share their own expertise, experiences and knowledge. In other classrooms the student teachers were observing teachers integrating technologies in their classrooms and modelling practices that enabled the students

to try it out for themselves. How each of the students read their situation and acted will be examined.

6.16.3 Confident teachers and ICT coordinators

As presented in part one (chart 2) in the classrooms where teacher use of technology was high, student use was usually high and we heard from Lauren, Ben and Judy who talked about the teachers that they had seen integrating technology in classrooms. A number of the students talked about watching the ICT coordinator incorporating digital tools into their teaching and how this supported them in having a go themselves. The role of the ICT coordinator in schools was a significant enablement for many of these students and whilst ICT focusses more on the computer skills involved, it was a good starting point for these student teachers to find out about the technology available in their schools and how they might make use of it in their literacy lessons. The ICT coordinator also provided assistance and support with the operational side of using new technologies in school and gave the students confidence to use the tools which helped with taking away the fears identified above by some of the students. Like Elizabeth discussed above, having some ICT skills can provide student teachers with a level of confidence to make use of the technology available even though as already noted, this is not enough to ensure that the tools are being used to effectively develop pupils' literacies in relevant and authentic ways that reflect contemporary literacy practices.

Sarah talked about two different teachers who encouraged her: a recently qualified teacher from the same university who was very confident using digital tools and an ICT subject leader. In Chart 2 Sarah is in the teacher high, student high quadrant. She had two experiences of teachers being very encouraging, both modelling the use of digital technology to support literacy learning. Sarah also describes herself as a confident user of digital technologies in her daily life. All three factors when brought together provided Sarah with the confidence to use her experiences in her own teaching.

The first one was newly qualified about 3 years ago she came from here and she was the one that used the IWB, Digi blues and digital cameras, she'd always got a sounds table with tape recorders and CDs but especially because she was only 23.

But the second one was the ICT coordinator that's why she was bringing in...

Interviewer: Did you feel well supported?

Yes, I think I'm like that anyway as a teacher, I take risks, I think you have to however they are going to work or not and she was like, yes, go for it, and she was good at using ICT, always got the laptops out and she had websites ready for them and you could block certain things so she could set up the network so once they had logged on with their own logins they could only go on to one activity which I didn't know and she had obviously thought about that. It was differentiated - she was clued up.

Sarah's teacher gave her the green light to have a go and this, along with modelling the use of technology on a daily basis and Sarah's personal digital practices and being a self-confessed 'tech-geek' provided Sarah with a number of enabling conditions for integrating the use of technology in own her teaching.

In comparison, when Ben compares his two school experiences although both teachers demonstrated very different levels of ease with technology, both encouraged Ben to integrate it into his own practice. Even if a teacher is not confident, this is not necessarily a constraint for the student's practice. Ben suggests that even though the second teacher was not able to support him in terms of showing him how to integrate technology, Ben has an internal motivation and interest in computers and relevant IT skills to enable him to make use of what was available to him anyway. But also he felt more confident to try out his own ideas in his second school placement because of the learning from his first placement. Ben's situation emphasises the importance of student teachers having a range of different school experiences so that they are exposed to a wider range of teaching practices (Although this wasn't always the case for the other students in this study - see Bea's account below). Because the teacher on his first placement was confident, he/she was able to support Ben more effectively in his endeavours to use technology. Ben appears to have exercised agency in the second experience, drawing on his previous school experience and digital interests to make decisions in the classroom.

I was encouraged in both. I was a lot more supported in the first one because the teacher was more confident whereas the second one whether it's a combination of the teacher's lack of confidence and whether it was the fact that I was in the second year the support wasn't there this time for using the ICT but I like to do it anyway so luckily I would do it anyway but the support was definitely a lot greater in the first one.

Sarah, Zara and Lara also talked about the teachers that they felt were confidently using technology in their classrooms and its impact on their own practice. Zara talked about how her teacher's confidence made it look easy which encouraged her to use it too. But Zara also, jokingly suggests that if she were to see her teacher struggling with something, then that would discourage Zara from trying out the practice herself which suggests the power of the existing practices to influence what student teachers do in the classroom.

Interviewer: how confident did your teacher seem?

Very, yeah very confident in using ICT and stuff.

Interviewer: did you feel encouraged to use ICT in your teaching?

Yeah, and the way she put it across to me was very encouraging because she used it a lot it looked easy so I thought I'll give that a go but if she was struggling with it I would think there's no way I would use it (laughs)

Lara also made reference to the positive influence that having the ICT coordinator/subject leader as a role model can have in encouraging students to have a go with technology. Clearly the ICT coordinators seem well placed to support trainees by not only demonstrating the tools that are available to students but are also there to support them as they try them out, giving encouragement and boosting confidence. As Ben suggested, even if your teacher is encouraging, if they cannot support you with using the technology, it may not be as effective as having someone who can show you the range of resources available in school and help with any technical difficulties.

Lara: I was very lucky to be placed in a school, my HP was the ICT coordinator and she has so many ideas.

On my second placement it was being developed, especially the host practitioner. The iPad was always out and she was influencing me to think of ways how to incorporate it into lessons which was really nice and yes, because she was confident with it, it enabled the children to be a bit more get involved.

Interviewer: How was she so confident?

At home I think, she was quite, she just seemed very up to date with technology and despite having her own children, I think that's as well actually, she kept referring to her

son using the games on the iPad and then she would bring it in to use in the classroom. With having her own children, which ranged from 5 to 13, I think they were quite aware so that helped her. I think she took a general interest as well.

Here Lara seems to be recognising that the teacher on her second placement was drawing on her own home literacy practices and those of her young children. Lara changed her mind partway through her account as she realised that actually, having young children enabled the teacher to be up to date with children's cultural interests. This is evidence of Lara reflecting on the experience in the interview, of reflexivity in action and developing her thinking, showing a developing understanding of the role of teachers' and children's home literacy experiences in classrooms. Lara reflects on her experiences to date and thinks strategically about the future as she suggests that she will take the learning from this experience into her future practice along with the learning from university as she has had first-hand experience of seeing it work in practice and can use this to justify her ideas should she face constraints in the future.

Interviewer: Do you think that helped you to have a go?

Yes definitely, if I had had my first HP again, I would probably have felt like oh no, I can't. Because she wasn't doing it already and because it was my first practice, I didn't have the confidence to say shall we try this? Now I think if I was going in and the teacher was saying... I think I'd have more confidence to say I've done this at university. I've sort of used it in sessions working with small groups of children, can I have a go? Obviously I'd take it from there and if that worked well, I'd show her and try and take it from there.

All of the above students felt encouraged and supported by seeing how teachers and ICT coordinators in particular incorporated technology into their classroom practice. The role of the ICT coordinator seemed particularly influential in the students' accounts of their experiences. Students like Elizabeth, Ben and Sarah have internal enablements provided by their levels of confidence in their own computer skills and personal interests in all things digital and they were able to make decisions and act with agency even if they did not see their teachers using much technology and stood in stark contrast to some of the students discussed above who were fearful of trying out something which they had not witnessed in school. It must be remembered that having the confidence to integrate technology is just one step towards using it effectively in supporting pupils' literacy learning, what is also needed as mentioned earlier is a greater

understanding of literacy and children's home literacy practices as well as pedagogical understandings of how the tools can be used in effective literacy teaching. But alongside this is the importance of providing student teachers of literacy not just with the resources and modelling of how resources can support literacy in the curriculum but to go a step further and provide them with the opportunity to observe and reflect on more disruptive pedagogies that are more in line with contemporary literacy practices that will encourage student teachers to rethink the role of technology in literacy classrooms.

6.16.4 Teachers lacking confidence but encouraging students to share experiences

We met Elizabeth earlier in the personal biographies section above. For Elizabeth, the teacher's lack of confidence provided the space for Elizabeth to show what she could do with the technology available and she seemed to find a considerable degree of agency in the classroom 'I think I sort of encouraged it more than they did'. In this area of teaching and learning, she was more knowledgeable than the teachers around her. On her last placement she explained how she showed her class teacher how to get the IWB working: 'I helped her do everything on the computer' and 'she was really dependent'. Elizabeth not only helped her teacher with the operational aspects such as plugging in the wires to the IWB but also went on to model and use the technology available in her lessons.

So literally I was like so you ask me and I'll tell you. She REALLY wanted to learn because she knows the importance and she was like 'you're such a useful tool' because I was happy to show her anything. Even just putting on the IWB was sometimes a bit of a difficulty because there were so many leads she was like 'I don't get the wires' So me just showing her 'that that wire goes in there' and because no other teachers - they don't really have time do they? To come into her classroom and say this is how you do this because they've got their own things to worry about so she really enjoyed having me there for that and I really enjoyed teaching her and then I actually put it into my lessons and she was really interested to see how I incorporated it.

It would seem from Elizabeth's narrative that the teacher was pleased to have someone to show her how to operate the technology that had been installed in her classroom and Elizabeth enjoyed being the more knowledgeable other in this situation. In this situation, the apprentice was able to contribute something towards the classroom practice. There was a role reversal with exchanges of knowledge running both ways between the teacher and the student teacher.

Elizabeth not only shared her expertise with her class teacher but also talked about how the other teachers were keen to hear about what she was doing. She felt very well supported and encouraged to try things out and it would appear that she had access to available resources.

I think I sort of encouraged it more than they did but then that was something that I was confident in. I would say 'let's combine it with ICT' because that's what I like but no, the staff were really supportive when I said can I do it? They were 'yes, yes'. They were always willing because in the classroom that I was in there weren't any laptops so I had to borrow them from classrooms they were always 'yes, yes Elizabeth you can use them, no problem, let me know what you've done'. They were always interested. Yes they were really supportive.

And so, with the space opened up for Elizabeth by her class teacher and other teachers in the school and the resources made available to her, she acted with agency, making the most of the possibilities on offer. Elizabeth modeled using the technology in a number of ways, she created interactive games with PowerPoint like 'Who Wants to Be a Millionaire' and she used laptops to support learning in different areas of the curriculum.

Lara also described a similar situation where she was able to share her knowledge with teachers and reflected on how it felt strange to her to be more knowledgeable than the teachers. She modelled using photo story with children based on her experience in the Multiliteracies module where she had worked with a group of children to create a story using photo story software and cameras. She was drawing on her learning and prior experiences to give her the confidence to share her knowledge with teachers.

On my first TP I was the only one using technology, the teachers were 'ooohh' and I was like, no, you can do it like this and I found I was kind of like teaching them which was like, kind of strange but my HP, she used technology. She didn't use it for projects though. She would take pictures and put it on the learning platform but for the ICT project, she never did anything like photo story or anything like that. Hopefully I have inspired her to use something like that. I don't think she was even aware that it even existed. I know some of the teachers were like 'what's this?' sort of thing. I was like well...

Like Elizabeth and Lara, Leanne found herself in the position of being more knowledgeable than her teacher and used her newly acquired knowledge of and confidence with the iPad to encourage some reluctant teachers when she went on her second placement. The fact that she felt that she could suggest some ways in which they might use the tools might indicate that it might have been the teachers' lack of familiarity with the iPad and how it could be used in the classroom to support teaching and learning rather than an objection to the use of technology. In her role as student teacher and apprentice to the experienced teachers in school, Leanne found that she was in the position of being more knowledgeable than these teachers in this aspect of teaching and learning and this enabled her to feel that she was in a position to make suggestions and model ways in which they could integrate the new tools into the teaching and learning in their classrooms. Later on in Leanne's narrative she talks further about the balance of knowledge between teachers and pupils, where pupils are more knowledgeable than teachers.

I know from my second practice experience they just brought tablets for the school so they were just introducing them and the teachers were very reluctant. Because I had done the module I was able to help them along and start introducing some things and sort of experiment with that but I'm definitely more inclined to use it in my practice because I thought it was really really interesting and beneficial.

Leanne explained to the teachers her experiences on the module and in particular the session given by the class teacher about his use of social networking in the classroom. In this way she showed that using the iPad is an acceptable practice because she has been learning about it at university, experienced integrating it in a classroom in another school and is something which another teacher is using. She used her university training to strengthen her position as the more knowledgeable other and support her ideas.

Interviewer: And you said that you encouraged teachers to use the equipment so what kinds of things did you do?

I sort of initially, I modeled how to use them because they were all very wary of it But I explained my experiences especially with the Multiliteracies and the meeting with the teacher and I explained what he said and I just emphasised how valuable it is if you can incorporate it and just sort of modeled a few things ...because I had shown them how to use it they were more comfortable with it.

I think the thing that intimidated them the most was that the children knew more than them and I think for a lot of teachers it's scary - the thought of letting children take the teacher role and take ownership of their own learning and some teachers think that they need to be on top of them all of the time and I think that was a daunting aspect for some of them.

In this part of Leanne's narrative she tries to explain why the teachers that she worked with, from her experience and perspective, might have been reluctant to use the iPads. She uses words and phrases such as 'they were all wary of it, 'intimidated' 'scary' and 'daunting' and she suggests that they might be experiencing such feelings because the children know more about the technology than the teachers and therefore teachers might feel that they are no longer in control or 'on top of them' and that this change in balance of expert knowledge might cause discomfort for some teachers just as it made Lara feel strange about sharing her knowledge with teachers. Leanne's story reflects Connie's account discussed above but Leanne suggests a reason for why perhaps children's cultural capital is not always utilised in school, it is not that their knowledge goes unrecognised but because it changes the knowledge exchange dynamic in the classroom, with children having knowledge that their teachers might not have and this can be uncomfortable for teachers.

6.16.5 'A good routine': How and why routines work in schools to constrain practice and the impact on student teachers

As presented above, the classroom practices that students see contribute towards their developing sense of what it is to be a teacher, supporting their identity building as their identities change from student teacher towards becoming a teacher. These practices also strongly influence their decision-making. Often the students in this study chose to reproduce the existing practices to avoid causing conflict or disruption in someone else's classroom. In a number of the students' accounts a constraint that became visible was the routinisation of classroom practices found in classrooms and schools and how routines can act as a causal power to restrict possibilities for change and doing things in different ways. Routines that offered little room for flexibility with planning or trying out new ideas constrained the students' classroom practice. Some of the students recognised that the routines were acting as constraints for both the teachers and the students. Routines were often unconscious and embedded in what is accepted as common-sense classroom practice adopted by all.

The routines that the students talked about included reading and writing paper-based texts rather than making use of digital tools and literacies, ‘sticking to the plan’, following prescribed programmes and using the IWB to structure teaching. These experiences help to shape the student teachers’ world figuring of how things are in classrooms as ‘they enter and make sense of the social world of the classrooms they encounter... working on what might be by examining what is’ (Ellis, 2010: 112). Ellis argues that the ‘what is’ are the unconsciously routinised practices that exist in classrooms and reflects Bourdieu’s concept of habitus as embodied dispositions as teachers act unconsciously in their classrooms employing familiar routines and practices.

Ellis (2010) argues that whilst there has been much support for the shift from university based training to school based training, this can offer an ‘impoverished experience’ as students are exposed to routinised behaviours and encouraged to take them on themselves as part of their own practice and professional development.

School-based reform of teacher education assumes pre-service teachers learn how to be a teacher by being acculturated to the existing practices of the setting with an emphasis on the reproduction of routinised behaviours and the development of bureaucratic virtues such as compliance and the collection of evidence (Ellis, 2010: 106).

As discussed in some depth already, behind the compliance and allegiance to routines in schools and classrooms is the issue of performativity as a result of a national and international standards agenda and the power that government policy wields upon schools and teachers and on the lived experience in classrooms. In this study some of the teachers that the students worked with modelled compliance as in the case of the teachers having to integrate the new iPads in Petra’s school (above). Even though they were not comfortable using them, they tried to because the head teacher had told them to.

Connie, Natalie, Christina, Bea and Petra all talked about how the routines in classrooms restricted the possibilities of them doing anything different. Connie’s comment below also suggests a link between routines and children’s literacy attainment and the fear of impacting negatively on their attainment – suggesting an understanding of accountability which will be

explored further in the next section. Connie clearly did not want to change the routine that the teacher had established as to do so, might cause a disruption in the pupils' progress.

I found it difficult to really do what I wanted to do because it's not my class and you don't want to uproot especially in the last practice - with the lower ability in literacy I didn't want to mess up anything - the teacher had a good routine going with them

Natalie talked about how her teacher encouraged her to make use of the class computers but she did not see the teacher using them much, suggesting that the teacher had a 'routine' of established practices that did not allow for considering how things might be done differently which again is evidence of teachers establishing routines of good practice – of 'what works' and are reluctant to make changes in case it impacts negatively upon pupil progress or because of workload it is often easier to follow established routines which help to streamline a busy timetable and manage teacher workload although Natalie's comment might also be describing the way in which teachers make decisions unconsciously and how routines as embedded practices support unconscious actions.

I reckon just because of routine, she didn't branch out as much.

Christina found it hard to incorporate her own ideas as she had to teach from a prescribed unit that was being taught across two classes which meant that she could not make any changes to the planning to ensure that both classes got the same learning experience. Here is evidence of how systems and routines in schools, whilst established to create parity of provision and support reduce workload, can get in the way of change.

Yes, I think in your head you are thinking of opportunities when you could use that but the problem on your TP if you have like 'follow this' you are still a bit nervous with like thinking 'can I try this with ICT?'

I followed the unit 'the Street child' there were certain things we didn't do but it was very much she wanted it in a set pattern because it was being taught in the other class as well. There was an NQT teacher in the other class and he would have to teach from my planning as well so it didn't leave a lot of scope for changing what they do.'

As discussed in part one above Petra also felt constrained by the prescribed daily literacy programme being used in school. Petra suggests that the only possible space for her to have some freedom to incorporate digital literacies would have been on a Friday during 'The Big Write' as all of the other literacy lessons were guided by the Read, Write, Inc. literacy programme as already discussed in the literature review.

There were other routines that the students made reference to. Routines of teaching that have become established teaching practices such as using the IWB to structure teaching and learning sequences. Many of the students talked about how they were encouraged to use PPT presentations to structure lessons routinely.

Linda used the IWB on a daily basis.

My second teaching practice, everything was on the whiteboard, so much - every starter of the lesson was whiteboard based, which was good for me because I got to know the Smartboard better.

Zara: I use it in starters and plenaries, er activities, getting them to come up and engage all the class, used the visualiser on there, it's quite a good one to show them texts in literacy and then they can all read along together, erm, PPTs on there for lessons, that's useful, erm, LO, the date (laughs) I always use it in lessons.

Whilst Lisa (below) talked about how useful a strategy the IWB can be, she also recognised that because it is used to structure the teaching sequence it is not always responsive to the children's needs and greater flexibility is needed. From the students' descriptions below here is further evidence of how the IWB is used as an additive pedagogy as discussed above in part one of this discussion chapter. The IWB is used in classroom practice is it is mostly used to carry out the job of the more traditional tools of the chalkboard or whiteboard, simply replacing the board with a digital screen. Also visible in many of the students' accounts is the routinisation of certain classroom practices - the taken for granted routines of ensuring that every lesson has a date, a learning objective and a WILF (What I am looking for). In fact Lisa compares it to her own experiences of learning at school providing further evidence of others' concerns over the presentational nature of teaching and knowledge transfer (Tufte, 2004; Reedy, 2008).

In my first TP at university all of the lessons came with a Smartboard presentation, already prepared all colours looking nice which was nice for the children but it did give no leeway for spontaneous questions you are not always able to do on the IWB but on the 2nd placement the teacher was able to not have the ready made presentations but used the IWB a lot like a whiteboard she'd put up the WILF and date on there and would write the questions on there. If she's teaching something she didn't always have to have set presentation she'd use it a lot like how I remember teachers at school.

So why do teachers stick to the plan and the established routines? Is it a lack of confidence as some of the students suggested? Is it mostly unconscious decision-making as a result of embodied practices or is it because of other, more powerful constraints that teachers encounter? Whilst teachers do tend to stick to established practices and routines, there is a good reason for their behaviour. As discussed in the literature review, teachers' professionalism has been called into question by the discourse of government policy; their creativity has been stifled by prescribed curricula; they are forced to focus on basic literacy and numeracy skills as a result of government 'back to basics' policy reform and they are constantly monitored as part of the standards agenda. Any changes in practice might be blamed if standards drop and thus teachers are forced to comply. The link between the good routine and the standards will be further explored in the following section on accountability and the standards agenda.

6.16.6 'Pressure from the top': Accountability and the impact of the standards agenda on classroom practice

Many of the students talked about how in the classrooms that they worked in, there was pressure to ensure that there was evidence of writing in the children's books after each lesson. Some felt that this constrained their ability to develop pupils' digital literacies. Bea was very aware of the constraints that teachers face and as she talked about her experience, the dominant discourse of standards and accountability rose to the surface. Her choice of vocabulary signalled the discourse as she talks about 'results', 'targets to meet' and 'pressure from the top' and the impact that this has on classroom practice in her experience. Sarah actually used the term 'accountability' in her account. Both students made visible the dominant discourse in action in their classrooms.

You know and if I could get them to learn in that way, let's find a way of making time and still get the same results but it almost feels like you get the pressure from the top, targets to meet, something has to appear in their books.

The standards discourse was also evident in Sarah's narrative as she talks about the need for written evidence in children's books and the accountability of teachers. She talks about not only the need to evidence pupils' learning but also she is perhaps suggesting that the emphasis on written evidence in books. Yet whilst she recognises the need to evidence children's learning, she also reflects on other ways that she can comply through taking pictures of their learning and writing a description of what they did. Whilst this is still compliance with the standards agenda, she suggests that there are spaces for doing things a little differently but still demonstrate performativity and provides an example of how she sees a way around one of the constraints experienced and of how she used reflexivity when considering what to do in such situations.

I still feel the emphasis is on what children write down as written, I still think that's the main emphasis for teachers and classrooms.

It's always down to accountability, what they do in each lesson but they haven't always got to write it down, it could be a post-it note, a picture of them, and so I'm very aware of that when I teach and I think it's great.

Christina also understood the pressure that teachers face as she described how she felt anxious about ensuring that there was evidence of the children's work in their books.

Where I think we often are really worried about having to show that there is something in their book today. You've done literacy today, we've got to get something in their book.

So where does this pressure come from? Bea suggested it comes 'from the top' and these students provide further examples of how teachers' classroom practices are driven by government policy to raise standards in literacy and numeracy. Teachers comply with the demands put upon them by their head teachers which in turn is in response to the climate of accountability and performativity and the pressures placed upon school leaders to 'perform' by raising literacy and numeracy standards in their schools. Student teachers are observing and

reproducing the discourse of accountability and a back-to-basics policy but it does not mean that teachers or student teachers are in agreement with the discourse but that they are compliant as Ellis claims above. However, even if only compliant and not consensual, teachers are developing and modelling routinised practices that become embedded in everyday teaching for becoming teachers to be acculturated into. Not only is a picture of classroom practice emerging but also emerging is a picture of what school literacy looks like as a result of the standards agenda and literacy education reform. The government's back-to-basics literacy policy discourse intended to raise literacy standards and how it shaped literacy curriculum and classroom practice has been extensively discussed in the literature review and is evident in the students' versions of the literacy classrooms that they experienced.

Chapter 7

Conclusions and Recommendations

7.1 Conclusions

7.1.1 Power and Privilege and identity building

As discussed above student teachers' views are heavily influenced by what they see in classrooms and as much as possible they tend to fit in with existing practices rather than challenge the norm (Marsh, 2006; Burnett, 2009). The student teachers in this study found themselves situated within complex social spaces populated by many different people with different roles and personalities including the pupils, teachers, teaching assistants, head teachers and senior leaders as well as university tutors. The study suggests how student teachers have to negotiate their role within these spaces and establish effective relationships with everyone. They are managing multiple identities - they are both a student and a 'teacher to be' and they often struggle to reconcile the differences between the two which can lead to conflicts arising (Lave and Wenger, 1999; Cook-Sather, 2006) as we saw with the students who were reluctant to cause any disruption of the classroom routines and equilibrium.

They are very aware that the class teacher that they are placed with is not only responsible for the attainment of the children in his/her class but also for the assessment of the student teacher themselves throughout and at the end of placements which ultimately frames their relationship and clearly positions the student as the apprentice/learner with less power and privilege than the class teacher who conversely has more power and privilege. Holland et al. (1998: 58) suggest that "Lived worlds are organised around positions of status and influence and is a lived social reality. Identities are formed as actors come to see themselves as having more or less power, more or less privilege in the figured worlds". In the students' accounts in part one of this discussion chapter we could see how in some instances, the students felt that they had less power to make decisions and act with agency whilst for others, at times, they found they were able to make decisions and act with agency. All the time, the student teachers in this study were carefully navigating this very complex social world, acting reflexively and weighing up their positions, what they wanted to do and of what was and was not possible in order to make decisions about how to act. Ellis (2010) argued that student teachers do not merely pass through the school setting but act on it and partly shape it and indeed, some of the students provided evidence of this as they talked about how they shared their expertise and knowledge with

teachers and were agential in developing their own practices, not always reproducing the existing practices. However, on the whole, because of the routinisation of classroom practice and their positioning as the apprentice/learner and their careful avoidance of potential conflict what we see with these student teachers is that they are more likely to reproduce the established classroom practices than upset the equilibrium of the classrooms they were working in.

7.1.2 The role of the class teacher

The teachers' competence and confidence with technology impacted upon how the students felt about integrating technology in their own teaching. Where teachers and or students were confident, these causal powers acted as enablements, allowing students to experience how technology could be used in classrooms and giving them the opportunity to evaluate the effectiveness of incorporating technology. Where teachers lacked competence and confidence to use technology in their classrooms, many of the students shied away from using it in their own lessons. However, there were instances where teacher use was low but student use was high and in those cases the students drew upon their own IT skills and/or experiences with digital technologies. The ICT coordinator in schools was particularly enabling for the students as they were able to show the students what technology was available to them and how it could be used.

This study suggests that university based ITE allows student teachers to experience classroom practice in different school settings and provides them with a wider repertoire of practices upon which to base their own. Some of the students in this study were able to apply their learning and confidence gained from a previous classroom experience in a different school to their next placement as different experiences provide them with different versions of what is possible and provides further information for their world figuring.

7.1.3 Personal Biographies

This research shows how the students brought with them their personal biographies and figured worlds to help them take action. Their own experiences of school weighed heavily in their world figuring of primary classrooms, influencing their ideas of what is and is not possible. Some of the students brought their biographies of learning about digital worlds to their classroom practice however this was not unproblematic as students struggled to understand how they can make use of their everyday literacy practices and the knowledge that brings to their roles as literacy teachers and to see how this knowledge relates to school literacy and curriculum. Other

students brought their competence with digital technology to support their use of technology in the classroom, providing them with the confidence to manage situations where the technology might not be working properly. On the other hand there were students for whom a lack of digital competence affected their confidence to integrate technology in their teaching through fear of the technology letting them down. This study provides compelling evidence that students who felt competent in their own digital skills were more likely to feel confident in applying their skills to their classroom practice and those who felt less competent with their personal digital skills were more likely to avoid integrating technology into their teaching. This study suggests that student teachers need to reflect more on their own digital literacy practices and develop their digital skills in order to gain confidence in integrating it in their classroom practice however, as Ben shows it is more complex than having the knowledge and skills and students need to be supported in seeing how their digital literacy practices relate to children's literacy lives outside of school, literacy pedagogy and the school literacy curriculum.

7.1.4 Routinisation, accountability and school literacy

Constraints in the form of the routines of classroom practices appeared in the students' accounts of their experiences. Some of the students expressed how, when they were thinking of their own lessons, they were mindful of not disrupting the existing routines of the classroom. The routines took the form of prescribed curriculum content and pedagogy, a focus on pupils' basic skills, the typical structure of lessons, having to follow lesson plans shared with other teachers to ensure parity of provision and how the IWB is used to structure lessons.

The demands of school literacy and government policy in the form of a back-to-basics policy impacted on the students' ability to develop pupils' digital literacies. Visible in their accounts was the language of performativity such 'pressure from the top' and 'we've got to get something in their book'. Teachers' accountability drives classroom practice and in turn, the students have to play their part in ensuring pupils make progress. The curriculum experienced by the students emphasised the transcriptional aspects of literacy such as spelling, handwriting and a focus on basic reading and writing skills, leaving little room for innovation and exploring digital literacies.

When talking about their experiences and in particular the constraints that they faced, the Discourse of accountability and what knowledge counts with regards to school literacy rose to the surface of the students' narratives. The framing of the English curriculum and the

government's focus on basic literacy skills presents a very real challenge for teachers who are faced with reconciling the need to make literacy learning relevant for pupils whilst ensuring that pupils are given access to the powerful literacies required in society that school literacy provides.

What is clear is that there remains a gulf between a multiliteracies perspective of literacy as promoted in the 1990s and discussed at length in the literature review and literacy as experienced in England's literacy classrooms and described by these student teachers. The students raised the issue of how school literacy was at odds with children's home literacy experiences and some of the students noticed instances where teachers were not recognising children's digital experiences or were not seeing how relevant they are for school literacy purposes or were perhaps wary of altering the knowledge exchange dynamic where children become the experts. The impact of the government's literacy policy and accountability policy significantly impacts teachers' behaviour and decision-making in classrooms, making them reluctant to change existing practices and routines despite what they know about children's literacy lives and contemporary literacy practices.

7.1.5 Disruptive pedagogies, teacher education and classroom practice

This study demonstrates that if student teachers are exposed to transformational practices that challenge current practices they are able to see what is possible and develop an understanding of alternative approaches to teaching literacy that reflect contemporary literacy practices. For the students that had been exposed to disruptive pedagogies through their university modules, even though they were not able to apply their learning in the own teaching, they talked about what now might be possible. If student teachers are to be able to be effectively exposed to transformational practices, there needs to be an effective partnership between universities and schools with shared aims and goals for teacher education which enable becoming teachers to make theory-practice connections and critically evaluate classroom practices with regards to school literacy and how digital tools are used in literacy practices, helping children to see the connection between their real, every day literacy lives and school literacy.

The importance of widening student teachers' conceptualisations of literacy to include looking beyond the classroom is crucial but so too is the importance of encouraging them to evaluate how digital tools are used by people in literacy practices so that they make use of them in authentic and relevant ways that transform pedagogy rather than adds to it.

The role of the students' university training was also significant as many related what they had been learning and thinking about to the classroom context and vice versa. At times they talked about how they were struggling to see how they could make use of this knowledge in the situations that they experienced and in other situations, the students were more aware of children's home literacies than their teachers and sought to make use of the new technologies available to them. Providing them with the opportunity to explore their own literacy practices as well as researching children's home and school literacies during the multiliteracies module encouraged them to appreciate the funds of knowledge that children and they themselves bring to the classroom even if they could not all make use of this knowledge. Being exposed to an example of disruptive pedagogy through the demonstration of the use of social media in the primary classroom was particularly influential. Even though many of the students could not apply these practices during their placements, they talked about what 'could be' and compared it with 'what is', reflecting on current practices and future practices and is evidence that they think practices could change.

7.1.6 The importance of reflexivity in teacher education

This research highlights how the student teachers in this study used reflexivity to successfully navigate their way through the complex situation of being on placement in a primary school as they negotiated and juggled university demands with classroom practice under the complex matrix of supervision of university tutors, class teachers and school leaders and with the unpredictability of working with young children. Archer stresses how 'situations do not directly impact upon us; they are reflexively mediated via our own concerns under our own descriptions' (Archer, 2007: 139). People evaluate the same situations differently based on their personal concerns and prior experiences and therefore will respond differently. Student teachers are caught up in structural relations that pattern and frame their decision-making and whilst there were structural relations common to each context, when looking closely at the student teachers in this study it is possible to see how each student weighed up their situation in relation to their personal concerns and took action and this learning provides an insight for policymakers, ITE and schools into not just how student teachers are affected by external constraints and possibilities but how student teachers can be supported to reflect, develop pedagogical agency and knowledge in relation to teaching digital literacies and take action within the structures that they encounter. If a change in literacy classroom practice is to be achieved in order to be in line with contemporary literacy practices it is precisely the nature of how student teachers receive

and respond to the constraints and possibilities on offer and how this leads to them taking action that needs to be studied. Developing student teachers' conceptualisations of literacy through looking at literacy beyond the classroom and through exposure to disruptive pedagogies that enable them to see what is possible and developing their ability to be reflexive when they have decisions to make are key in changing literacy classroom practice in the future and all stakeholders have a part to play in achieving this.

It is also important for student teachers to develop pedagogical agency in classrooms in order to counter our earlier examination of Bottery's (2004) warning that policy implementation acts as a form of power that leads to teachers implementing and responding to policy rather than critiquing and amending and which can lead to less reflective practice. As Ellis (2011) suggests, as discussed earlier in the literature review, it is only when teachers have the agency to solve problems that they develop the understanding and skills needed to meet individual pupils' needs and are able to address more local issues. Ellis argues that literacy policy implementation disempowers and prevents teachers from being creative and innovative and therefore hinders teachers' professional development and new learning. If we want student teachers to be able to be responsive to pupils' needs and be 'nimble' (Ellis and Smith, 2017) and adapt teaching to suit pupils' needs then they need to feel that they can exercise agency when on placement in classrooms through evaluating the needs of their pupils, their personal concerns and problem-solving.

The key constraints that the student teachers in this study experienced were: the significant impact of international literacy tests on England's literacy curriculum resulting in a narrow literacy curriculum and assessment policy that does not reflect children's experiences of literacy outside of school; the routinisation of classroom practice in England as a consequence of a regime of accountability leading to performativity and embedded practices; a disconnect between the ideas around contemporary literacy practices explored in university and school literacy as experienced in classrooms; the student teachers' own experiences of school as learners; limited experiences of seeing teachers modelling disruptive pedagogies relating to the use of digital technologies to support children's literacies and a lack of opportunity to develop the pedagogical knowledge required to develop a more reflective use of digital technology in literacy teaching; requirement to pass the teaching placement which often led to the student teachers 'playing safe' and fitting in with existing practices.

Where the student teachers did make use of digital technologies in their literacy teaching a number of enablements were identified. The student teachers who were competent and confident with digital technologies in their personal lives were more likely to make use of digital technologies in their classroom practice and students who saw teachers using digital technologies in classrooms made use of digital technologies in their own practices. Where there were instances of teachers who were less confident with the digital tools working with student teachers who were more confident, the teachers were open to the students making suggestions as to how digital tools could be incorporated into the existing literacy classroom practice. The student teachers who had been exposed to some disruptive pedagogies through their university modules articulated a broader understanding of literacy, even if they did not feel that they could make use of their developing understandings. The student teachers were drawing upon their own digital literacy experiences, their university learning, what they were observing in schools and reflection to develop their pedagogical understanding of how to incorporate digital tools into their teaching.

7.2 Thesis Summary

This study shows that student teachers teaching literacy on teaching placements are busy navigating a complex space that involves a number of different structuring powers, multiple relationships, identities, constraints and possibilities that all work to influence how they use digital technologies in their classroom practice. Incorporating digital technologies into their teaching was not straightforward even with experience, training and encouragement but required a number of possibilities coming together in one space. The student teachers in this study reflexively deliberated when faced with new situations and plotted a course of action to meet their goals proving that they were agential but at the same time were cautious in the decisions that they made, weighing up carefully their next move, aware of the constraints and possibilities on offer as they considered themselves in the social context that they found themselves in (Archer, 2007).

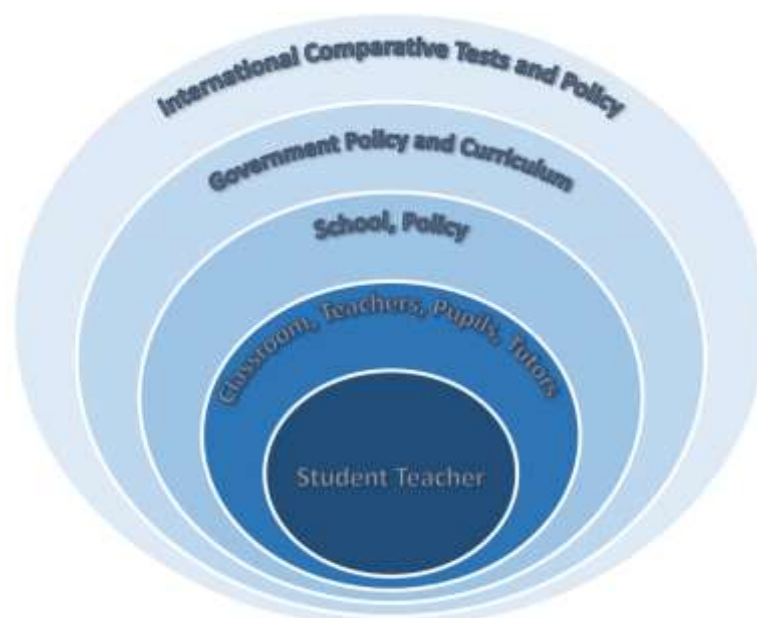
7.2.1 Student teachers within a larger system of relationships

This thesis focusses on the experiences of a group of student teachers in a particular moment in education reform history – between 2011 and 2013 as England’s national literacy strategy came to an end after its launch in 1998, renewal in 2006 and closure in 2011. This research explores how this group of student teachers were positioned and affected by the literacy reform battles that had taken place prior to their training and highlights the embeddedness and durability of

classroom practices and routines as a result of government policy implementation and the impact upon schools, teachers and teacher education but in particular it sheds light on how student teachers experience policy in classrooms. This study explored how literacy curriculum and former policy reform endures and constrains classroom practice leading to a narrowing of the literacy curriculum and how student teachers had difficulty in relating the curriculum to their own experiences of literacy and children's everyday literacy practices. What is needed is a literacy curriculum that reflects contemporary literacy practices and one which includes authentic digital literacy practices which complements and supports the teaching of basic literacy skills. In this way student teachers will not experience the disconnect that was evident in this study.

This study provides more evidence for Apple (2003) and Cuban's (2013) desire for a greater focus on what actually happens in classrooms as a result of policy implementation rather than the heavy focus previously placed upon on the input and output. The student teachers' experiences were framed by the policy moment, their university training, what they saw happening in schools, their world figuring based on their personal biographies and their developing conceptualisations of literacy in the 21st century. Student teachers are operating within a structuring system and this study explores the way in which student teachers receive and respond to the structures as they encounter them through examining how they used reflexivity in classrooms to assess their situation and take action.

The student teacher in the classroom is at the centre of this research as they reflect on their experiences, constraints and possibilities that they faced and their decision-making and actions.



At the centre of this very complex space under examination is the student teacher within a system of power relationships. Whilst the diagram above illustrates the different layers of structuring powers within this complex space it cannot fully illustrate the complexity of the situation for student teachers as a result of all of the social structures and structuring powers that surround them and the interconnectivity between and amongst the layers.

7.2.2 Student teachers

The student teachers in this study entered this structured space bringing with them ideas, values and skills which they used to help them build their developing teacher identities and pedagogical knowledge with regards to teaching literacy and in particular, digital literacy. They brought their personal biographies and experiences of school and literacy as well as their own values and beliefs with regards teaching and learning based on their previous experiences as learners in school and from their university training. They brought experience, skills and confidence with digital technologies from their personal lives and previous classroom experiences. All of these experiences and knowledge were brought to bear on the students' decision-making but also part of the decision-making process was the student's ability to weigh up their position within a larger system of structuring powers that served to influence their conceptualisations of literacy, their developing pedagogical practices and of what they could actually do in the classrooms as they experienced them.

7.2.3 The classroom

Within each classroom the student teachers had to be reflexive, taking into account the different variables on offer in order to make their way successfully through their teaching placement. They had to build an effective relationship with the class teacher and any other adults coming into the classroom to support learning and were ever conscious of the power relationship between themselves and their teachers. They were the learner and the teacher was their mentor, modelling the existing policies and practices at work in each classroom. The teachers were also involved in assessing the student's progress and the student teachers worked hard to take on board the existing practices in order to show not only their respect for their experienced teachers but also to become recognised within the larger community of teachers. They were in a vulnerable position as teaching placements have two outcomes: pass or fail and therefore they were mindful of their position as learners. This is not to say that the teachers made them feel vulnerable but from the perspective of the student teachers the power relationships were influential in the navigation of their placements.

Not only did the student teachers need to develop effective relationships with their teachers but they were also involved in building relationships with the pupils in their class. The student teachers had to read the pupils' capabilities and needs with regards to literacy to inform their literacy planning and teaching. Developing pupils' basic skills became a priority for many students and this signifies an issue with regards digital literacies being seen as separate or an 'add-on' to the existing literacy curriculum whereas it needs to be considered within the existing curriculum in order to support pupils' basic skills and broader literacy understanding. Some of the student teachers also reflected on how the behaviour of pupils impacted upon their decision-making. Both the behaviour and literacy capabilities of pupils needed to be taken into account alongside the existing literacy classroom practices and their relationship with their teacher when the students were planning their literacy lessons.

Within this classroom space with the student teacher, the class teacher, the other adults supporting learners and the pupils sits another structuring power; the university tutor and university training. The tutor is an almost ever-present presence in the classroom who oversees the success of the placement. The student teachers also talked about how university tutors either served to constrain or enable their decisions to incorporate digital tools into their literacy teaching. Some used their university learning to justify their ideas and shared their knowledge and experiences with their teachers to influence classroom practice and the integration of digital tools whilst others were more concerned with 'playing safe' to avoid failing.

7.2.4 The school

As well as the structuring powers experienced by student teachers within classrooms, classrooms sit within the larger institution of the school and the policies that govern school practice. Some of the students talked about how school policies impacted upon the teachers' behaviours and classroom practices. For example, when head teachers instructed teachers to integrate new iPads in their classrooms. The student teachers were aware of the hierarchy of power within schools with some discussing the need to gain approval from the head teacher before attempting to integrate digital tools into literacy teaching. The role of other teachers within schools was also influential as a number of the student teachers gained ideas for what is possible from the ICT coordinators in schools through observing and reproducing their practices.

The students were very aware of the school policies at play at classroom level as they and their teachers complied with the need to focus on basic literacy skills and provide evidence of learning in the children's books for each literacy lesson. The student teachers therefore carefully followed school policy even if at times that did not think that it supported pupils' literacy development.

7.2.5 Government policy

However, as discussed in the literature review, government policy has strongly influenced school policy and literacy classroom practice and the student teachers in classrooms felt the power structures emanating from policy level. A number of the student teachers articulated their awareness of an accountability culture and 'pressure from the top'. This group of student teachers were experiencing the embedded and enduring nature of Labour's literacy reform and standards agenda of the 1990s on classroom practice. Government policy at the time included a curriculum which focussed heavily on the teaching of systematic synthetic phonics, the encouragement of purchasing government approved literacy programmes to be adhered to unquestioningly, the summative testing of pupils' basic literacy skills, a gruelling inspection framework and the publication of school results. The impact of government policy was felt all the way down to the student teachers, pupils and teachers in the classrooms.

7.2.6 International policy

International literacy policy provides the outer layer to this multi-layered structuring system. As discussed in detail in the literature review England's education policies are strongly related to international policy and a global literacy standards agenda. As a result of international comparative literacy tests the pressure to perform well in comparison to other nations resulted in England's nationwide literacy policy reform and thus was felt all the way down from an international drive to raise literacy standards right down to each individual within the primary classroom.

All of these external structures impact upon the student teacher in the classroom alongside the internal constraints and enablers that the student teacher brings to each social situation. This research showed how their personal biographies and classroom experiences strongly influence their figured worlds of classroom practice as well as their understanding of their positions within the system of relationships that they find themselves in. Through responding to the structures they are also having an impact on the structures they encounter as they use reflexivity

to mediate between the structures and their actions. In this way the forces can be two-way with each impacting upon the other.

It is indeed a complex world containing numerous variables and conditions and this research shows how individuals dealt with the constraints and possibilities that they faced – how they considered their positions and how they proceeded to act. Archer (2007) claims that it is important to redress an imbalance in research as she argues that too much focus has been placed on how structuring forces influence agents and not enough focus has been placed on how agents receive and respond to the external constraints just as Apple (2003) and Cuban (2013) argue that more valuable learning can be gained from focussing on what actually happens in classrooms rather than on the structuring forces impacting on classroom or on the measurable outcomes. This research does precisely that as it showed how the student teachers in this study responded to the structuring forces experienced in the classrooms that they worked in.

7.3 Summary of the chapters

In summary this thesis examines the digital lives, classroom experiences and classroom practice of student teachers between 2011 and 2013 and describes how they developed their identities as becoming teachers, their growing conceptualisations of literacy and their pedagogical knowledge in relation to digital literacy.

In chapter one a review of the literature examines a number of key issues that frame this study. It examines the changing nature of teacher education and the implications for student teachers and ITE and the ways in which the profession is viewed differently by different stakeholders. It examines competing conceptualisations of literacy and the influential developments in literacy policy, curriculum and practice and how these developments have impacted upon schools, teachers, ITE and student teachers.

Chapter two presents the researcher's ontological perspective of how the research would be framed and takes a critical realist approach in order to identify the structures and mechanisms that lie beneath the surface and impact upon student teachers' literacy beliefs and classroom practice. It explores the concept of figured worlds in the identity-building process of these becoming teachers and explores the structure-agency debate in preparation for examining how much agency the student teachers in this study demonstrated through their accounts. And finally this chapter explores the role of reflexivity within the structure-agency debate and draws upon

the work of Margaret Archer for a way of exploring how the student teachers in this study engage in reflexivity to mediate between the structures and their goals.

Chapter three explains the tools selected for conducting the research and explains how I brought together two compatible lenses with which to examine the data; that of Gee's concept of figured worlds and Archer's reflexivity in order to examine how student teachers make their way through the complex situations that they encounter, making use of 'varifocals' to explore student teachers' experiences and reflexive accounts of their experiences. This chapter presents the research process undertaken and justifies the choices made.

Chapter four presents the results of the questionnaire and provides an overview of the student teachers, their ages, digital lives and digital confidence. It presents an overview of the digital tools that they have seen in schools and how they have used them in their own practice.

Chapter five presents the discussion of the interviews having analysed the student teachers' accounts of their experiences using Archer's reflexivity questions and Gee's critical discourse analysis toolkit. It presents three in-depth case studies and moves on to examine the key themes arising in the wider data. It presents the constraints and enablements and offers up the key findings and new insights into the experiences of student teachers in literacy classrooms. Finally, it makes recommendations for the different stakeholders involved in ITE.

7.4 Contribution to the field

This study offers a new contribution to the field as it provides insight into the experiences of student teachers in primary classrooms by focussing on how they exercise reflexivity when they rub up against structuring powers as they develop their literacy beliefs and practices. In doing so it reveals the most significant constraints and enablements impacting upon not only student teachers but on universities, schools, teachers and pupils with regards to developing a contemporary and relevant literacy curriculum. Existing research identifies the constraints on student teachers' literacy teaching practices but this study examines the important role of reflexivity in helping student teachers to make decisions. This study shows how student teachers act consciously, reflexively deliberating to weigh up their situation and plot a course of action, demonstrating agency even if the routines and structures in place do not allow for experimentation.

This research demonstrates how student teachers' conceptualisations of literacy and literacy classroom practices are strongly influenced by their personal biographies, classroom practices observed in schools and the English curriculum and shows how student teachers build their own pedagogical knowledge for teaching digital literacy. This study suggests that disruptive pedagogies can disrupt student teachers' figured worlds and provide them with what is possible however unless student teachers see these in practice, they are not likely to make use of them in their own practice. For this to happen it requires a more effective partnership between schools and universities. Future research that builds upon the relationship between ITE and schools where student teachers are part of the research process could be examined to see how they act reflexively when certain practices are legitimised. Following student teachers through to their own classroom practice as teachers to explore how they find agency as teachers compared to when they were student teachers could shed more light on the classroom space and the structure/agency balancing act that teachers and student teachers experience.

This research also highlights the fact that there remains a gulf between the ideological form of literacy as described in the literature review and school literacy as experienced by the student teachers and that this can cause student teachers to experience a disconnect between theory and practice.

This study suggests that international comparative literacy testing significantly impacts upon the student teacher's experience of literacy in classrooms with policy deeply embedded in routinised practices that inhibit change and innovation and reduce space for a broader conception of literacy in the curriculum. The standards agenda and its metalanguage is deeply rooted in classroom discourse and shapes school literacy and student teachers' beliefs and practices

Not only does this study provide important findings and recommendations but also presents a theoretical model for examining social spaces through examining how participants engage in reflexivity to make their way through the social worlds that they encounter and which are not restricted to classrooms but can be applied to many other social worlds. Archer's three reflexivity questions can be applied to reveal the intentions and actions of many different groups of people in many different contexts and not just in education and therefore I offer up a model for theoretical generalisability. The connection made between Archer and Gee is a new one and

provides the researcher with a useful analytical framework for analysing qualitative data in numerous fields.

These findings therefore have important implications for a range of stakeholders and researchers in initial teacher education and I make the following recommendations for each stakeholder:

7.5 Recommendations

7.5.1 Schools, teachers and mentors

- Provide student teachers with the opportunity to meet with the ICT coordinator and explore the digital resources available in school
- Model how teachers make innovative use of digital technologies in schools to support literacy learning
- Encourage students to evaluate how they and teachers use digital technologies in their teaching
- Provide opportunities for students to see a variety of classroom practice

7.5.2 Teacher Education

- Include digital literacies as part of the core English programme – broaden student teachers’ understanding of literacy through encouraging them to reflect on their own literacy practices and explore children’s literacy practices beyond the classroom
- Develop student teachers’ knowledge of digital literacies and available tools and strengthen IT skills to enable them to feel confident to have a go in classrooms
- Develop students’ pedagogical knowledge with regards to digital literacy through evaluating *how* digital tools are used within contemporary literacy practices and relating to school literacy. Encourage them to consider how children’s funds of knowledge can be used as a resource in literacy classrooms
- Work in greater collaboration with schools to provide opportunities to disrupt ideas of accepted classroom practice through sharing innovative practices with regards literacy teaching and learning.
- Encourage student teachers to make strong theory-practice connections in university and school based training

- Ensure that students have opportunities to experience a greater variety of classroom practice
- Facilitate reflexivity through encouraging student teachers to talk about their decision-making and actions

7.5.3 Policy makers

- Revise the National Curriculum for English. Broaden the curriculum to reflect the ways in which literacy is used in everyday literacy practices and create a more balanced curriculum that includes basic literacy skills and digital literacies.
- Change the way that English is assessed in schools to recognise the changing nature of literacy and reduce the narrowing of the curriculum towards statutory testing.

Chapter 8

Afterword

8.1 Final reflections on the study and the research process

Having examined student teachers' experiences of digital technology in primary classrooms and how they develop pedagogical knowledge and agency with regards to teaching digital literacy, future research into disruptive pedagogical approaches and examining what counts as a disruptive pedagogy and what this looks like in practice and how teachers and student teachers react to disruptive pedagogies would deepen our knowledge of how to develop teachers' and student teachers' digital literacy classroom practice. This would also serve to focus on what actually happens in classrooms – what teachers think and what teachers do deserves greater study and shifts the focus from the structuring powers to the actual inhabitants of the literacy classroom.

As outlined above in the conclusions this study has not only addressed my research aim and provided the answers to the original questions above but has involved a significant amount of personal learning along the way. Whilst the study is small in sample size and the participants represent just one example of university-based training in a particular policy moment in history it has provided valuable insight for myself as a researcher. The issues around researching literacy as an ever-evolving concept presented a significant challenge to add to the challenge of studying part-time when working full-time which led to regular updating of the literature review and keeping up-to-date with developments. I have learnt the importance of the theoretical underpinning to any piece of research. To decide on the theoretical framework was the most challenging decision but once I discovered a lens for examining my data everything finally seemed to fit into place. Throughout the process I gained an understanding of myself as a researcher as well as a deepened understanding of my role as a literacy teacher educator and importantly my role in supporting new teachers in developing a broad understanding of what it means to be literate in the 21st century

8.2 Moving forward

This thesis has already started to impact upon the training delivered at my ITE institution. In a level 5 English module the students are encouraged to reflect on their own literacy lives and that of the children that they teach. They are introduced to the concepts of ideological and autonomous views of literacy and begin to evaluate the English curriculum. They also examine the practices of teachers incorporating social media into their primary classroom practice as a way of introducing some disruptive pedagogies.

As module leader for a new level 6 module involving the core subjects English, Maths and Science, I have ensured that the module requires the student teachers to critically evaluate policy and practice in the core subjects and importantly it involves a critical examination of the English curriculum in light of the changes in the way that people and children use digital technology in their everyday literacy practices. The module explores innovative practices in the three core subjects in order to provide the student teachers with the possibilities of ‘what might be’ rather than the ‘what is’ with regards to classroom practice. The module begins with a core conference to introduce the students to the idea of innovative practices in Early Years and primary classrooms. There is a keynote presentation on problematising assessment whereby the students are introduced to the idea of critically evaluating the role of assessment in the core subjects and then the students select from a range of workshops (one workshop for each of the three core subjects) where teachers and specialists in their fields share innovative practices in the core subjects in order to open up to the students the idea of disruptive pedagogies that challenge normalised practices. Throughout the module, the students continue to examine policy and practice in light of changes in practices through the theme of ‘past, present and future’. In this way it is hoped that the student teachers begin to consider their own future practice and the relevance of curriculum and practice for pupils’ lives.

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Appendix I

Table 5: Examination of the external and internal enablements of students where teacher use of technology was low and student use was high

Key:

1. Teachers' personal comfort and confidence with digital technologies
2. Teachers modeling use of digital technology
3. Teachers providing the space and opportunity to allow students teachers to use digital technologies in their teaching
4. Student teachers' personal comfort and confidence with digital technologies
5. University training
6. Student teacher sharing own expertise and modeling use of digital technology
7. Existing routines and external pressures
8. Standards
9. Children's poor literacy skills – back to basics
10. Resources
11. Own experiences of school literacy
12. Fear of getting it wrong/lack of confidence

Ben (25)

The teachers:

- The teacher's personal confidence and comfort with technology
- Teacher modeling effective practice on previous placement
- How recently the teachers have been qualified Newly qualified teacher
- Encouraged by both teachers but one could support more than the other based on her personal confidence/skills

The student:

- His own growing confidence in the classroom
- His own confidence and comfort with technology based on his personal digital experiences – online gamer – very confident in his skills (but not how to transfer to the classroom)
- High use on both placements

Leanne (19)

The student:

- Beliefs about her responsibility as an educator

The teachers:

- Teachers less confident than herself as iPads only just introduced in school – Leanne modeled how they could be used

University training:

- The university taught modules – both multiliteracies and personalized learning validated the use digital technologies through classroom experience
- class teacher on the multiliteracies module sharing his experiences validated the use of social media and digital literacy practices

Ann (35)

The teachers:

- Teacher not confident with the new tool (iPad). Ann was more confident than the teacher to try using the new iPads so was happy to experiment with them. Something about these students feeling emboldened/enabled when they feel they have more knowledge and confidence that the teachers
- Teacher allowed Ann the space to experiment
- Felt that the age of the teacher affected the teacher's confidence and competence with technology

The student:

- Ann is a confident user in her personal life and not afraid of technology 'I'm not afraid to give anything a go, you learn from mistakes, trial and error, you learn as you go. I just switch it on and take it from there.'
- Her own daughter has been talking about how she has been using digital technologies at school
- She personally feels that it is important to incorporate technology in teaching 'because that's the way it is going'. Talks about children's home literacy experiences and making learning 'relatable' and the significance of a digitally literate world that children will be entering

The school:

- Had technology available to her

Elizabeth (20)

The teachers:

- Teachers providing the opportunity for Elizabeth to share her skills
- Age of the teachers – felt that the age of the teachers affected their competence and confidence with technology

The student:

- Own ICT skills and confidence – 'A' level ICT – very confident in her skills
- Enjoyed sharing her skills with teachers who were not skilled

Aaliyah (35)

The teachers:

- Teacher lacked confidence and gave Aaliyah responsibility for ICT and allowed her the space to try out her ideas

The student:

- Feeling comfortable around digital technology
- Being more comfortable with technology than the class teacher
- Understandings of literacy and digital literacies

University training:

- The university module, multiliteracies and meeting the classroom teacher who used social media in his classroom

Lois (20) TP2

The teachers:

- Didn't see teachers modeling using digital literacies in their classroom practice on either placement but IWB and ICT skills used/taught
- Felt that age was a significant factor in teachers not being confident users in the classroom

The student:

- Formal ICT qualification and feels confident with ICT skills but not how to incorporate them in her classroom practice
- On TP1 the student supported a teacher with her ICT planning and on TP2 she found space when the teacher was away

University training:

- She took the multiliteracies module because she wanted to find out how to teach literacy in a more engaging way
- 'I think it's made me more confident to try new things because I think on my first teaching practice, I wasn't really taking risks but since doing this module, the digital literacies module, I think I've been a bit more, coming out of my shell a bit more and trying new things which to be honest paid off'

Jane (21)

The teachers:

- Jane was encouraged by teachers to use digital technologies in her practice regardless of whether they themselves were confident users.
- Teacher modeled using technology on TP2
- Teacher on TP2 confident – ICT coordinator

The student:

- High use on both placements
- Student showed the teachers on TP1 how to integrate technology

The school:

- Jane found space in school lunchtime club to draw on her experiences on the modules

University training:

- University taught modules. Both The Personalised Learning and the Multiliteracies modules provided Jane with the opportunity to work with groups of children on developing their literacy skills through creating digital texts, which she then used on her placement. Jane volunteered to lead a lunchtime Science club where she created a podcast with a group. These university modules gave her confidence in a number of ways; exposed her to a range of technology and software that could be used in classrooms, gave her experience to try out what she had been learning about with small groups of children and enabled Jane to see that such practices are acceptable classroom practices.
- Meeting a class teacher as part of the multiliteracies module who was using social media and a range of digital literacies in his classroom to get boys writing and develop all pupils' literacy skills enabled her to see what is possible and also acceptable

The seven students in the teacher use low, student use high quadrant have some factors on common:

- All the teachers encouraged them to use technology and share their expertise
- four of the seven talked about their university training and how this enabled them to know what might be possible in practice even though they did not see it in practice when on placement
- The students felt more confident than their teachers because of their personal competency, their university training or they had seen it on practice on their first school placements and thus were enabled

Appendix II

Table 6: Teacher use low, student use low

So how do the experiences of these seven students in the teacher use low, student use high category compare to the experiences of the nine students in the teacher use low, student use low category?

Key:

13. Teachers' personal comfort and confidence with digital technologies

14. Teachers modeling use of digital technology

15. Teachers providing the space and opportunity to allow students teachers to use digital technologies in their teaching

16. Student teachers' personal comfort and confidence with digital technologies

17. University training

18. Student teacher sharing own expertise and modeling use of digital technology

19. Existing routines and external pressures

20. Standards

21. Children's poor literacy skills – back to basics

22. Resources

23. Own experiences of school literacy

24. Fear of getting it wrong/lack of confidence

Lois TP1 (19)

The teachers:

- Didn't see teachers modeling using digital literacies in their classroom practice on either placement

The student:

- Very comfortable with Microsoft software due to ICT formal qualification but not comfortable with the technologies used in schools or with digital literacies

Claire (39)

The teachers:

- Didn't see teachers using digital literacies in their classroom practice
- Following a scheme/planned pattern of lessons and couldn't make changes

The students:

- Own lack of confidence with digital literacies
- Nervous to try out new practices
- Concerned about being observed by university tutors

The school:

- Timetabling of resources
- Need to evidence writing daily in literacy books

The children:

- Poor behavior of the children given as a reason for not using the laptops
- Poor literacy skills of the children given as a reason for focusing on writing skills

Lara (21)

The teachers:

- Didn't see much digital literacy at all with my first HP I would probably have felt like oh no, I can't because she wasn't doing it already

The student:

- 'and because it was my first practice, I didn't have the confidence to say shall we try this? '

University training:

- Now I think if I was going in and the teacher was saying I think I'd have more confidence to say I've done this at university.

Connie (31)

The teachers:

- An unsure teacher

The student:

- Own experiences of school literacy
- Fear of messing up
- There was some agency in that the teachers were not always present and therefore not always monitoring her practice
- Interested in social learning through social media

The children:

- The children's poor basic skills required her to focus on handwriting and spelling

Resources

- Lack of human resources

Lynn (25)

The teachers:

- Not seen digital literacies in practice – makes a distinction between digital literacies and teachers using PPT ,IWB and videos to present
- Thinks teachers might not be confident in the classroom

The student:

- Feels that she is digitally literate

The school:

- Time constraints. worries about the time it takes to teach children how to use the technology

Petra (19)

The teachers:

- Didn't see it in practice other than some ICT
- Teacher's lack of confidence to use the iPads
- Teachers' lack of willingness due to headteacher's mandate. Incorporated into ICT only
- Age of the teacher

The student:

- Petra's own perception of her digital literacy skills
- Feeling that she is 'only' a trainee teacher and therefore not able to make suggestions

The school:

- The RWI scheme of work – lack of flexibility/opportunity to make changes
- Feels that it is still not allowed and permission is needed

Linda (23)

The teachers:

- Didn't see much digital literacy
- 'I suppose Anna was little bit older so she wasn't totally keen on computers so I don't think she was, you know, all for it, that might have been a reason

The student:

- Because I'm not totally confident, I can use an iPad, a laptop, but I'm not confident on how I can bring that into the classroom

Natalie (20)

The teachers:

- I wouldn't say developing the children's, I mean they use it, using the IB and bits of software in literacy and I can't remember what the software is called but I don't think it necessarily develops their kids, because the kids then go and do their work on just on paper or their books. They don't then go and practise and use literacy, digital literacy themselves which I think is important because literacy is all over the place and not just on paper. I would say I've seen very little. I would say the kids don't use it as much just from the two experiences that I have had but the teachers do

Did the teacher use them?

- Not as much as I thought because having her tell me to use them more I did think but I haven't really seen you use them. I reckon just because of routine, she didn't branch out as much, she did seem confident

The student:

- Are you DL? Not massively, more so than some but I wouldn't say that I'm really confident

- And things at school, like the whiteboards, the ones at school have been different, different software and often I have made mistakes in front of the kids which is fine because they are okay with it but you get nervous when you make mistakes
- I remember telling the teacher that I was scared to do the ict lessons because of the laptops because they weren't very reliable and you've got to sort them all out

Resources:

- Laptops always go wrong and you have to sort that out

The nine students in the teacher use low, student use low quadrant have some factors on common:

- Didn't see their teachers modeling the use of digital technologies and/or digital literacies in their classroom practice
- Their own lack of confidence with digital literacies
- Teachers were lacking confidence with digital technologies
- There was a lack of agency or confidence to suggest new practices
- Having to stick to a planned programme of lessons leaving little or no scope for change
- A feeling that there were external pressures that affected classroom practice
- A need to focus on pupils' basic skills where literacy skills were

Appendix III

Table 4: External and internal constraints and enablements using Archer's questions

Student Teacher	Why do people act at all?	How do social properties influence people's courses of action?	What do people do?
Connie	Personal interest in literacies She wants to be recognized as a teacher interested in literacies Building a socially recognizable identity - teacher	External constraints Own experiences of school literacy the existing routines of the classroom the children's poor basic literacy skills set learning criteria lack of human resources an unsure teacher no one seems to be figuring out a way around the issue. Internal constraints Fear of messing up Enablements Teachers not always present allowed certain amount of agency/control over planning	She follows people on social media discussing digital literacies Runs her ideas by the teacher first. Works hard to be recognized as a teacher Finds an alternative approach to meeting the set criteria Suggests university tutors could support/back up students' ideas
Christina	To achieve social status. Wants to become a teacher 'Making her way in the world'	Not had the opportunity to see it in practice Having to follow the existing planning – limited by schemes of work/planning	Takes an ACCESS to education course Studies a module to address personal/professional targets

	to address own weaknesses – to improve ICT skills and how to use in the classroom strives to be recognized as a teacher by following existing practices	Teacher's lack of skills and confidence Children's poor behavior Children's poor basic literacy skills Emphasis on writing in books Lack of resources Timetabling of resources Views of the university tutor Internal constraints Nervous about trying out new practices	Follows the existing practice and did not use technology
Elizabeth	Interest in technology Wanted to become a secondary ICT teacher	Enablements Personal ICT skills, competency and confidence Teacher wanted to learn Encouraged by teachers in school	Studied ICT throughout school to 'A' level Tutors GCSE ICT students Supports friends and family Showed the teacher how to use technology in her classroom Modeled using technology Seeks to be recognized as 'a technology person'
Petra	Working to be recognized as a teacher and therefore follows existing practice apart from one time	External constraints RWI literacy scheme – little room for agency/own ideas Teachers lacked confidence/unwilling to use new ipads and did not model practice Internal constraints Doesn't think she is as digitally literate as her peers	Followed existing practice Did use the ipads once instead of going to the ICT suite as usual

		Lack of confidence to suggest how the teachers might incorporate the ipads	
Georgina	Picked the multilliteracies module because she lacked confidence to use technology on her classroom practice despite her regular use of technology in her personal life 'You don't want to be a bog standard teacher' wants to develop her practice – teaching literacy in particular	External constraints Lack of opportunity in school Timetabling constraints – same time as library book exchange Resources – 1 iPad used as a teacher tool, IWB at wrong height for young children Internal constraints Fear of trying out ideas and the lesson going wrong when being observed Focus on tools and technologies rather than practices Enablements during taught modules, Two experiences of using technology in schools and hearing from a teacher who uses technology	Selected both English enhancement modules Had a go at using the cameras for digital storytelling
Ben	Genuine interest in technology. Self-taught. Ben describes himself as digitally literate and a confident user of technology and is surrounded by technology in his everyday life Online gaming	External constraints Structured learning experiences on schools 'I think they need to be given the opportunity to just have a go though because in school a lot of things are structured and you are told what to do'	Integrated technology where he could because 'I liked to do it anyway'

		<p>Focus on writing in schools Not seeing it modeled in practice Heavy workload</p> <p>External enablements Seeing a confident teacher allow children time and space to explore Both teachers encouraged him despite their different levels of technology use themselves</p> <p>Internal constraints ‘Even though I know it in my head that you can, <u>getting to grips with it and how you actually do it in the classroom I think it’s a very grey area</u>’ lack of knowledge of podcasting</p> <p>Internal enablements Confident and competent user – self taught Learning from English core module</p>	
Leanne	Doesn’t think she is as digitally literate as she should be – lack of skills	<p>External constraints</p> <p>Internal constraints Perceived lack of skills</p> <p>External enablements Leanne suggests that having the experience of using an iPad with children during the university modules and having the opportunity to explore</p>	Encouraged reluctant teachers to incorporate the new ipads. ‘because I had done the module I was able to help them along and start introducing some things and sort of experiment with that’

		its potential has given her the confidence to consider using it in the classroom 'I am definitely more inclined to use it in the classroom'	
Lauren	Picked multiliteracies as wanted to know how to incorporate technology in school as has very little experience of seeing it used and wanted to make greater use of her own iPad.	External constraints Lack of resources – laptops unavailable on first school placement External enablements Taught module multiliteracies – knowledge of Apps to use on school First placement Teacher was ICT coordinator and modeled using technology in different ways Nintendo DS and other software to support learning in maths and spelling Internal enablement feeling more confident to try out ideas with young children – more aware of children's existing capabilities/experiences	Had to produce leaflets on paper in second placement First placement Used the laptops when available
Linda	Because I'm not totally confident, I can use an iPad, a laptop, but I'm not confident on how I can bring that into the classroom. I'm still not brilliant at knowing how to teach ICT in a fun way and I thought I'd do it just to see how	External constraints First placement didn't have the opportunity to see it in practice 'teacher was a bit older and didn't seem very keen on computers' and the other teacher 'wasn't too concerned about digital literacies in the classroom'	On second placement used the Smartboard regularly, DVD and taught a film unit

	<p>you can incorporate DL into your classroom.</p>	<p>Internal constraints Lack of skills 'I think if you've got it and can understand it or you can teach yourself, and you are interested then I think it's fantastic and then you because you've got a sound understanding of it, then your children will, but because I haven't got a sound understanding of it if I was to then go into a classroom, like let's have a go at this. If you are going to do it in your classroom I think you need to be very sound understanding of what you're doing. <i>You are setting yourself up to fail.</i></p> <p>External enablements Second placement saw a film unit being taught – 'everything was taught through the film'</p>	
Lara	<p>Then when I saw what it was going to be about, including ipads, I thought yeah, really useful I think I've heard of schools using them, so really I want to know, be more clued up about that. How I can use it within literacy and then as well, the popular culture thing, I wasn't sure really how that was all going to link in.</p>	<p>External constraints Overwhelmed by workload/responsibility 'I didn't have enough time to really go for it' 'I didn't have the time or energy' Lack of opportunity to see it modeled in practice 'I felt like no I can't because she</p>	<p>Yes, they had an ipad for that class so I def wanted to use it to see how it would work. I got one of the children to record, We did hotseating, so one of the children recorded some of the others doing that. We connected it the iwb and we all got to watch it as a class. They just wanted</p>

	<p>That's what attracted me as well. I think that that home and school link is really important, to know a bit more about that as well.</p>	<p>wasn't doing it already' not very much at all, I felt it was very traditional. I don't think I've probably had the opportunity to use it enough'</p> <p>External enablements</p> <p>'My second placement it was being developed, especially the host practitioner. She was really big, the ipad was always out and she was influencing me to think of ways how to incorporate it into lessons'</p> <p>external enablements</p> <p>on my first placement I didn't have the confidence to say shall we try this? Now I think if I was going in and the teacher was saying I think id have more confidence to say I've done this at university. I've sort of used it in sessions working with small groups of children, can I have a go?</p>	<p>to do it again. They <i>really</i> enjoyed it and you could tell they were so engaged</p>
Bea	<p>Has learned how to use computers as an adult.</p> <p>Interested in literacy</p>	<p>External constraints</p> <p>Lack of opportunity to see it in practice or try out ideas</p> <p>'Pressure from the top' 'targets to meet' 'something has to appear in their books'</p>	<p>Teaches older people IT skills.</p> <p>Followed the examples provided – fitted in with existing practice</p>

		<p>'I felt like I couldn't. I would have loved to but the kind of placement possible' 'my hands were tied' teacher sticking to the plan</p> <p>external enablements first placement teacher modeled using Mac computers, creating films</p> <p>internal enablements A fairly competent user of technology in personal life.</p>	
Lorna	Wants to be accepted/recognized as a teacher	<p>External constraints Lack of resources, hardware and software 'Teachers not very digitally literate'</p>	Followed existing practice – 'I think you use kind of what everyone else is using. I just followed the example'
Zara	Encouraged by the teacher	<p>External constraints Lack of resources Not seen many examples in practice</p> <p>External enablements saw a maths programme being by another teacher</p> <p>Internal constraints I think it's important but I'm not so confident teaching it</p> <p>External enablements Teacher encouraged her to use technology</p>	<p>Used the maths game in her plenaries Used the IWB mostly I use it in starters and plenaries, er activities, getting them to come up and engage all the class, used the visualiser on there, it's quite a good one to show them texts in literacy and then they can all read along together, erm, PPTs on there for lessons, that's useful, erm, LO, the date (laughs) I always use it in lessons</p>

Kay	Likes to find out how things work. Likes a challenge	<p>External constraints Writing in books ‘they need to be seen doing their writing’</p> <p>External enablements ‘well they don’t say you can’t do this or you can’t do that, it’s your lesson, you do what you want’</p> <p>Seen the IWB used a lot in schools</p> <p>Internal enablements Quite a confident user</p>	I used the digital camera a lot I tried to get away from writing so I tried to incorporate a lot of drama into my lessons so to get the evidence because I do think writing is a bit boring. If they can do it on other ways, it’s not always about the writing.
Natalie	The teacher asked her to use technology Wants to know about the different software that you can use	<p>External constraints Not seen it in practice: ‘I would say I’ve seen very little’ ‘I would say the kids don’t use it as much but the teachers do’ ‘in schools it’s very much pencils and paper’ routines – ‘teachers afraid to branch out’</p> <p>Internal constraints Fear of technology ‘going wrong’ simpler to get the kids to do it on paper – how do you get around that? I have made mistakes in front of the kids which is fine because they are okay with</p>	in school I started to use a variety because they have bits of software which I ask how to use to make sure I understand it

		<p>it but you get nervous when you make mistakes</p> <p>external enablements Teacher encouraged her to use technology 'but I did think I haven't really seen you use it much'</p>	
Sarah		<p>External constraints One Teacher lacked confidence and did not model using technology 'it's always down to accountability' having to write it down</p> <p>Internal enablements Self-confidence</p> <p>External enablements Teacher encouraged her to have a go despite lacking confidence herself Other teacher used smartboard, laptops, netbooks, digiblu cameras – modeled use of technology 'she was clued up'</p>	<p>'I take risks anyway'</p> <p>Sarah modeled using technology for the teacher who lacked confidence</p> <p>I always got the laptops out</p> <p>Used the visualizer</p>
Lynn		<p>External constraints Not seen much in practice 'I haven't actually seen many apart from PPT presentations and videos. Not seen</p>	Created an interactive PPT presentation

		<p>any of the things like podcasts and things and Twitter because they don't understand it themselves maybe and so they don't use it'</p> <p>Time constraints in the classroom</p> <p>internal constraints worries about needing time to teach children how to use technology 'you don't want to waste time teaching them something separate</p> <p>internal enablements I'd say I was but I'm not necessarily up to date with the latest things like Twitter, I don't use that but I think things like that are quite easy to grasp once you start using them so I'd say yes I am digitally literate.</p>	
Aliya	<p>Interested in literacies and digital technology</p> <p>Wanted to find out how to engage children through using technology</p>	<p>External constraints Hasn't seen teachers using technology Some teachers hate technology and are not confident Lack of time/heavy workload Curriculum constraints</p> <p>Internal enablements</p>	<p>Follows teachers using digital technologies on twitter</p> <p>Taught the ICT sessions because the teacher didn't want to</p> <p>Created posters</p>

		<p>Confidence with using technology in personal life</p> <p>External enablement</p> <p>Teacher lacked confidence so allowed Aliya to experiment and teach the ICT lessons</p>	
Lisa	Interested in computers and technology	<p>External enablements</p> <p>Encouraged to use her strong points – her ICT skills</p> <p>Encouraged to support other teachers</p> <p>Internal enablements</p> <p>Self confidence in ICT skills</p>	<p>Showed a teacher who lacked skills how to use technology and planned the ICT lessons for the teachers</p>
Judy		<p>External enablements</p> <p>Learning from university</p> <p>Teacher modeled film making</p> <p>‘with the flip cams they were doing gymnastics so we had certain members in the group record the sequences and the ICT teacher he slowed them down and they turned them into Charlie chaplain films and they made them black and white and put a background on like an old style film’</p> <p>I think it was from the uni sessions they are always teaching us to use alternative styles such as using film to write a story</p>	<p>Everyday I would use the IWB for everything , from displaying learning objectives to interactively getting the children to come up and do an activity I used the flip cams and Dictaphones that you plug into the computer because they were a much more technology based school.</p>

		<p>and then because I had such a good time I wanted to use it more. The gymnastics one was when I was on my prelims so I had seen it done anyway and they enjoyed it as soon as I started teaching I tried to use it myself.</p> <p>Encouraged by a teacher who lacked skills 'this year the teacher I was with had been teaching 8 or 9 years and the things that I was bringing in she was like, oh that's brilliant, I don't know why I'm not using it whereas when she trained there wasn't a big emphasis on the IWB or interactive games.</p> <p>They didn't specifically encourage me to do it but any idea that I had were encouraged so it wasn't try using this. I'd say I'm thinking of using this and they would say that it would be okay to use it. If they thought it would work they would say try it and see.</p>	<p>Student modeled use of technology for the teacher based on her previous experiences</p>
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Appendix IV

Digital literacy lives questionnaire

1. Gender
2. Age
3. Write a short statement about the use of digital technologies in your life (just one or two sentences about what you use and why they are important to you or why you don't use digital technologies very often)
4. What digital technologies/electronic devices do you use in your everyday life? How often? How confident are you with each one?
 - a) PC
 - b) Laptop computer
 - c) Smartphone (wi-fi, multi-function, can be used to store/receive and send data eg Blackberry, iphone)
 - d) Mobile phone (basic functions)
 - e) Ipad
 - f) Digital camera
 - g) Ipod/portable music device
 - h) Games platforms (X-Box, PSP, playstation 3, Gameboy, Nintendo DS)
 - i) Online gaming devices/platforms/software
 - j) Other
 - k) Very little/none
5. Please list other digital technologies that you use that are not in question 4.

6. Why do you use digital technologies? Tick all which apply.

- To pursue hobbies/interests
- Employed work
- Study
- Socializing with friends and family
- Gaming
- Managing finances
- Shopping
- Listening to music/downloading music
- Watching/downloading TV/film
- Creating own music/editing
- Sharing
- Editing and publishing photographs and videos

7. Please list any other ways that you use digital technologies that are not in question 6

8. In general, how confident do you feel using digital technologies?

Very confident

Quite confident

Not very confident

9. What do you do when you want to learn how to use new software/devices/applications? Tick all which apply.

- A friend helps me
- A family member helps me
- I read the manual/instructions

- I find the information on the internet
- I play with it – using trial and error

10. Why do you want to learn how to use new software/devices/applications?

- Need to know for work/studies
- You like to be able to master something new/become an expert
- You are interested in learning how something works

11. What digital technologies have you seen being used in schools? Tick all which apply.

- PC
- Interactive White Board
- Laptops
- Microsoft Office software (Word, Excel, PowerPoint, Publisher)
- The internet
- visualisers
- Control devices (Beebots, remote control devices)
- Playstation Portables (PSPs)
- Digital cameras to take still pictures
- Video cameras
- Voice recorders/microphones
- Social networking sites (such as Twitter, Myspace)
- Email
- Music creation/editing software/devices
- Games software (not online)
- Online games
- Virtual worlds

- Other
- None

12. Please list any other digital technologies that you have seen being used in schools that are not in the list for question 10.

13. Write a short statement explaining your views on children using digital technologies (one or two sentences only)

14. Have you used any digital technologies in your own teaching and how often?

- Yes a bit
- Yes a lot
- Not yet

15. How confident do you feel using digital technologies in your teaching?

- Very confident
- Quite confident
- Not very confident

16. If you have used any digital technologies in your teaching please describe briefly what you used and how (in 1 or 2 sentences)

17. If you have not used any digital technologies in your teaching so far, please explain why (1 or 2 sentences)

18. How well has your training prepared you to use digital technologies in the classroom?

- Very well
- Quite well
- Not very well

19. What support would you like to have to enable you to feel more confident to use digital technologies in your teaching? (1 or 2 sentences)

Please indicate if you would be happy to be involved in a follow-up interview and if so, please provide an email address so that you can be contacted.

Yes – my email address is:

No

Thank you for completing this questionnaire