



Primary student-teachers' perceptions of the role of digital literacy in their lives

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**Primary Student-teachers' Perceptions of the Role of Digital Literacy
in Their Lives**

Catherine Burnett

A dissertation submitted in partial fulfillment of the requirements of
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Abstract

Primary student-teachers' perceptions of the role of digital literacy in their lives

Cathy Burnett

In considering the potential for new student-teachers to draw from personal experience to arrive at transformative uses of technology in classrooms, this study investigates the nature of student-teachers' 'digital insidership'. It explores seven primary student-teachers' perceptions of the role of digital literacy in their lives both within and beyond primary classrooms. Adopting a methodology influenced by phenomenology, it draws primarily from interviews, exploring participants' experience of digital texts as social practice whilst adopting a reflexive approach to interpretation. The study draws on Gee's concepts of 'Big D' Discourses and 'borderland discourses' to focus on how student-teachers' perceptions of their digital practices interacted with different identity positions as they moved between personal and professional discourses. Exploring the varied feelings and levels of empowerment associated with digital practices, the study argues that these student-teachers' sense of their own digital insidership was uneven and highly contingent on context. It describes both the new kinds of possibilities associated with their digital practices and the tensions they experienced when entering environments patterned by unfamiliar discourses. Highlighting what is termed 'borderland activity', it explores how personal and professional practices merged or contrasted as student-teachers found different ways of crossing, avoiding or spanning the borderlands between discourses. In particular, student-teachers' stories of the accommodation of technology-use within teaching identities suggested that, whilst they may see technology-use as an important part of enacting a teacher identity, opportunities for transformation were limited as technology seemed chiefly to be accommodated, albeit in different ways, within discourses of standardisation and teacher control. Whilst some student-teachers may therefore see new opportunities for using technologies in innovative ways, they may receive most affirmation when using them in ways that are aligned to existing discourses. The study concludes by suggesting a series of strategies through which policy makers, researchers and initial teacher educators may investigate further student-teachers' experiences of digital practices and, through promoting critical reflection on the discourses which frame technology use, encourage student-teachers to engage with technology in innovative and possibly transformative ways.

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Teacher Education, Technology and Transformation: an agenda for research into student-teachers' digital practices

Introduction

The following personal commentary¹, drawn from research diary entries between November 2007 and February 2008, highlights some of the tensions and inconsistencies which contextualise the study which follows.

As a lecturer in primary initial teacher education (ITE), I am often involved in debates about how new technologies are mediating a shift in relationships between learners and their courses: whilst much has been done at my institution to attempt to use virtual learning environments to support learner autonomy, concerns arise when students use new technologies in ways that seem to challenge the traditional relationship between learners, tutors and knowledge. Students, for example, complain about peers using laptops to access the Internet during lectures; this is seen as inappropriate, demonstrating a lack of professionalism. Similarly, discussion boards hosted by the university virtual learning environment are abandoned in favour of Facebook, debate and peer support migrating to virtual spaces owned by students not tutors. Amongst the academic community, there is uncertainty about how far such practices should be encouraged and a resignation that these kinds of behaviours are inevitable anyway.

¹ Within this dissertation, different fonts are used to signal different voices: *Italicised Times New Roman* is used for quotations from interview and focus group data. *Italicised Verdana* is used for my personal voice, deriving from reflections in my research diary.

At the same time, our students' use of new technologies is being highly rated on school placements: across each cohort, teaching practice grades for using ICT exceed those gained for any other curriculum subject. However, whilst beyond primary classrooms digital technology may be mediating practices which challenge established power structures, in school students seem to be using technologies in ways which reify existing relationships between teachers, learners and knowledge and are praised as innovative for doing so. Many of our students seem to be positioned as technical experts but encouraged to display this expertise in ways that reinforce rather than challenge current practice.

A contrasting but related tension exists in the relationship between my own personal and professional identity. As a lecturer in primary English, my teaching and research interests have clustered around digital literacies and I have been involved in a series of research projects investigating children's and students' uses of digital communication. At the same time, my personal use of digital texts is limited: I am more of an observer than participant. However, whilst in my personal life I may be reticent in digital environments, in my professional life I have published work in this field and taught extensively on modules addressing changing literacies. Within an academic context, I am given voice for my 'expertise' on digital practices.

This commentary illustrates how, in my professional life in ITE, anxiety about losing control paralleled a frustration that new possibilities may be stifled in institutional contexts. This raises questions about how power, ideology and identity filter through and pattern digital practices. Which kinds of digital practices are deemed legitimate within educational environments? Why are some people positioned as experts and others as novices? What kinds of digital identities are given credence within education

and who is permitted to engage in these? And how do such identities relate to those developed in other contexts? In addressing such questions, this study focuses on how a group of English primary student-teachers experienced and used digital practices in and out of school and explores the values, purposes and possibilities associated with those practices.

Section 1.1 of this chapter begins with a rationale which explains the relevance of this study to professional practice and justifies the focus which is outlined in Section 1.2. This is followed, in Sections 1.3-1.7, by an overview of the theoretical, policy and research context for this study. Chapter 2 outlines the methodological perspective and research design whilst Chapter 3 introduces Gee's work on 'Big D' Discourse and borderland discourses (Gee, 2005) and explains how this is used to inform the theoretical framework used in analysis of data. Chapters 4 and 5 explore students' experience whilst Chapter 6 considers the implications of this analysis for understanding the digital experience student-teachers bring to ITE and how this is brokered during their courses. The study concludes with recommendations for further research and implications for policy-makers and ITE institutions.

1.1.Rationale

This focus on digital technology is particularly relevant given calls, from government agencies and researchers, to use technology to transform educational practice. As explored in Section 1.3, such calls derive from various perspectives: from government agencies which see increased learner autonomy as a route to ensuring a more flexible workforce (DfES, 2005; Becta, 2008a); from researchers and theorists of digital practices in everyday life, who have highlighted how digital texts have mediated new kinds of relationships and enabled users to engage with the world in creative and empowering ways (Gee, 2003; Lankshear and Knobel, 2006); and from researchers of educational technology who draw from the critical pedagogy tradition to explore the potential of technology to empower learners to take increasing control of their lives and

engage critically with the world around them (Bigum, 2002; Kellner, 2004; Pearson and Somekh, 2006; Somekh, 2005).

Despite these arguments, it has been suggested that the implications of such transformation have been ill-defined and practical examples are limited (Burnett, Dickinson, Merchant and Myers, 2005; Fisher, 2006). Over the last decade, attempts to integrate new technologies within primary education in England have intensified: government commitments to provide Internet access to all schools were followed by mass training for teachers and increased access to hardware (Conlon, 2004; Furlong, Facer and Sutherland, 2000) and successive government-sponsored reports on primary teachers' use of information and communications technology (ICT) have claimed that technology has become increasingly integrated within the curriculum (OFSTED, 2002; 2004; 2005). Further reports, however, have suggested that, whilst ICT may be embraced by enthusiasts, it is not fully integrated by others, is often used in limited ways and gives insufficient attention to pupils' experience of technology outside school (Becta, 2003; 2007a; 2008a; OFSTED, 2008).

There are a number of sites where teachers and researchers have worked practically to develop ways of using networked technology to support collaboration in order to create, access and exchange knowledge in meaningful contexts (deBlock and Sefton Green, 2004; Harris and Kington, 2002; Pearson and Somekh, 2006; Sefton-Green, 1999). However, evidence suggests that, in many classrooms, technology has been assimilated within existing pedagogy (Andrews, 2004) and school-based technologies may be experienced in ways which contrast negatively with the rich and varied encounters possible out of school (Clwyn, 2006). In primary schools, for example, the mass introduction of interactive whiteboards (IWBs) appears to have had little impact on reducing teacher dominance of classroom discussion (Smith, Hardman and Higgins, 2006). It seems that IWBs are easily accommodated within whole-class teacher-led lessons and so may reinforce rather than transform existing relationships between teachers, pupils and knowledge (Moss, 2007). Considering this possible lack of integration and innovation, Lankshear and Bigum (1999) suggest that, unlike their pupils, many contemporary teachers may operate as 'outsiders' to digital environments

and may therefore draw inappropriate conclusions about how best to promote learning in such environments. A divergence of children's out-of-school and in-school digital practices may therefore be exacerbated by a mismatch between children's experiences and those of their teachers.

Against this background, student-teachers could be seen as offering the confidence and competence needed to innovate with technology in classrooms. Various writers (Green and Bigum, 2003; Lankshear and Knobel, 2006; Leung, 2003; Prensky, 2001, 2007; Rheingold, 2003; Tapscott, 1998) have proposed that immersion in digital environments can lead to new ways of thinking, behaving and interacting around and through digital texts. For example, Lankshear and Knobel identify how the mindset brought to technology-use by 'insiders', who have grown up with new technologies, differs from the mindset typical to 'newcomers'. Insiders are those who are exploring 'new ways of doing things and new ways of being that are enabled by these technologies' (Lankshear and Knobel, 2006:34). Such experience could mean that young student-teachers bring valuable understandings about digital environments to ITE through previous and continuing use. However, attempts to position student-teachers as pioneers for new technologies may be problematic in ignoring the probable diversity of that experience. Patterns of technology-use suggest that many individuals are insiders to some technology uses but outsiders to others, with levels of access determined not just by availability but social and cultural factors (Burbules and Callister, 2000; Facer, Furlong, Furlong and Sutherland, 2001; Holloway and Valentine, 2002; Selwyn, 2004). Student-teachers, then, may have had, and may continue to have, varying degrees of access, enthusiasm and confidence within digital environments.

There has been little research directly related to student-teachers' digital practices in their lives outside ITE. Various studies have explored student-teachers' use of technology, for example by: evaluating programmes for integrating technology within ITE (Mayo, Kajs and Tanguma, 2005); examining audits of student-teachers' technological skill (Banister and Vanetta, 2005); or conducting surveys of student confidence (Topper, 2004). Such studies, however, tend to focus solely on student-teachers' skills in using what might be seen as work-related applications, such as word-

processing or data handling, and ignore competencies associated with less formal uses (such as computer gaming or social networking). Kay (2006), in a review of articles identifying and evaluating strategies for technology integration within ITE, found little evidence to support particular strategies and argues for mixed-method studies to provide evidence about which might be most effective. However, Kay neglects the sociocultural perspective, focusing on supporting and resourcing use rather than exploring how uses interact with context. Pope, Hare and Howard (2005) do move beyond a functional discourse in surveying student-teachers' attitudes to technology-use within different kinds of teaching contexts, including those associated with a socio-cultural model. However, their methods do not enable them to capture the relationship between attitudes and classroom practice or technology-use beyond school contexts.

Graham (2008) used qualitative approaches to explore how young teachers had learned to use digital technologies and their attitudes towards experimentation within digital environments. Looking beyond the classroom to learn about what teachers bring to it, she highlights the value of playful use learned through social interaction and contrasts this with the often 'solitary and serious' use developed through more formal learning about technology. Graham suggests that a 'playful social' orientation may be particularly useful in planning for classroom integration as this may support the kind of flexibility and experimentation that may be best suited to promoting children's learning and she argues for encouraging teachers to reflect on their learning about technology in order to consider ways of framing classroom use. Graham's article usefully explores young teachers' varied experiences but stops short of examining how such experience filters into classroom applications.

Robinson and Mackey (2006), drawing from small-scale surveys from the United Kingdom and Canada, note variations in use between students in the two locations and between older and younger students but also caution against assuming that young student-teachers are 'insiders' to the full range of digital technology, noting their infrequent use of certain technologies, such as computer games, in their own lives. Robinson and Mackey suggest not only that this may reflect gendered patterns of computer use but also that it may mean student-teachers have less experience of the

kinds of playful interactions with technology which characterise children's uses of digital texts. Indeed, whilst Graham's work celebrates the informal experience that some teachers bring to classrooms, Robinson and Mackey's survey suggested that many student-teachers see little relevance for playful uses of technology in classrooms.

As a study by Honan (2008) shows, organisational and structural factors may mean that teachers find it difficult to accommodate digital texts in ways that go beyond addressing skills needed to use them. Indeed, Teo, Chai, Hung and Lee's survey of student-teachers suggested that even those student-teachers who avowed a constructivist approach to teaching often used technology in ways that were more conducive to a didactic approach (Teo et al, 2008). Ottesen (2006) however suggested that whilst student-teachers' understandings about technology are often shaped through classroom observation, they also draw from other influences. Her study of how secondary student-teachers conceptualised technology in school found that they drew from different understandings as they 'authored' their professional identities.

Given possible tensions between competing cultural models and experience, it would seem important to know more about the diversity of student-teachers' digital practices. This study therefore aims to contribute to such understanding through capturing student-teachers' own perspectives on their experience of digital literacy in their lives.

1.2 Focus

This study focuses on the digital lives of a group of female primary student-teachers in England. It attempts to capture their experience of digital practices both within and outside the classroom through exploring their perceptions of the role of digital literacy in their lives. It investigates the tensions they experienced as they moved between different identities and how these were reflected in or generated by their digital practices. In doing so, it explores how different kinds of experience were valued within different contexts and, through examining the values and assumptions inscribed in their

digital practices, investigates the ideologies that seemed to underpin them. The study was framed by the following questions:

- How do student-teachers perceive the significance of digital practices within various domains of their lives (e.g. within their personal lives and within initial teacher education)?
- What do they see as the salient features of their digital practices in different contexts in and out of school?

‘Significance’ was interpreted in relation to what they felt their digital practices enabled them to achieve in different contexts. ‘Salient features’ are those aspects or dimensions of practices which featured within their accounts. These included feelings or values as well as tools, spaces and processes.

Gee’s notion of ‘Big D’ Discourses was used to conceptualise their experience in different contexts. This helped to explore the relationship between structure and agency and offered a way of understanding how new, transformed relations may emerge in digital practices (Gee, 2005). For Gee, potential for transforming relationships occurs when discourses collide or merge. Such clashes may generate ‘borderland discourses’ which offer new ways of being that challenge existing values and assumptions. Particular attention here was therefore paid to the students’ experiences of tensions between discourses and the opportunities or barriers to transformation they presented.

The study drew from a methodology influenced by phenomenology, which sought to privilege student-teachers’ own perspectives on their experience. Of particular significance was the study’s situatedness. The study focused on seven female student-teachers, each interviewed three times. All were studying on a course of primary or early years ITE and developing a specialism in English. As part of the requirements for this specialism, they completed a compulsory module, ‘Changing Views of Literacy’, which included a focus on digital texts. I was both interviewer and their tutor for this

module so our interviews occurred against the background of other conversations about digital practices. In reporting the study, therefore, I attempt to acknowledge my own role in constructing their accounts.

Whilst the methodology is explored further in Chapter 2, the remainder of this chapter expands upon the theoretical, research and policy context for this study. Section 1.3 focuses upon the potential of new technologies in addressing a transformative agenda for education and Section 1.4 describes the affordances of digital texts, outlining how these may mediate practices compatible with this agenda and considering the significance of ‘literacy’ for transformation. This is followed, in Section 1.5, by an overview of recent policy relating to literacy and technology in England which explores possible barriers and opportunities to such potential and highlights some of the discourses which structure classroom practice in technology and literacy. Finally, in Section 1.6, I argue, from a sociocultural perspective, that the potential of new technology is most appropriately investigated by considering technology-use embedded in social practice. The chapter ends by outlining the definition of ‘digital practice’ which underpins this study.

1.3 New technologies, transformation and digital texts

As briefly outlined in Section 1.1, calls for transformation in education are motivated by diverse ideological and theoretical perspectives and associated with different conceptualisations of the significance of technology. In understanding these different perspectives and the assumptions underpinning this study, Markham’s work is useful. Markham (2003) argues that the metaphors used to describe digital technology reflect but ultimately shape its significance. She explores how technology has been variously constituted as a ‘tool’, a ‘space’ and a ‘way of being’. Perceiving technology as a ‘tool’ involves seeing technology as a means of achieving a particular purpose and Markham differentiates between different ‘tool’ metaphors: prosthesis, conduit and container. Technology conceptualised as ‘space’ highlights the sociocultural significance of technology, the interactions and understandings made possible within digitally mediated

environments. Technology as 'way of being' sees technology-use as deeply embedded in how people think about and interact with the world around them.

Within government strategy for educational technology in England, the aims for using technology to 'transform' education focus on achieving motivating, flexible and personalised learning and ensuring economic success within a 'technology-rich society' (DfES, 2005; Becta, 2008a). Whilst this includes references to changing relationships between teachers and learners, and giving learners control over the learning process, it implies that learners are engaging with fixed knowledge: the curriculum remains the framework which structures learning and the teacher organises learners' progress through it. It seems that government-sponsored approaches to technology are still associated with technology as a 'tool', regarding both delivery and content of the curriculum: technology may be used to make learning more motivating and individualised and learners may be equipped with skills that they can use in their adult lives.

In my study, notions of transformation are associated with a more radical vision of the transformative potential of new technologies, linked to the critical pedagogic tradition (Kellner, 2004; Pearson and Somekh, 2006; Somekh, 2005). Building on the work of theorists such as Apple (1995) and Freire (1985), this perspective maintains that schools create and reproduce cultural positions through how they structure learning. From this perspective, transformation involves critique of existing structures and empowering learners to take control of and redefine the knowledge they encounter. The significance of technology is in the new kinds of relationships that may be developing between individuals and knowledge in digital environments (Jaffee, 2003). Technology here seems to be conceptualised as 'space': the kinds of relationships developed in digital environments could offer new ways of encouraging learners to participate critically in the world around them and be active in not just consuming but producing knowledge (Bigum, 2002).

An alternative perspective argues that education must transform in order to respond to the changing understandings and experience that learners are already developing out of school. The work of Prensky (2001; 2007) assumes that, through experience in digital environments, individuals are developing new 'ways of being' that should be acknowledged and utilised in institutional contexts. Whilst this perspective has been included within government-sponsored visions of transformation (Becta, 2007b), it seems to be used mainly to highlight the importance of drawing from pupils' confidence in using technology or in devising ways to make learning seem more relevant. It is argued here that, whilst such aims may be laudable, the conceptualisation of new technologies as a 'way of being' gains greater pertinence when recruited to a critical pedagogic perspective. Acknowledging and enabling new 'ways of being' could enable students to draw from out-of-school identities and practices in empowering ways and gain the critical distance needed to critique existing educational structures. It is this perspective which underpins the rationale for this study and indeed highlights the significance of the affordances of digital texts and associated literacy practices to an agenda for transformation. In order to understand such possibilities further, the following section focuses upon the distinctive features and affordances of digital texts.

1.4 The affordances of digital texts

Researchers have noted that the proliferation of multimodal, hyperlinked and networked texts has implications for what is understood by reading and writing, and this is significant to how we understand and interact with the world (Burbules, 2002; Marshall, 2000). Communication becomes increasingly multimodal as writers and readers can draw from images (still and moving), sound and hyperlinks as well as the printed word. As Kress (1998; 2003; 2004) explores, screen-based texts are read according to the logic of the image rather than that of the page and hyperlinks enable readers to take varied pathways through and between texts, juxtaposing information in different ways. Reading then, for Kress, becomes a matter of 'design' as individuals create their own meanings in response to individual preferences and priorities. Whilst reader response theory (Iser, 1978) has highlighted the socially and culturally situated meanings inscribed in all texts by readers, the affordances of new technologies enable readers to

take an active part in not just comprehending but structuring text. Moreover, given that texts can be easily changed, forwarded and updated, notions of authorship are challenged. Writing screen-based texts may involve not only multimodal communication but the appropriation of images and texts from other sources resulting in a 'bricolage' of components (Lankshear and Knobel, 2006) that are, in turn, mediated differently by successive readers.

Such tendencies, as Merchant (2007a) argues, have been and are continuing to be influenced by technological developments which facilitate increasing portability, convergence, pervasiveness and transparency. Convergence enables different functions to be accommodated within a single device (as exemplified in the addition of functionality such as cameras, Internet connectivity and MP3 players to mobile phones), enhancing possibilities for multimedia and multimodal practices. As devices become smaller and more portable, they become ever more available, facilitating increasing integration within everyday life. As this pervasiveness increases, manufacturers are designing technologies with greater transparency, for example using icons to enable rapid understanding of how to operate features, leading perhaps to even more pervasiveness.

Portable, networked technology has implications for the kinds of relationships that are forged and audiences contacted. Users can access a range of experts in diverse sites and publish their own ideas in digital environments. These possibilities have supported what has been termed 'collective intelligence' (Cornu, 2004). Knowledge is no longer, as Kress writes, ' "dispersed" by those with power to those without' (Kress, 2004:16). Rather than seeing knowledge as generated and communicated by individuals, expertise is developed through online sharing and negotiation. This is evident in wikis, where multiple authors create a shared text, or online discussion boards where a fluctuating online community shares insights and solutions to topics or problems. Within digital environments, then, users may be positioned simultaneously as consumers and producers. They can participate in multiple communities, reaching new audiences for their ideas, accessing distributed expertise and creating new meanings through juxtaposing ideas in new ways.

All this offers much to a transformative agenda. Not only does it highlight new skills needed to achieve outcomes in digital environments, but it suggests that focusing on technology as ‘way of being’ and learning from the kinds of identities developed in digital contexts could help to achieve more democratic relationships between learners and knowledge. Building upon this in classrooms therefore involves teachers in ‘orchestrating’ rather than disseminating learning, enabling pupils to access, evaluate and exchange knowledge (Leu, Kinzer, Coiro and Cammack, 2004:1597). If such possibilities are to be utilised in order to challenge existing power structures, however, this has significant implications for the literacy curriculum as it is through texts that learners will contribute to and critique the world around them.

Green’s three dimensional model of literacy has been used to structure consideration of the implications of digital technology for classrooms (Lankshear and Bigum, 1999; Snyder, 2001). This model highlights the importance of considering operational, cultural and critical dimensions of literacy. It suggests that literacy provision should not only support the development of skills needed to access and create meaning in screen-based and networked texts (operational dimension) but knowledge of how different contexts shape and are shaped by digital texts and the significance of this for individuals, groups and societies (cultural dimension). Learners also need to explore how texts position readers and writers and the power relations evident within social contexts mediated by digital technology (critical dimension) (Cope and Kalantzis, 2000). Active involvement in the production of digital texts may empower learners to challenge existing power relationships through presenting their perspectives and experiences. Examples of this can be seen in the work of Nixon and Comber (Nixon and Comber, 2004; Comber and Nixon, 2005), who have involved children actively in producing digital texts in order to empower them to challenge existing power relationships through presenting their own perspectives and generating knowledge of genuine value to the community.

The operational/cultural/critical framework begins to chart an agenda for literacy provision which could promote transformation through equipping children to engage agentively and critically with the world around them. However, reviews of technology-use within literacy in educational contexts have suggested that recent literacy research and government policy have focused primarily on using technology to support priorities related to print literacy (Andrews, 2002; Burn and Leach, 2004; Labbo and Reinking, 2003; Lankshear and Knobel, 2003; Locke and Andrews, 2004). Whilst more recent research has addressed the reading and writing of digital texts, much of this is small-scale, short-term and focused on researcher-led interventions rather than embedded in classroom practice (Burnett, forthcoming). This position has perhaps been exacerbated as government policies regarding literacy and technology education in England have been fostered within two distinct policy strands and managed by different organisations. Primary literacy policy since 1998 has been driven forward by the National Literacy Strategy, now part of the Primary National Strategy (PNS), whilst developments in technology have been led by the British Educational Communications and Technology Agency (Becta). Apparent contradictions between these policy strands are explored below.

1.5 Policies relating to literacy and technology

The PNS frames literacy teaching within a prescriptive, objectives-led curriculum. Until recently this focused on print literacy and made few references to digital technology (DfEE, 1998). Instead, the majority of references to the use and production of digital texts were contained within the National Curriculum Information and Communication Technology (ICT) programmes of study (DfEE, 2000) separating skills needed to read and write screen-based texts from the literacy curriculum. Recent revisions to the literacy curriculum and accompanying professional development packages have acknowledged the reading and writing of digital texts more explicitly (DfES, 2006; DfES, 2002, 2003, 2004) and there have been attempts to develop an approach to assessment which recognises children's multi-modal meaning-making (QCA, 2004). However, whilst such developments address operational dimensions of engaging with digital texts, they do little to acknowledge cultural or critical dimensions. Moreover,

schools' accountability still rests on children's achievements in standardised attainment tests (SATs), which focus on print literacy. Such a context may be unlikely to support the kind of pupil experimentation, reflection and autonomy associated with fully recognising the operational, cultural and critical dimensions of engagement with digital texts.

Becta, meanwhile, has celebrated and reviewed innovative practice in using and creating digital texts (Becta, 2006a; 2007b; 2008b) but has given little specific guidance on how this relates to literacy provision. Indeed, Becta's guidelines on engaging with digital texts have sometimes seemed to contradict their commitment to transformation: guidance on ICT and literacy, for example, focused on use of technology to support a teacher-led version of print-based literacy (Becta, 2006b). Moreover, where guidance on using digital texts has been provided, it can display limited faith in children's ability to drive their own learning. Lankshear and Knobel (2002) noted, for example, how Becta devised guidelines on school use of the Internet which could have encouraged an impoverished and inauthentic use of networked resources. Whilst this guidance has since been updated (Becta, 2008c), such recommendations could mean that digital literacy is not framed within authentic contexts but becomes another 'school literacy' (Gee, 1996: 45).

What emerges then are contradictions between the model of literacy embedded in the curriculum and the kinds of experiences, attitudes and skills which may characterise digital environments beyond school. A difficulty here is that within current curriculum documentation, 'literacy' is seen from within an autonomous model (Street, 1995), which focuses on the ability to reproduce culturally dominant forms of literacy rather than acknowledging and valuing the diverse ways in which technology and literacy intersect in practice. An alternative, as Street argues, is to view literacy within an ideological model. This model, which reflects a socio-cultural perspective, sees literacy as situated practice, highlighting the social, cultural and historical context for different literacies. As Street writes:

Every literacy is learnt in a specific context in a particular way and the modes of learning, the social relationship of student to teacher are modes of socialization and acculturation. The student is learning cultural models of identity and personhood, not just how to decode simple script or to write a particular hand. (Street, 1995: 140).

A focus upon literacy as practice draws attention to the social, cultural and historical location of that experience and enables more wide-ranging insights into the significance of technology. The following section explores this perspective further and expands upon its relevance to this study of student-teachers' digital practices.

1.6 Investigating digital experience as social practice

Research positioning literacy within an ideological model has loosely coalesced around the field of New Literacy Studies. In contrast to an 'autonomous' model, the focus is upon the 'literacies' people engage in within multiple sites. This highlights how literacy involves not only processes but its significance to people's lives: the values, priorities, purposes and feelings associated with texts and the places, spaces, relationships and interactions which characterise their use (Barton and Hamilton, 1998; Street, 1995; 1997). From this perspective, literacy is investigated as 'social practice' which exists 'in the relations between people, within groups and communities, rather than as a set of properties residing in individuals' (Barton and Hamilton, 2000:8). Barton and Hamilton (1998) demonstrate how different 'domains' or dimensions of life are associated with different literacy practices. Conventions, expectations and significance are not seen as fixed as in an autonomous model but created through and within situated social interaction. The focus is on literacy practices or 'what people do with literacy' (Barton and Hamilton, 2000:7).

Investigating literacy as social practice therefore highlights how literacies are shaped by contexts, the values which underpin them and how people are empowered (or not)

through their engagement. Literacies can therefore be seen as patterned by the power structures underpinning social relations: people acquire differential rights to define what kind of literacy is valued and may be empowered or suppressed in different contexts according to the kinds of literacies in which they engage. Barton and Hamilton differentiate between dominant literacies, such as those enacted in formal education, and 'vernacular literacies', which are, 'not regulated by the formal rules and procedures of dominant social institutions and which have their origins in everyday life' (Barton and Hamilton, 1998:247). Although, as Barton and Hamilton write, such literacies are still framed by discourses, they are not regulated in the same way as what Gee terms 'schooled literacy' (Gee, 1996: 45) and, whilst perhaps not affording the same status as schooled literacies, may be highly significant within people's lives. Much work in the field has explored the relationships between home and school literacies and highlighted the 'continuities and discontinuities' (Marsh, 2007) between the literacy experiences learners bring to education and school-based literacy practices. Such work has not only highlighted mismatches between home and school experience but the new spaces that may be generated as discourses mingle. Gregory (2005), for example, describes the 'syncretic literacies' that emerge as multilingual siblings create new kinds of practice drawing from practice in different domains whilst Marsh (2006) explores how texts gain local significance as they are introduced and intersect within family life.

Work from the New Literacy Studies has considerable significance for investigating the role of digital texts in people's lives. Indeed, various studies have explored how digital texts may mediate new kinds of relationships and enable users to experiment with identity in creative and possibly empowering ways (Ito, Lyman and Carter, 2005; Knobel and Lankshear, 2002; Merchant, 2001, 2003; Robinson and Turnbull, 2004). Lankshear and Knobel illustrate this by exploring the networked practices associated with what has come to be known as Web 2.0 (O'Reilly, 2005). 'Web 2.0' refers to Internet activity which emphasises participation and interactivity, as exemplified through wikis, blogs, social networking sites, photo-sharing sites and consumer ratings at online stores. In response to opportunities for greater interaction and user-generated online content, individuals have found new ways of relating to others in ways that are challenging long established assumptions. Lankshear and Knobel (2006) refer to such practices as emerging from what they describe as a new 'mindset' or 'ethos', contrasting

the 'author-centric', 'published' and 'individualised' old literacies with 'distributed', 'collaborative' and 'participatory' new literacies. Digital resources therefore enable people to sustain relationships in new ways. For Lankshear and Knobel, it is not just technical possibilities that are important but the social and cultural ways of being and understanding the world that are developing around new technologies. By seeing digital literacy as social practice, then, we move beyond focusing on skills to consider its significance to people's lives.

This study therefore drew from this emerging tradition of research in exploring student-teachers' perceptions of their digital practices. It addressed what practices meant to student-teachers and how they felt they positioned themselves through, and were positioned by, digital texts. This illuminates the complex contexts which framed their professional development, noting how practices merged, blended and diverged. By exploring what student-teachers felt was acceptable in different domains, the study explored the power relations which underpinned their experience: the practices valued, identities given status and possibilities open to them. This highlighted the relationship between their digital practices outside ITE and their professional development.

A number of qualifications are important with regard to how 'digital practices' were defined within this study. Firstly, they did not refer solely to practices conducted primarily on screen, such as blogging or virtual world play. The focus was upon any social practices which included the use of digital texts, even if digital texts were peripheral to the social practice described; as Leander (2003) writes, practices involving digital technologies often involve crossing sites as on- and off-line worlds merge and intersect.

Secondly, ambiguities around definitions of 'digital literacy' are acknowledged. In recent years, 'digital literacy' has been used loosely to encompass engagement with a wide range of texts. Indeed, Lankshear and Knobel (2006) reject the term, arguing that it has been used either too broadly to include digital texts within an expanded understanding of 'literacy', or too narrowly to define only the skills and competences

required within digital environments. This, they argue, neglects the distinctiveness of new kinds of understanding and interactions associated with digital texts. Instead they use the term 'new literacies' to capture practices which are 'ontologically new' or 'consist of a different kind of 'stuff' from conventional literacies we have known in the past.' (Lankshear and Knobel, 2006: 24). A new literacies mindset sees people relating differently to one another and the world around them, participating in the production of knowledge and moving fluidly between spaces and networks.

Within Lankshear and Knobel's definition, 'literacy' includes practices surrounding all digital texts including visual and audio texts, such as digital photographs or digitally encoded music. This too, however, has been problematised. Merchant, for example, argues that we need to conserve the term 'literacy' for 'the study of written or symbolic representation that is mediated by new technology' (Merchant, 2007a: 121). Merchant's definition is not intended to imply less status for other modes, such as still and moving images, or to distract from the multi-modal sense-making that characterises much engagement with digital texts. What it achieves however is a more bounded definition of 'digital literacy' which is distinctive from what Larson and Marsh call other 'communicative practices' associated with oral, corporeal and visual modes (Larson and Marsh, 2005: 70). This, Merchant argues is important if we are to consider the implications for the curriculum of the distinctive features and opportunities presented by digital writing.

In this study, I was concerned that a tight focus upon digital writing might deflect from the broader significance of digital texts and, ultimately limit consideration of the implications of student-teachers' practices for an agenda of transformation. I therefore planned to focus more broadly on 'digital practices' which involved any interactions with screen-based texts although, as explored further in Chapter 3, students ultimately chose to focus on a fairly limited range. There was no attempt to focus solely on 'new literacies' as defined by Lankshear and Knobel (2006). Whilst the distinction between old and new literacies was valuable in supporting the analysis of these student-teachers' practices, it was not used to limit its focus: this study was not a search for examples of new literacies but an examination of the variety of student-teachers' practices. My

intended definition of ‘digital practices’ therefore included interactions with a wide range of screen-based digital texts mediated by digital technologies: those displayed on small or large screens, fixed or portable, networked or not.

Chapter Summary

This chapter established the research focus for this study: student-teachers’ perceptions of their digital practices. It provided a rationale which justified this focus by contrasting ongoing calls for increased technology-use with the still limited integration of technology in primary schools. Responding to arguments that the new generation may offer the understandings and experiences needed to address this deficit, an overview of research into student-teachers’ uses of technology was provided. This explored how such research tends to focus on functional technology-use, although studies by Graham, Robison, Teo et al and Ottesen were used to highlight the importance of considering such experience from a socio-cultural perspective. Next came a summary of research and policy related to the role of technology in transforming education. It explained how this study’s position regarding transformation draws from the critical pedagogy tradition whilst also recognising the importance of accommodating an orientation towards technology as ‘a way of being’ within this perspective. Having highlighted the role of digital texts in mediating new relationships between learners and knowledge, the implications for understandings of literacy were discussed using Green’s framework to highlight the importance of addressing operational, cultural and critical dimensions of digital literacy. This was followed by a brief overview of current policies regarding literacy and technology in England which highlighted some of the competing discourses which student-teachers might encounter. It was argued, therefore, that the significance of digital technology is appropriately understood by examining technology-use as social practice. The chapter ended by defining the scope of this study’s conceptualisation of ‘digital practices’: social practices involving some interaction with digital texts.

Chapter 2

Researching Student-Teachers' Digital Practices: Methodology and Research Design

Introduction

As outlined in Chapter 1, this study aimed to gain insight into student-teachers' perspectives on the role of their digital practices within and outside the classroom. In order to gain insights into this experience, the study adopted a qualitative approach influenced by phenomenology and supports an analysis which sees experience as socially constructed. Based on semi-structured interviews with seven student-teachers, the study draws from subjective accounts to highlight dimensions of the student experience that may be relevant to the experience of others. It aims for what Bassey (1995) terms 'fuzzy generalisations', suggesting possible rather than certain conclusions about experience and using rich description to root these in specific contexts so that readers can interpret their significance to other situations. The study does not seek to provide a contemporary picture of student-teachers' digital practices but rather sees the shifting nature of their experience itself as important, enabling a focus on how participants felt they approached, appropriated, mediated or avoided new practices as they moved between different contexts. For example, over the seven-month period of the study, participants began to use technology in new ways and abandoned old ones. The range of opportunities available to them in classrooms also changed as did government policy.

It is recognised that the meanings generated by the study were created against the background of my relationship with participants: knowledge is therefore seen as rooted in context and 'laced with personal biases and values' (Creswell, 1998:19). The study sought to make explicit the layers of interpretation involved, adopting a reflexive approach. Below, in the first part of this chapter, the varied influences which have shaped the methodology are explored, explaining how it draws from and departs from

ethnographic work in the New Literacy Studies and the influence of phenomenology. This is followed by a more detailed consideration of interviews as situated events. The second part of this chapter outlines the research design and includes reflection upon the significance of student-teachers' involvement in the module 'Changing Views of Literacy'.

2.1 Methodology

2.1.1 The influence of New Literacy Studies (NLS)

In Chapter 1, the significance of investigating student-teachers' experience as social practice was explored. In attempting to gain insights into the cultural worlds which surround the literacy practices of individuals and communities, work from the NLS is primarily ethnographic (Barton and Hamilton, 1998; Street, 1995; 1997). Barton and Hamilton's seminal study of a Lancaster community, for example, draws on diverse methods, such as interview, observation and textual analysis to create rich descriptions of how daily life is mediated by literacy and the relationship of literacy practices to individual and collective concerns, interests and priorities (Barton and Hamilton, 1998). Textual analysis has played a significant role in much of this work. As Baynham writes (1995), the study of language can be seen as central to the study of literacy as social practice, as language is used, 'to reproduce and maintain institutions and power bases as well as the discourses and ideologies that operate through language' (Baynham, 1995:2). The language used in texts has been used to exemplify the social, political, historical and cultural structures which produce them.

Such work offers valuable models for researching culturally- and socially-situated activity within digital worlds. Textual analysis, for example, has featured in studies of literacy practices in digital environments. Analysis of the discourses which pattern online texts provide insights into the kinds of meanings made and identities performed within digital environments (Burnett et al, 2005; Davies, 2006). Others have explored

digital environments through insider accounts, using their own participation as a means of exploring activity within different sites (Merchant, 2007b, Knobel and Lankshear, 2006; Dowdall, 2006). Whilst such work provides insights into identity and agency in digital worlds, I was interested in the breadth and variety of student-teachers' practices, aiming to capture any diversity of, and interactions between, practices in multiple domains and gain insights into experience of moving between practices. In this study, therefore, I focused on the variety of practices engaged in by individuals rather than detailed analysis of particular practices.

Importantly, I did not look directly at what these student-teachers did with digital texts or at the digital texts themselves. In Section 2.2.2, it is argued that my position as tutor/researcher, whilst inevitably shaping what they shared with me, enabled me to explore their experience with them in ways that may have been difficult for an outsider. However, had I tried to enter their worlds more directly, for example through visits to school placements or asking participants to guide me through the digital environments they frequented, this may have inhibited what they chose to explore. Whilst they discussed the role of social networking sites, for example, they may have been less keen to show me their Facebook wall. Indeed, as illustrated in Section 2.2.5, analysis of transcripts suggested that, for participants, I shifted to and fro along a continuum from researcher to tutor during interviews. Whilst participants *spoke* confidently about classrooms visited, it would have been difficult to stay positioned as researcher during a school visit and avoid them viewing me as an evaluator, rather than investigator, of their practice. My restricted focus also enabled participants to retain greater control over what they chose to share with me. The study therefore builds on their descriptions of their worlds rather than mine. Whilst there is no attempt to claim that this representation of their experience is not influenced by my presence or perspective, the study attempts to capture their subjective experience. In so doing, it draws from the tradition of phenomenology.

2.1.2 The influence of phenomenology

A phenomenological approach has its roots in Husserl's writing, which privileged the investigation of subjective experience in an attempt to explore the essence of human experience (Husserl, 1931). Husserl saw the purpose of phenomenology as arriving at an understanding of the essence of phenomena, such as the imagination or particular emotions. Husserl's project sees all attempts at arriving at objectivity as inevitably shaped by subjective experience: 'The knowledge of the objective world is 'grounded' in the self-evidence of the life-world' (Moran and Mooney, 2002). For him, phenomenology involved a search for insights into subjective experience, before it had been theorised in any way. This did not attempt to discover reasons for particular phenomena but to describe life as experienced.

Whilst Husserl's writing focused specifically upon human consciousness, Schutz highlighted the significance of phenomenology to sociology (Wallace and Wolf, 1999). Schutz (1967) explored meaning as an 'intersubjective phenomenon' created in the relations between people. For him, meanings were created through drawing from schemas developed through previous experience: from this perspective, people use established ways of seeing or understanding the world in making sense of their experience and this forms 'common sense' knowledge. Such sense-making becomes habitual so that everyday reality can be seen as a socially constructed system of ideas that has accumulated over time and is taken for granted by group members. As Schutz and Luckman write, 'Every definition of a situation is an interpretation within the frame of what has already been interpreted' (Schutz and Luckman, 1973:4). The purpose of phenomenological sociology then becomes to investigate this system of ideas examining what makes sense through the 'lifeworld' (Curtis and May, 1978). Building upon this, Berger and Luckman explored how such ways of understanding the world may be reified within institutions as people's behaviour becomes associated with particular roles and so generates expectations for others who perform such roles. This 'reciprocal significance of habitual actions by types of actors' (Berger and Luckman, 1967: 51) explains how certain understandings about the world become accepted as truths or objective realities; this creates 'the knowledge that guides conduct in everyday

life' (Berger and Luckman, 1967: 33). In exploring these student-teachers' digital practices, this study drew from this tradition of phenomenological sociology in seeking to capture how student-teachers made sense of their experience. As explored more fully in Chapter 3, however, a focus on experience as patterned by discourses was used to gain a critical perspective on their presentation of their life-world.

As explored in Section 2.1.3, it is acknowledged that the interviews themselves were significant to how student-teachers presented that experience and also that my analysis of their stories of digital practices involved interpretation. There is therefore no attempt to suggest that my presentation of their accounts is unbiased. In attempting to privilege student-teachers' perspective however, the study draws from Husserl's notion of 'bracketing'. Through bracketing, Husserl (1931) argues that researchers should strive for 'epoche' in putting aside assumptions about a phenomenon in order to understand it from participants' perspectives. As Husserl writes, 'we put out of action the general thesis which belongs to the essence of the natural standpoint' (1931:110). There is an attempt by the researcher to step out of his/her own 'engaged or absorbed attitude' and strive for 'detachment or disengagement' (Moran and Mooney, 2002:5) in exploring others' subjective experience.

As Ashworth (1999) writes, it is impossible to bracket this 'natural standpoint' completely- the framing and design of a study is inevitably underpinned by assumptions framed by the lifeworld of the researcher. Indeed, as explored above, the sociocultural dimension was central to my theoretical perspective. However I did seek to bracket assumptions about: the participants; the practices in which they engaged; and likely significance of these practices to them. This meant, for example, disregarding presumptions about:

- my pre-existing thoughts about their individual interests, priorities and values;
- the possibilities enabled by digital technology and the significance of this to their lives;

- their status as insiders or outsiders (and whether the insider/outsider division was useful in characterising individuals' digital practices);
- the significance (or insignificance) of digital texts within their lives;
- the kinds of digital practices which might be pertinent to formal educational contexts.

In gaining access to this subjective experience, I relied primarily upon interviews. As Kvale writes, the phenomenological interview is seen as providing insights into subjective experience, giving 'a privileged access to our basic experience of the lived world' (Kvale, 1996: 54). This approach is distinct from the survey model of interviewing and its assumption that interviewing can generate knowledge about objective truth (see Payne, 1951; Richardson, Dohrenwend and Klein, 1965). However, the role of the interviewer in constructing meaning is important here. Kvale's distinction between the conceptualisation of interviewer as 'miner' or 'traveller' is useful (Kvale, 1996:3). Rather than 'mining' for objective truth, Kvale conceptualises the interview as a journey on which interviewer and interviewee travel together, with its outcome influenced by the decisions made by interviewer and interviewee along the way. From this perspective, it is recognised that participants make sense of their experience as they discuss it during the interviews; interviews support interviewees in 'developing their meanings' rather than 'uncovering existing meaning' (Kvale, 1996: 194).

This notion of 'travelling together' to explore subjective truth highlights the significance of my relationship with participants in constructing meaning through interview. Whilst I hoped that this relationship meant that they felt relaxed and confident in talking with me, I was aware that it might structure the kinds of meanings generated. Habermas (1987) notes how there are shifts in the references people use to make sense of experience, or in 'the segment of the lifeworld relevant to the situation for which mutual understanding is required in view of the options for action that have been actualised' (Habermas, 1987: 123). This is illustrated in the following extract from my research diary completed during a pilot study. In it, I consider how my interventions seemed to encourage one student-teacher to expand on some aspects of experience and curtail others. (The participant had constructed a mindmap prior to the interview which

she used to prompt her reflections on the role of digital literacy in her life. As explored in Section 2.2.3, this was an approach also used in the main study.)

Having listened to her stories of personal experiences, I effectively terminated discussion of her personal life before moving onto professional concerns by commenting, 'so now if we can talk about the classroom...'. At this point, she folded up the mindmap as if taking my cue that this was irrelevant to what would follow. My comment perhaps reinforced her existing assumption that these were two different spheres and discouraged her from making links between the classroom and digital literacy in her own life.

The physical folding up of the mindmap here seemed to exemplify how people may not use all available experience in their interpretation of events but see different aspects as relevant to different situations and so select from ways of making meaning available to them. The lifeworld from this perspective becomes 'represented by a culturally transmitted and linguistically organised stock of interpretive processes' (Habermas, 1987: 124). Whilst for Husserl, the focus was on an essence of experience, for Habermas subjectivity draws from cultural resources meaning that the representation of experience is shaped by context. Whilst, therefore, the study privileges subjective experience, it sees that subjectivity as constructed through the interview. As explored below, this had implications for the kinds of meanings made and the way in which bracketing was conducted.

2.1.3 Interviews as situated events

The interviews were not regarded as 'neutral tools of data gathering' but 'negotiated text' (Fontana and Frey: 2000: 646-663). Kvale (1996) explores various dimensions of interviews which influence how they unfold. These include cognitive and ethical dimensions along with dimensions relevant to how the personal relationship between

interviewer and interviewee is enacted, i.e. 'interpersonal', 'interactional', 'communicative' and 'emotional'. These dimensions affect what is discussed and may evolve during the course of a study, as illustrated in the following reflections from the pilot study, in which I note the significance of my personal relationships with participants:

Listening to the transcripts, I noted that I positioned myself differently with different participants. This was evident in my tone of voice: some interviews were filled with laughter and fast talking whilst others were more contemplative and serious. This may have affected not only the ease with which interviewees responded, but the topics they felt happy to discuss. The more irreverent the mood, the more likely they may have been to make statements that did not accord with their honed identity as beginning teachers. Indeed those that participated in more serious interviews were less fluent in their descriptions of their own experiences. Perhaps the tenor of our discussion was not sufficiently different to that more normally associated with tutor/student interactions and so talking about the personal domain seemed inappropriate.

These interviews could also be seen as operating within and across multiple discourses (Gee 1999; Miller, 1997) including institutional and vernacular discourses associated with: ITE (interviews took place in university rooms with a university tutor); primary teaching; digital technology; and literacy (evident within university modules). Whilst the interviews attempted to position participants as experts in their own lives, such discourses may have framed how they articulated their experience or affected their confidence in discussing that experience with me, their tutor. For example, as they described their digital practices during interviews, all spoke of their care and sensitivity towards others and their commitment to their work. Interestingly these particular qualities have been associated with stereotypical constructions of teacherly identities. As Britzman argues, the stereotype of a 'good' teacher coincides with stereotypes of a 'good' woman: 'Like the 'good' woman, the 'good' teacher is positioned as self-

sacrificing, kind, overworked, underpaid and holding an unlimited reservoir of patience.’ (Britzman, 2003; 28-29). It seemed that participants presented their experiences in ways that often reflected this stereotype. One interpretation here is that they applied for and were selected for ITE because what might be termed their ‘primary discourse’ (Gee, 1996) was aligned to the values and attitudes associated with this model of teaching. Another is that they highlighted these aspects during interviews as they seemed to accord best with the professional identity they wanted to project to me, their tutor.

Influential discourses may also have included pre-existing understandings about interviews themselves. As Silverman argues (2001), the interview is ubiquitous in contemporary society; frequent exposure to, for example, job or television interviews, leads to particular assumptions about the form and purpose of interviews, which may influence how experiences are organised and interpreted during research interviews. As Miller and Glassner write (2004: 127), the question/answer format ‘fractures experience’ as the interviewer prompts the interviewee to extend or curtail particular parts of their narrative. The meaning that can be made, therefore, may be supported or constrained by the conventions of the interview genre.

Also significant was my personal experience within digital environments. Given our shared experience of the module, it is possible that participants saw me as an expert or enthusiast in relation to digital practices and indeed comments made by participants suggested this was the case. Ironically, however, whilst I used digital technology extensively in my professional role, I considered myself an outsider to more social, playful digital practices. As others have noted, presenting oneself as an outsider in interviews can be problematic as it can undermine the depth of insights gained (Miller and Glassner, 2004; Shah, 2004). Difficulties may arise from misplaced assumptions or preconceptions about experiences; there may be a lapse in communication due to a lack of shared language to discuss experience (Warren, 2002). Indeed, I found in a pilot study that if I admitted ignorance or inexperience, then the tenor of the interviews changed and participants focused more on explaining how practices worked rather than their experience of them (see Appendix 1).

In this study then, whilst the interviews aimed to privilege subjective experience, that experience was viewed as dialogically constructed through interviews. Social, cognitive and relational dimensions were seen as invested with different discourses which determined what it was appropriate to say. This has implications for the notion of privileging participants' perspectives; the nature of the perspective expressed can be seen as influenced by how I elicited, structured, edited and synthesised the meanings made by participants (Fielding, 2004; Usher, 1996). Graue and Walsh explore how data emerge from 'the researcher's interactions in a local setting; through relationships with participants, and out of interpretations of what is important to the questions of interest' (Graue and Walsh, 1998:73). Here then, interviews were not viewed as providing direct access to subjective experience but as collaborative constructions between myself and participants.

In addressing this situatedness, the study strives for what Altheide and Johnson (1994) term 'interpretive validity'. Interpretive validity involves the acknowledgement of processes of interpretation at all stages of research. 'Reflexivity' (Hertz, 1997; Potter, 1996; Rossman and Rallis, 2003; Gergen and Gergen, 2003) is central to contextualising and interrogating the data generated. In this study, this involved explicit consideration of how meanings were brokered and the influence of my researcher positionality, along with the use of a variety of strategies for examining the data from different perspectives. Bracketing did not involve just attempting to cast aside assumptions but making them explicit. The process of making knowledge claims then is regarded as a chain of interpretive acts, inevitably influenced by my own values and perspectives. Within this chain, I was placed as an 'instrument' of data collection (Creswell, 1998:14), generating rather than collecting data. Moreover, as interactions between me and participants were recorded, the data took on new forms. 'Captured as texts', the recorded data was codified in a particular way and then analysed involving new acts of interpretation (Marcus, 1986; Piantanada, Tananis and Grubs, 2004).

2.1.4 Methodology: summary

This study views student-teachers' personal and socially situated experiences as significant in understanding their uses of digital technology. In doing so, it draws from the tradition of phenomenological sociology. At the same time, it is recognised that insights gained are socially constructed, influenced by the particular context for this study and the layers of interpretation which underpin its design and execution. Consequently, a reflexive approach is used to make explicit these levels of interpretation.

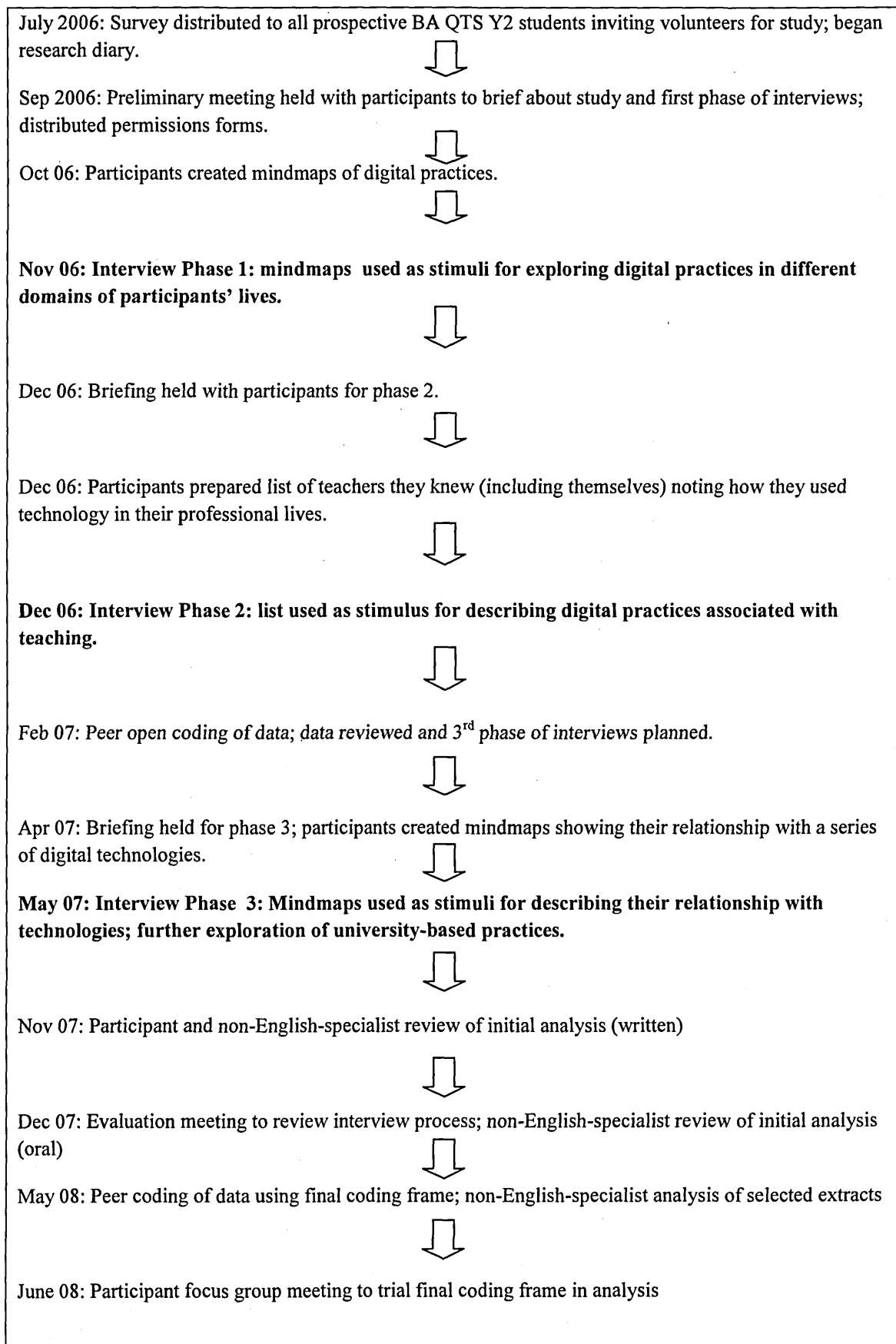
2.2 Research Design

The study focuses on seven primary student-teachers in the second year of a three-year undergraduate course of ITE who were developing a subject specialism in English. This second part of the chapter begins, in Section 2.2.1, with a summary of the research design. Section 2.2.2 explains the process through which research participants were selected and reasons for working with this particular group of student-teachers. Section 2.2.3 explains my approach to interviewing and provides a rationale for the three interview phases whilst 2.2.4 outlines the use of my research diary. This is followed, in Section 2.2.5, by a discussion of the significance of the English specialist module, 'Changing Views of Literacy', for this study's findings and an outline of the ethical framework in Section 2.2.6. Section 2.2.7 provides a summary of what I term 'interpretive strategies' or data used to support reflexivity: participant and non-English-specialist reviews of data analysis and peer critique. Section 2.2.8 includes an overview of the approach to analysis, which discusses issues arising due to the situatedness of this study and explains how my own positionality was addressed.

2.2.1 Summary of Research Design

Three phases of individual, semi-structured, exploratory interviews were conducted which focused upon student-teachers' digital literacy practices in various domains. They described their digital literacy experiences within the classroom and their broader lives, commenting on how these were valued by themselves and others. Interview data were supplemented by my research diary and perspectives generated through peer coding of data and involvement of both participants and non-English-specialists in the analysis of data and review of my analysis. An evaluation meeting was also conducted with participants to review the interview process. The design is summarised in Figure 2.2.2.

Figure 2.2.1: Summary of Research Design



2.2.2 Selection of participants

The study focused upon the experience of seven student-teachers. Participants were all female and in the second year of a three year BA (Hons) in Primary Education or BA (Hons) in Early Years Education, which confer qualified teacher status (QTS). An outline of these courses and summary of opportunities provided by the university for technology-use are contained in Appendix 2. All participants were studying for a specialism in English and participated in a compulsory English specialist module, 'Changing Views of Literacy'. Taught from a socio-cultural perspective, this module included exploration of digital literacy and its implications for the classroom and aimed to challenge the models of literacy evident within dominant curriculum frameworks. Participants completed this module during the first semester of their second year in 2006/7, during which I conducted the first phase of interviews. As part of their module assignment, they worked collaboratively to carry out an investigation of literacy practices within a chosen site and were therefore rehearsed in analysing literacy as social practice. The decision to work with English specialists was driven by my intention to involve student-teachers themselves in commenting on their practice. 'Changing Views of Literacy' offered an opportunity to arrive at shared understandings, or at least a shared area of interest, prior to the study which could increase their confidence in discussing their experience. The implications of this are explored further in Section 2.2.5.

Participants were recruited through a process of self-selection. All 113 students in the second year of the BA Primary Education were invited to complete a survey which collected information about different levels of access, confidence and use relating to a series of technologies (see Appendix 3). The survey included a section for English specialists to complete if they were willing to participate in the interview study. The survey was distributed at the end of a year group lecture and 80 students returned completed surveys. This was primarily used to enable student-teachers to volunteer for the study without feeling pressurised and also enabled some limited comparisons between the digital preferences of participants and their peers on the course. It was also designed to enable me to select a sample reflecting a range of experience but, as only

eight English specialists volunteered to participate, all were invited to do so. One subsequently withdrew, leaving a group of seven. All were female, aged between 19 and 45. None claimed technical expertise and, indeed, three described themselves as technically inexpert. All used technology in similar ways - for example, using mobile phones, the internet and email - but varied in the extent to which they used instant messaging or social networking and none participated in virtual worlds or web creation. Those that contributed to social networking sites such as MySpace and Facebook used these in limited ways (although this use expanded over the course of the study) and those that accessed sites such as YouTube positioned themselves as consumers rather than producers.

Whilst the survey data suggested that this pattern of technology-use broadly reflected that of the majority of students who returned questionnaires (see Appendix 4), there is no attempt to suggest that the sample was representative of the group of English specialists yet alone the cohort as a whole. The quantitative data collected may hide qualitative differences: for example, the survey revealed that all students sent text-messages regularly but students may have done so for different purposes and in different ways. Indeed, participants' gender and subject specialism alone suggested that they belonged to a very particular group of student-teachers. Whilst gendered patterns of technology-use have become less marked over recent years and research has possibly underplayed the skills and aptitudes of female users (Abbis, 2008), there still seem to be differences in technology-use by male and female users (Cooper, 2006). Moreover, given their enthusiasm to contribute, it may be that these students were unusually articulate in discussing their experiences. In gaining places as English specialists, they had demonstrated an interest and/or expertise in English and literacy and it was possible that they were particularly sensitised to how language and texts are used within university and primary classrooms or that their digital practices may have featured particular kinds of experience and neglected others.

2.2.3 The interviews

Three phases of individual, semi-structured, exploratory interviews were used to investigate participants' digital practices in various domains. Whilst the analysis of interview data considered how my contributions helped shape meanings generated (see 2.2.8), I sought to adopt an interviewing style which drew from Kvale's notion of interview as journey (Kvale, 1996). During the study I aimed to avoid making assumptions about participants' implied meanings and instead invited them to expand upon definitions and/or provide examples to illustrate points made (see Appendix 5 for examples of approach to interviewing). I still privileged some aspects of their descriptions over others, inviting definitions of some terms but ignoring others. At times, I also attempted to clarify my emerging interpretation of participants' experience with them, summarising what I felt was significant about the experience they had presented and asking them to respond or comment further, a process which Kvale (1996:30) describes as 'pushing forward' categories. Given our tutor/student relationship, it was possible that participants may have been unlikely to challenge such interpretations. However, this process did seem to prompt further elaboration which supported my understanding of their experience.

The first phase of interviews addressed participants' practices outside school whilst the second focused on their school-based experience. A third phase invited participants to expand on digital practices within the university environment and comment further on their relationships with specific technologies. The three phases are explored in more detail below. Interviews were all transcribed verbatim and the approach to transcription is described in Appendix 6. Following the interviews, participants were invited to a focus group meeting in order to capture their views on how interviews had been structured and conducted. Recognising that responses were likely to be inhibited, I organised the meetings to try to maximise the likelihood that they would speak freely and provide anonymity. I stayed away from these meetings, providing participants with a list of questions read by a non-English specialist student-teacher, a tape recorder to record ideas and arranged for the tape to be transcribed by a third person (see Appendix 7 for briefing notes). Only two participants chose to attend the meeting, perhaps feeling

this had less status due to my absence. However, their contributions did provide a useful prompt for my own reflection on the interview process. Comments taken from this meeting are integrated within the following commentary.

Phase 1

The first phase focused upon student-teachers' lived experience of digital texts beyond the classroom. These interviews were designed to encourage participants to talk broadly about their experiences. As Denzin (2003: 146) explores, interviews operate through use of 'machinery', such as turn-taking and question/answer pairs, which may support particular kinds of meaning-making. For example, narrative is frequently used in response to interview questions perhaps because, as has been argued (Stroobants, 2005; Miller and Glassner, 2004), the process of storying enables interviewees to make meaningful sense through ordering their own experiences into linear narratives. The disadvantage is that a linear structure may struggle to accommodate the complexity of their experience. Following a trial in a pilot study, therefore, students were invited to create mindmaps to use as elicitation devices (Johnson and Weller, 2002).

Mindmapping was chosen to allow the organisation of ideas and experiences in radial rather than linear form and prompt what Buzan and Buzan term 'radiant thinking' (Buzan and Buzan, 1993: 40). The intention was to encourage participants to present varied and possibly unconnected aspects of their lives (see Appendices 8-9 for interview schedule and sample mindmap).

This activity was introduced during a preliminary meeting during which I modelled drawing a mindmap of digital texts I use and reasons why they are important to me. I asked participants to draw similar mindmaps to bring to the interviews. I chose to present the activity in advance in order to enable participants to consider what to share before we met. This was important for ethical reasons discussed in Section 2.2.6 but also in providing participants with time to begin to analyse their experience. Indeed, during the evaluation meeting, one anonymous participant commented:

I just found it very very useful, firstly getting my thoughts onto paper. I think if I'd just gone into the interview and just been asked to speak about digital literacy I don't think I would have had much to say because I didn't realise how much it actually impacts on my life and it wasn't until I wrote it down that I saw it was deeper than just academic things. It was actually within my home life. Very useful.

Another suggested that it had prompted her to consider the relationship between digital practices in new ways:

...when you do a concept map, you do different areas but in fact some of those areas link up. It helps you look at different areas of your life and how they impact on each other because I found I was drawing lines between so yeah- it was a visual picture of the way in which you used it which was why I think the concept map was good rather than a list

Whilst these participants seemed to find mindmapping helpful in preparing for the interview, it was likely that my modelling of the activity during the briefing meeting influenced how they presented their experience. As Holstein and Gubrium (1995) write, the introduction to a research project helps position the researcher in a particular relationship with participants and this relationship may influence the kind of experiences divulged (Altheide and Johnson, 1994; Graue and Walsh, 1998). This was particularly important for me as I was repositioning myself from tutor to tutor-researcher. By creating a map of my digital practices, I attempted not only to clarify the task but to establish an environment in which it was appropriate to discuss both personal and professional experiences. Nevertheless it was possible that in doing so I privileged the discussion of certain dimensions of their experience. Reflecting on the transcript of this event, I noted that I focused on the personal rather than political dimensions of my practice and, in doing so, perhaps encouraged them to consider social rather than ideological dimensions. My approach perhaps reflected the prevailing discourse of ITE: whilst reflection on personal experience features strongly in ITE, this is often at the level of subjective rather than politically located experience. As explored later, ITE policy and practice seems to highlight the importance of commitment to personal

professional development, but not necessarily to the critical examination and reconstruction of the profession itself.

Phase 2

During the second phase of interviews, students were invited to list teachers they had encountered before or during their course and identify ways that each used digital technology (see Appendix 10 for briefing notes). Including themselves in this list, they considered professional digital practices within and outside the classroom. The focus on individual teachers was intended to prompt them to give specific examples. Usefully however, descriptions of practices addressed not only individual approaches and attitudes but broader aspects of classroom life: classroom layout, curriculum frameworks, pedagogies and availability of equipment. It is important to emphasise that the intention here was not to achieve a secondary (or even tertiary) insight into the full range of digital practices in which teachers engage or to all significant aspects of classroom culture. Indeed this focus on teachers was already exclusive in deflecting attention from pupils' digital practices and the 'funds of knowledge' (Moll, Amanti, Neff, and Gonzalez, 1992) they brought with them to school. Instead the aim was to highlight the kinds of insights that student-teachers had gained into digital practices associated with a professional role.

Phase 3

The third phase of interviews provided an opportunity to develop insights gained from the first two phases (see Appendices 11 and 12 for briefing notes and interview schedule). The first two phases suggested interesting comparisons between how participants experienced digital literacy in their lives within and outside the classroom. During the first phase of interviews, they all presented themselves as agentive, creative users of digital texts in their own lives whilst, in the second, they focused on constraints and limitations of classroom practice. I was concerned however that my methods had resulted in a polarisation which overly simplified their experience. Narratives of digital practices in their lives outside school seemed to emphasise positive stories, ignoring practices in which they did not participate. This may have obscured how they were irritated, inhibited, controlled or even oppressed by practices involving digital texts. I

therefore wanted to explore the variety of participants' experiences including their feelings about practices which they avoided or of which they had peripheral experience.

Given the timescale of this study (seven months), I was interested in any changes in their practices. In order to both prompt consideration of more negative experiences and revisit practices already discussed, I encouraged them to re-consider digital technology in their lives but this time focus on their relationship with texts. I hoped this would encourage them to consider both positive and negative encounters with digital texts in different domains. In supporting this, I specified a series of texts and asked them to draw mindmaps representing their relationship with each (see Appendix 13 for sample mindmap). Whilst this list was inevitably limited, it included both texts discussed in the first phase and some they had avoided. As with the first interview, I modelled the process of mindmap creation but, keen to avoid description of my own relationship with digital technologies, did so by describing my relationship with another significant piece of technology, my car: I described my 'driving practices' exploring my feelings, beliefs and assumptions and the ideological significance of what I did. Again, these diagrams were used as prompts during interviews and participants were also invited to expand on their university-linked digital practices, which had been discussed only briefly during the first interview phase.

2.2.4 Research Diary

During the course of the study, I maintained a research diary in which I kept an ongoing record of my emerging thoughts and reflections. These thoughts and reflections related to four areas. Firstly, I used the diary as a site for reflecting upon the process of research. I captured dilemmas and contradictions that arose as the study progressed, linked to methods adopted and how encounters with student-teachers seemed to be framing meanings generated. Silverman (2005) argues that this logging of ongoing thinking, including ambiguities, problems, obstacles and mistakes, is important in contextualising and problematising findings: it helps to avoid the presentation of research as a 'seamless web' (Silverman, 2005:249) of ideas and highlights the

situatedness and contingency of data generated. Secondly, the diary was used to capture my developing thinking in relation to the focus of research. As Altrichter and Holly (2005) write, the process of writing can cultivate critical distance. I found that this helped me formulate ideas but also created a record I could return to as my ideas developed: re-reading my diary sometimes reminded me of thoughts I had discarded, prompting me to re-visit theoretical constructs. Thirdly I made notes following each 'Changing Views of Literacy' session in order to capture what I deemed significant about students' interactions with the module content. As exemplified in Chapter 3, these reflections sometimes highlighted moments when interviews seemed to reproduce ideas developed during seminar discussions. Finally, I maintained a supplement containing reflections specifically relating to my personal experience of digital technology. This included stories emerging in the media and significant incidents regarding digital technology experienced or observed in my everyday life. Reflection upon these events was important to me in locating my own positionality as a user of digital technology. It highlighted my perspective, preferences and concerns, which in turn may have shaped my interpretation of the data. In capturing a very personal account, my notes highlight my fluctuating positionality as, like the students, I grappled with new ways of making meaning in digital environments and indeed making sense of that meaning-making. As the following section illustrates, this was particularly significant when considering the relationship between the interviews and participants' experience within 'Changing Views of Literacy'.

2.2.5 'Changing Views of Literacy' as a context for research

As described earlier, all participants were English specialists and during the period of the study completed a compulsory English specialist module, 'Changing Views of Literacy'. This module was useful in providing a shared vocabulary for describing digital practices and a process for reflecting upon them. Indeed, during the evaluation meeting, one participant commented, *I'd never before analysed the way somebody used a text and I think some of that, the way we analysed in that assessment, I think I transferred it to myself*. Another commented that the module helped her discuss her experience:

I think it was just that doing the module, um... I think it did affect the way I spoke about my experiences but in the way that it gave me a richer vocab because I actually knew sort of what was happening, because I knew that what I did I my home life was called x, y and z and it was because of this. I think in that way, not because of what I spoke about but because it made more sense as to why we were talking about it.

In addition to providing a framework for looking at practice, it seemed that, for this participant, the module had helped designate personal experience as a legitimate area for study: *it made more sense as to why we were talking about it*. Through valuing activities and language associated with vernacular practices, the module perhaps positioned students as worthy reporters on their lives and provided them with the means to express that experience. At the same time, the group positioned some practices as more legitimate than others: for example, during one seminar, practices associated with virtual worlds were met with incredulity by the most vocal members of the group and evaluated as bizarre and even unhealthy diversions from the 'real' world. This casting of different practices as acceptable or not may have influenced the kinds of experiences the students chose to describe during interviews and the significance they ascribed to them.

My role as tutor/researcher had implications for participants' responses to my questions. Whilst I attempted to position them as experts in their own lives, they seemed to locate themselves differently along a continuum between researcher and researched. One participant, Daisy, for example, seemed to present herself as researcher of her own life, commenting for example, *I found out I had 6 domains*, the *I found out* suggesting she had interrogated her own experience and reflected upon it, sorting it in the way I had modelled at the preliminary meeting. Moreover, in preparation for interview 2, she had contacted a teacher friend to discuss ways in which she used digital technology. She did not simply draw from her own experience but seemed to position herself as a research assistant, actively seeking out ways to help in my study. As the following excerpt from

my research diary suggests, however, another participant, Kate, seemed less certain about the role she should adopt:

Initially there was a sense that Kate wasn't sure if she was on the right track with what she was talking about. She seemed uncertain that she was talking about what I wanted to hear. There are difficulties here in establishing a sense of what digital literacy is – also with her role here. Is she student or interviewee? How far does she struggle because she knows that she is presenting herself as both and that the dual relationship, however far I attempted to clarify that this is always there. I think it was important here that I didn't try to define digital literacy for her. She seemed more confident when I asked her to just go ahead with what she'd written. I think here I managed to at least start to show that I was a listener rather than a teacher.

Here I was aware that my intention to find out about Kate's experience demanded a change in our relationship which afforded us different identities. She seemed firmly situated in her identity as student and this framed how she approached the interviews. Kate's uncertainty suggested that what she presented needed to be acceptable within her relationship with me both as student and participant. I therefore attempted to shift my own position through appearing passive and giving her permission to drive the agenda, positioning myself as interested listener rather than probing tutor.

Whilst I consequently attempted to avoid implying judgements about participants' practice, occasionally this caused difficulties as my prompts seemed to be interpreted as evaluative. This is illustrated by the following notes made after an interview with a third participant, Joanne:

There was a moment here when my attempt to ask her to clarify her thinking seemed to be interpreted as a 'teaching' or 'critical' intervention by me. i.e. I asked her to clarify what she meant by

'traditional teaching' – by the teacher and she retracted her definition, apparently realising that traditional (and its opposite) weren't necessarily defined by a teacher's use of technology. She 'corrects' herself... and the way she does this implies that she feels I have just corrected her. This highlights difficulties of interviewing as a tutor/researcher. The way I'm using questioning (challenging definitions, etc) is very similar to the way I use questioning within taught sessions.

My request for clarification was driven by my agenda as interviewer – I was genuinely interested in the links she made between technology-use and 'traditional' teaching. However, she seemed to interpret my question as a prompt to re-consider her answer. For her, my conversational move perhaps positioned me as tutor not researcher. Wary of this, at times, I decided against challenging in order to avoid the tutor role. In doing so, however, I may have missed opportunities for insights into experience, as the following reflections, following a further interview with Kate, suggest:

I felt some awkwardness as she described some of the classroom practices she saw. There were a number of assumptions underpinning her reaction to these which suggested certain pedagogical assumptions, e.g. learning styles. Felt my face freeze as she began to describe these, wanting to interrupt and get her to justify this approach (to question her assumptions) but didn't feel this was appropriate. Instead I let this go unchallenged, yet actually this could just be another example of something that needed defining. It was as if I dodged anything that could be seen as me challenging her thinking...and yet really I did need to challenge in order to gain her perspective.

Here, in my attempt to distance myself from my role as tutor, I avoided asking Kate to clarify the pedagogical assumptions which seemed to underpin her evaluation of

classroom practices. In doing so, I perhaps misunderstood her or missed insights into her perspective on the relationship between technology and learning.

These insights illustrate how interviews were interwoven with different discourses and how my positionality impacted upon the content and process of interviews. This also had particular implications for my ethical framework, my use of strategies to gain different perspectives on the data and my analysis of data generated. These implications are considered in Sections 2.2.6-2.2.8.

2.2.6 Ethical framework

The ethical framework for this study accords with the standards of good practice laid down by the SHU Research Ethics Policy (SHU, 2008), which draws on the Declaration of Helsinki and British Educational Research Association Revised Guidelines for Educational Research: beneficence, non-maleficence; confidentiality/anonymity; informed consent.

This study has generated knowledge useful to my course team and the broader educational community in helping to understand student-teachers' experience and inform decisions about how primary student-teachers could be best supported and empowered to draw from wide-ranging digital practices in professional education. Participants also spoke informally about how participation highlighted personal expertise and sharpened their reflection about the role of technology in classrooms. My positioning as tutor-researcher, however, prompted a number of ethical considerations.

There were possible conflicts as the findings from this study revealed insights into students' own classroom practice. It was important to ensure that participation in the study did not impact negatively on student-teachers' progress within their course. I therefore ensured participant anonymity: pseudonyms were chosen by participants at the

briefing meeting and used subsequently in all written records of data generated. Interview tapes were stored securely and will be destroyed on completion of the study. As explained earlier, I sought to minimise pressure for student-teachers to participate by inviting them to volunteer through a survey distributed to all students. I also ensured that assessments of participants conducted during 'Changing Views of Literacy' were moderated by another tutor and avoided marking or moderating assignments submitted by these student-teachers for other modules.

As the students' tutor, my relationship with participants was marked by existing power relations (Olesen, 2003) and they may have felt pressurised to contribute or yield information about their lives. Particular tensions could have arisen from encouraging students to discuss personal experiences whilst ensuring they did not feel seduced into talking about experiences they were unwilling to share publicly. The preparation activity for each interview, therefore, provided students with an opportunity to consider what they were prepared to discuss. I began interviews by inviting participants to talk through what they had prepared and, when I used questions to probe, focused only on those aspects they had identified. Despite these approaches, there were times when I experienced tensions in my own role as tutor/researcher, when students genuinely asked for help related to an aspect of university life. When this happened, I withdrew from my researcher role and dealt with the difficulty as best I could. From an ethical position, I was aware that my dominant position was as course tutor not researcher and I needed to uphold my responsibilities to the students.

Informing my approach was Fine's process of 'working the hyphen' (Fine, 1994:72). Fine sees the hyphen as the point at which researcher and participants meet, arguing that researchers should engage with participants by seeking to understand their experience of the interview process. This she feels not only gains 'better' data, but may 'limit what we feel free to say, expand our minds and constrict our mouths, engage us in intimacy and seduce us into complicity, make us quick to interpret and hesitant to write' (Fine, 1994:72). Fine sees strength in the internal dilemmas prompted by the kind of duality described above. Emotional commitments prompt consideration of ethical considerations and force researchers to take their responsibilities to participants

seriously. In my study for example, participants contributed significant amounts of their time, engaging fully with the pre-interview activities and providing me with detailed insights into their experiences. There seemed to be a genuine commitment to the study but also, as suggested by the following excerpt from the evaluative focus group, to me:

.....um I don't know, because it wasn't a stranger, it was somebody that I knew and also somebody that you know, you like and respect, you felt you could really talk about anything and I actually wanted to because here was that whole thing sort of, not you are helping Cathy, but I really want to do my best type of thing [.....] And give her as much information as possible and be as honest as possible. Otherwise, there wasn't much point in doing it

Moved by this personal commitment, I was aware that I needed to treat it with care. Whilst Fine's approach may inhibit the presentation of relevant data, for me this was helpful in attempting to ensure that the conduct and reporting of the study's findings prioritised the personal interests of participants. Given the nature of the data it was tempting to do more, to ask for further interviews or ask them repeatedly to review my thoughts and interpretations. However, when conducting my final analysis, these students were engaged in the final stages of a degree and I avoided abusing their commitment by asking for unrealistic amounts of involvement.

This process also prompted me to re-consider the tension within my study between trying to privilege participants' perspectives whilst seeing these perspectives as constructed with and interpreted by me. Given that analysis continued long after initial interviews had been completed, there was a danger that my sense of 'ownership' of the interview data passed further along a continuum from them to me, as illustrated by the following excerpt from my research diary:

Met with Kathryn/Holly- (Interestingly they have 'become' Kathryn and Holly now – I even had trouble remembering their real names –

have they become new people?) This actually made me nervous as I met with them. I have been working so much with their data that, in my mind, they have become existent only within that data. There is a danger then that the Holly and Kathryn (and Charlotte, Joanne, Daisy, Kate and Grace) that I presented through my work become products of my imagination ...whilst I have always seen the interview data as co-constructed, the contribution of participants is perhaps fading. I became particularly nervous when they asked if I could send them versions of the finished document. Would they feel misrepresented in this? How would they feel about the representations of themselves evident within the tiny extracts taken from the interviews and my commentary on these?

During the study, I had given participants opportunities to approve or revise their pen-portraits and to analyse their own data using my analysis frame. However, as these comments suggest, through analysis, the interview data assumed a significance for me which perhaps sidelined the salience of my concern for them as individuals. This was dangerous both ethically and regarding the integrity of my findings. Ethically, it meant that I might present them in ways that betrayed their sense of trust. Moreover, my reification of the data might have undermined the reflexivity which was so central to the significance of these findings. In working the hyphen then, I attempted to adopt the 'hesitancy' described by Fine, considering these students as possible audiences for the finished report. In turn, this strengthened my ability to bracket assumptions and avoid easy conclusions about motives or influences, considering and acknowledging alternative interpretations within my analysis.

It was also important to clarify to participants that their comments could be shared with a larger audience. As Fontana and Frey (2000) note, the intimate interview context may prompt interviewees to share experiences or ideas which they would be unwilling to share publicly; whilst consent may be freely given, this consent may be considered 'unknowing' if participants are unfamiliar with the contexts through which their ideas may be represented. All participants provided very detailed accounts of aspects of their

personal lives and, indeed, in the evaluation meeting, they spoke of how they had been made comfortable enough to talk freely. I was concerned that the relaxed atmosphere may have seduced them into telling stories they may not want shared publicly. I therefore attempted to clarify the various contexts in which data could be used and provided students with repeated opportunities to remove data generated through their interviews or withdraw from the study (see Appendix 14 for information notes for participants and permission form). These processes were used to attempt to establish a shared understanding of how data would be used and enable participants to retain control over what was explored through interviews.

2.2.7 Interpretative strategies

In attempting to gain critical distance from my own position, gain alternative perspectives on the data, and achieve the kind of ‘interpretive validity’ described in Section 2.1.3, I used a variety of what I call ‘interpretative strategies’. The intention here was to acknowledge and confront different interpretations in order to support more detailed analysis through what Richardson, (1997, cited in Lincoln and Guba, 2003) terms ‘crystallisation’ of findings. The focus here was not ‘checking out’ findings (Miles and Huberman, 1994) but adding to the understanding of complexity generated by the data (Graue and Walsh, 1998; Mason, 1996).

My initial plan for three phases of interviews was decided at the beginning of the study as I needed to outline its scope for participants before inviting their commitment. ‘Interpretive strategies’, however, evolved in response to emerging findings or concerns about my analysis. Whilst the value and response to each of these varied, I was therefore able to involve participants and peers at various stages of the analysis inviting them to comment on my developing thinking. During the course of the study, I drew from the following approaches:

- participant and non-English-specialist review of initial analysis;

- Non English-specialist analysis of selected extracts
- participant focus group meeting to trial final coding frame;
- peer open coding of data and peer coding using final coding frame.

These strategies are described below.

Participant review of initial analysis

Strategies were used to facilitate participant validation (Miles and Huberman, 1994) at two stages of the project. Various difficulties have been identified with respect to participant validation. Bloor (1997:47) summarises the context for participant validation as a ‘social event, constrained in this case by the social dictates of polite conversation and shaped by the biographies and circumstances of the discussants’. Indeed, Ashworth (1993) argues that whilst participant validation may be important for ethical reasons, in enhancing participant ownership in relation to the knowledge claims, this process has little relevance to validity. He argues that the salience of ‘human anxiety concerning self-presentation in the findings’ (Ashworth, 1993: 15) will affect the kinds of interpretations and representations that participants accept or reject. In attempting to reduce the importance of this social dimension, I provided participants with a series of statements summarising significant aspects of digital practices generated during the early stages of analysis, asked them to annotate these anonymously and post them back to me (see Appendix 15 for briefing notes and statements). Despite attempts to anonymise the process, most participants agreed with all statements made and offered no further comment. It is possible that the task discouraged other ideas or that they were reluctant to disagree with interpretations either because they were intimidated or found it socially awkward to challenge my interpretation. At the same time, this process did generate some alternative perspectives which are integrated into the analysis which follows.

Non English-specialist reviews of initial analysis & analysis of selected extracts

Given the specificity of the sample, I also distributed the statements to a group of nine non-English specialists and invited them to a focus group discussion to consider, review and comment on these in the light of their experience. The focus here was on contextualising and deriving multiple perspectives on the data generated by the English-specialist group rather than checking findings in order to establish typicality. Again I arranged to be absent in order to try to gather comments which were not directly generated through discussion with me. Whilst all non-English-specialists returned annotated paper copies of the analysis, only one attended the focus group discussion. This clearly provided no opportunity for the kind of discussion which I had hoped might generate different insights. Indeed, both written and spoken comments were very generic and ignored the socio-cultural dimension (see Appendix 16 for commentary on sample comments). I was concerned that the statement activity itself had limited students' responses: by providing statements, I presented them with summaries of experience only once these had been interpreted by me. Moreover, without the experience of 'Changing Views of Literacy', these non-English-specialists may have been less confident or less equipped to relate my summaries to their own experiences. In attempting to gain responses more directly arising from the interview data, I timetabled a second meeting, to which I invited all non-specialists from the year group. Just two student-teachers attended, a geography and a science specialist. I provided these with excerpts from the data, inviting them to comment on what seemed to be the significance of the digital practices described and on how these compared with their own experiences. This generated useful analyses of the data, some of which accorded with my own interpretations but some of which provided me with new possible interpretations (see Appendix 17 for commentary on sample comments).

Participant focus group meeting to trial final coding frame

I invited all participants to a final meeting to review data using the matrix that I used to support my final analysis. (This matrix is explained in Chapter 4.) Whilst only two participated, I asked them to both sort excerpts from others' interviews and place excerpts from their own interviews within the matrix explaining their justification for doing so. These meetings took place a year after the final interviews and students

themselves may have developed new perspectives and practices and been unlikely to recapture how they felt during interviews. However, whilst the small numbers perhaps limited the depth of analysis, this process provided a further angle to inform my analysis, sometimes supporting it and sometimes adding new perspectives (see Appendix 18 for commentary on sample comments during participants' coding of data extracts using matrix).

Peer open coding of data and peer coding using final coding frame

Two tutor colleagues were also involved in reviewing my analysis. One colleague was involved in open coding following the second phase of interviews, freely coding two interview transcripts whilst two each coded two interviews using the matrix outlined in Chapter 4. Their analysis was compared with my own and reasons for discrepancies explored. It is acknowledged that these meetings, like the initial interviews, were framed by the discourses evoked by my relationships with peers. However the intention was not to check my coding strategy through arriving at 'inter-rater reliability' (Miles and Huberman, 1994) but rather to interrogate my analysis and the coding frame itself: asking others to code revealed ambiguities in my categories and generated alternative interpretations which were built into the analysis. (See Appendix 19 for commentary on sample comment from colleagues' coding of data extracts.)

2.2.8 Approach to analysis

In exploring patterns of experience, systematic inductive analysis, drawing from the tradition of grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990; Strauss and Corbin, 1997), was used to examine the data. The intention here was to help avoid the 'elite bias' and 'holistic fallacy' (Miles and Huberman, 1994) that may emerge when disproportionate amounts of attention are paid to the more exotic parts of the data set. As Orona (1997) explores, the continued re-examination of data through this approach can be effective in shifting stereotypical assumptions or preconceived ideas. I therefore used open coding to highlight salient features of participants'

experience and the significance they ascribed to it and with each round of analysis, altered the order in which I examined the interview scripts in order to avoid seeing the significance of later interviews only in response to themes and patterns emerging from earlier ones. In identifying units for analysis, I drew from Alsup's work in focusing upon narratives and philosophy statements (Alsup, 2006) and added a further category, 'significance statements'. Philosophy statements were expressions of beliefs, values or attitudes whilst significance statements were those statements in which participants summarised why particular practices were important to them. Narratives focused on events including participants' stories of ongoing behaviours or actions. Occasionally narratives were divided into sub-units (or sub-plots) where there seemed to be different stages in a story which had different kinds of significance (see Appendix 20 for example of a passage annotated as philosophy statements, significance statements and narratives). Within the discussion which follows in Chapters 3, 4 and 5, philosophy statements, significance statements and narratives are known collectively as 'accounts'.

I used constant comparison analysis to re-visit the data in the light of emerging themes. This approach highlighted the contrasts between digital practices in different domains. In order to explore these contrasts, I first used axial coding, placing emerging categories relating to the students' presentations of digital practices in relation to one another. (See Appendix 21 for sample of axial coding.) Designed as an approach to generating theory around lived experience, grounded theory seems to assume an objective reality which can be uncovered through repeated analysis of the data (Charmaz, 2002). This study, however, sought, like Charmaz's (2002: 677), to explore an 'interpretive portrayal of the studied world, not an exact picture of it'. The process therefore explored what participants seemed to present as causal features and consequences, rather than drawing what could be seen as objective conclusions about causes and consequences. This highlighted that students seemed to feel they were at times creating and at others subject to the practices in which they participated. As explored in Chapter 3, Gee's theory of 'Big D' Discourses was used to explore this theme and provide a critical perspective on their presentation of experience.

This summary of stages in the process of analysis perhaps conceals some of the complexity involved in reflecting upon the data. As argued in Section 2.1.3, these interviews were constructed through various discourses, such as those of interviews, ITE, technology and literacy. In exploring how these multiple discourses inflected the interviews, particular emphasis was therefore paid to any ‘recognition work’ (Gee, 1999) that students and I did during interviews in aligning ourselves to different identities at different times, e.g. as teachers or students, digital insiders or outsiders. Throughout the study, my research diary formed the primary site for reflecting upon how this recognition work occurred. Also, a form of ‘analytic bracketing’ (Gubrium and Holstein, 2003) was used during an initial stage of open coding (see Appendix 22). This involved coding data twice: in relation to both substantive content and the process of meaning making. Coding the process involved considering how experience was represented through the interviews. In doing so, particular attention was paid to ‘membership categorisation’ (Baker, 2004; Antaki and Widdicombe, 1998), which assumes that insights into discourses can be gained through analysing how people categorise themselves, each other and their experiences. This was seen to be evident through the way participants and I:

- articulated our experiences, e.g. through metaphor (see Coffey and Atkinson, 1996);
- seemed to interpret each others’ contributions, e.g. through implied definitions;
- followed up or curtailed each others’ topics of discussion.

This process suggested that during the interviews the students and I moved between perspectives. This shifting seemed evident not just in the practices they described but the way they presented that experience: the varied and intersecting discourses of practice were overlaid by the varied and intersecting discourses of interview. Where appropriate, I integrate commentary on this process of meaning-making into the analysis which follows in Chapters 3, 4 and 5.

Chapter Summary

This chapter began by outlining this study's methodology. It explored the influence of New Literacy Studies and phenomenology in informing a study which aimed to privilege student-teachers' perspectives on their digital experience, whilst still viewing this experience as socially and culturally located. Acknowledging the situatedness of this study, the chapter explored how meaning is constructed through interviews. Having considered some of the different discourses which may have influenced meaning-making in this study, the first part of the chapter ended by emphasising the importance of achieving 'interpretive validity' through making explicit the levels of interpretation at each stage of research.

The second part of this chapter described the research design. This began by providing a summary of methods used and explanation of the rationale for the selection of participants. An overview of the three phases of interviews and the role of my research diary was followed by discussion of the impact of the relationship I had developed with participants through 'Changing Views of Literacy' and discussion of ethical considerations, with a particular emphasis on those relevant to my dual role as tutor-researcher. Interpretative strategies were then described which were designed to achieve the interpretive validity described in Part 1. These included participant and non-English-specialist reviews of data and peer and participant analysis of data. Whilst these strategies were similar to those sometimes used to claim validity through interpretative congruence, here they were used to achieve what Richardson (1997), cited in Lincoln and Guba (2003) terms 'crystallisation', generating alternative perspectives to help enrich and gain critical perspectives upon my own analysis. The chapter ended by summarising my approach to analysis.

Discourse, Identity and Practice: characterising shifts between digital practices

Introduction

The three phases of interviews generated 242 pages of interview transcript representing approximately 21 hours of interviews. During interviews, participants discussed varied domains of their lives: their relationships, hobbies, part-time jobs and experience on the course and in the classroom. This chapter begins, in Section 3.1, by providing initial insights into digital practices associated with different domains of their lives and in doing so the nature of the digital insidership they brought to the course, highlighting how digital practices were associated with the management of multiple roles. This is followed, in Sections 3.2-3.4 by an exploration of the theoretical framework which contextualises the analysis which follows in Chapters 4 and 5. This explores Gee's notion of 'Big D' Discourse and borderland discourses in investigating how the significance participants ascribed to their practices seemed to fluctuate between different domains. Particular attention is drawn, in Section 3.4, to elements of what Gee terms 'situation networks', which provide a framework for considering the salient aspects which contextualise participants' practices.

Brief pen-portraits of research participants are provided which summarise significant aspects of their practices, as presented through interviews. These are integrated within Chapters 3 and 4. In order to contextualise commentaries on interview data whilst minimising interruptions to the reader, pen-portraits are included at the top of a page close to where their interviews are first quoted. There is no assumption here that these pen-portraits summarise the full range of participants' digital practices. As explored in the previous chapter, the examples of practices that participants described and their presentation of these were likely to have been influenced by the interview context. The participants are known here as: Charlotte, Daisy, Grace, Holly, Joanne, Kate and Kathryn. All names are pseudonyms they selected themselves.

3.1 Managing multiple roles through digital practices

Analysis of these students' presentations of their digital practices provided insights into the extent of their 'digital insidership'. As illustrated by the pen-portraits which follow, whilst they used technology in flexible, varied and sometimes creative ways, there were practices in which none participated, or at least which none described. Firstly, it is worth commenting that, despite the broad definition of digital practices which underpinned this study, participants focused mainly upon accounts of digital communication and that there was only one reference to any aspect of computer gaming. This pattern may result from misunderstandings about the possible scope of the study or reflect Robinson and Mackey's findings about the range of student-teachers' digital practices (Robinson and Mackey, 2006). However, their accounts suggested that they were not web-designers or bloggers and their online practices were embedded mainly in local activities and relationships sited primarily in the physical world. Whilst they used the Internet to access global markets, there were few examples of establishing a digital presence that extended beyond existing relationships. Kathryn for example noted that she found consumer ratings and comments on websites useful but never added them herself; whilst Holly, Kathryn, Kate and Joanne all embraced Facebook, just Holly made her own pages available to unknown others. Grace was the only one to establish relationships online, through family history research, although again these new relationships were founded on existing ties. All expressed suspicion of virtual worlds.

Initially, then, these student-teachers seemed to be only partial participants in the kinds of distributed, participatory practices that Lankshear and Knobel (2006) associated with new literacies. Their practices, as Leander (2003) suggested, seemed embedded in relationships and practices primarily developed in face-to-face contexts. Whilst they relied heavily on digital communication, they used the Internet mainly as consumers not producers, using online shopping sites and browsing for information but never publishing their own ideas online. They rarely participated in online communities and were wary of sharing experiences or understandings publicly. Their experimentation with multimodal composition, exemplified in Joanne's exchange of multimedia text-

Charlotte

Charlotte was in her late 30s. Living locally, she juggled course demands with commitments to her family – her husband, 10-year old daughter and 7-year old son. Prior to the course she had a series of jobs, with which she became quickly bored. Whilst she defined herself as *not a techie*, she had worked as an IT consultant for IBM and her husband was a computer programmer. Charlotte described herself as a *control freak* and *impulsive*. In managing her complex life, she used her mobile phone to text friends and family and had recently acquired a gold Dolce and Gabbana phone, loving its glamour. During this study, she emailed her curriculum vitae to a local health club and managed to gain a part-time job to fund shopping for Christmas and her daughter's birthday presents. In managing her time, she rarely went shopping but searched for purchases on the Internet, describing herself as *addicted* to eBay, which she used to locate bargains and plan and book holidays online. In her limited spare time, she browsed the internet following up interests. Aware of social networking sites, she knew that her group of friends had a presence on Facebook but decided not to participate, feeling she did not have the time. She experienced various computer games vicariously through her children: her son played his Nintendo Wii whilst her daughter enjoyed creating a virtual identity on The Sims.

messages with her partner, for example, was nested in private relationships rather than contributing to collective forms of knowledge generation.

Initially it seemed that their practices could be most effectively summarised by using Markham's 'tool' metaphor (Markham, 2003): they used technology to achieve old purposes in new ways, such as communicating, purchasing or information-seeking. However further analysis suggested that it was this very embeddedness of technology and the links this enabled between roles that seemed to prompt them at times to approach technology-use as a 'way of being'. Charlotte, for example, conveyed the impression of being at mission control, dispensing orders and sympathy, making arrangements and organising others. She commented:

It's a standing joke in our house that our phone's always... I don't know what I'd do if I lost my phone. Honest to God, it's like absolute life as far as friends, friends at university, my friends, home, I get like, 'J _____, where are you? When are you coming home? Do I need to do this? A _____ is going here- is that all right?'

Using a single, portable piece of equipment and the conventions of fast, brief communication enabled her to make many and rapid transitions during her busy day.

Giddens (1991) notes that, in the past, transitions between identities, such as from child to adult, were marked by formal celebrations and clear understandings of the expectations within different roles. In contrast, he sees late modernity as characterised by rapid transitions between different identities: in the modern age, 'the altered self has to be explored and constructed as part of a reflexive process of connecting personal and social change' (1991:14). Indeed all participants outlined particular challenges as they managed a multiplicity of roles as mothers, daughters, sisters, partners, colleagues, old friends, new friends and trainee professionals. Of course my research design could be seen as generating such findings. The process of inviting participants to mind-map their experience in different domains may itself have highlighted this aspect of their lives. However, the interview data seemed to suggest that participants felt their digital practices not only reflected but facilitated and intensified this multiplicity. They described how digital practices were threaded through their complex lives, enabling them to move between identities and explore new possibilities. Portability and convergence, as Merchant (2007a) suggested, seemed to enable this pervasiveness. Grace spoke of texting her children when at university whilst Kathryn reported moving between a series of windows on her PC, chatting with friends whilst searching for a journal article for a university essay.

It seemed that this ability to traverse domains meant that connectedness had become an essential dimension of these student-teachers' lives. Daisy, too, for example, described how she used digital technology to manage varied relationships. Daisy, like Charlotte, stated that she could not manage life without her phone:

Daisy

Daisy, aged 19. She had grown up locally and had a strong network of friends and family who provided her main source of support during her time at university. She had very close relationships with her four sisters and brother and kept in frequent contact using her mobile phone: texting helped her ensure that the family were in touch even when physically apart. She disliked Facebook, feeling she did not have the time to participate, preferring her active, face-to-face social life. Daisy worked part-time at an after-school club and play-centre, sometimes searching the Internet for ideas to use with the children. She rarely used the Internet before coming to university but now used it extensively, to find out about forthcoming concerts, book holidays and tickets, and for online shopping. She attributed this to a combination of increased access (she now had Internet access at home) and increased need (her university course depended on it). Sometimes, she played her Nintendo DS, in order to 'relax'.

My mobile phone is integral to me as a person. I don't know how I ever used to cope without one. I love using my mobile phone, I always text a lot. I don't like speaking on the phone, I like to catch up in person. Otherwise if you speak on the phone, you've already covered everything. You don't know what to talk about. I text a lot [...] Because sometimes, you can just send a text and say I'm just doing this for a minute or let somebody know how long you're going to be. Or let somebody down without speaking to them – oh- I can't come out sorry and it's nice to let somebody know that I'm thinking about them. If I haven't seen them for ages, you can just send them a text when you've got a spare five minutes and put some nice thought into a message. Or just have a laugh when you're bored. [...] You can be talking or texting somebody when you're getting ready. Put your phone on loud speaker or speaker phone while you're writing some notes or cooking. These jobs that you need to do but you just need to have a conversation too.

Daisy's text messages were not replacements for face-to-face communication. She stated, indeed, that texting allowed more fulfilling face-to-face conversations. However, whilst her text messages had different purposes - to manage her life, maintain contact or have fun - all enabled her to play an active part of her social network even when occupied with mundane tasks. Whilst all participants talked most enthusiastically about texting from mobile phones, email, social networking sites and MSN were used in

similar ways, enabling participants to stay continually hooked up to networks of families and friends. Wellman (Wellman and Hampton, 1999; Wellman, 2001; 2002) terms this kind of experience 'networked individualism' and sees this as typical of much digital technology-use. As active participation in networks can be maintained regardless of geographical location, networked technology enables maintenance of complex and intersecting networks of contacts.

This kind of experience would seem to be important when considering the transformative agenda. Firstly it suggests a confidence in moving fluidly between relationships which could prove valuable in understanding the possibilities for learners engendered by participation in multiple communities. Ironically, however, despite the opportunities provided by the Internet to engage with wider audiences and diverse communities, this may result in a narrowing of the kinds of communities in which people participate as they use networked technology to maintain links with existing communities, even if geographically dispersed, rather than exploring new ones. Indeed, whilst this networked individualism seemed to be a feature of student-teachers' engagement with family and friends, it was notable that all demonstrated a reluctance to participate in wider networks, such as through university discussion boards or with unknown others through social networking sites. Whilst for these student-teachers, use of digital technology could perhaps be described as a 'way of being', this 'being' seemed mainly confined to local, personal relationships.

If, as these variations in practice suggested, enthusiasm and use are related to context, this may have implications for student-teachers' ability to draw from this experience in influencing their professional practice. I began therefore to focus upon what they presented as the salient features of the contexts which shaped their attitudes and uses. Importantly their sense of context seemed salient at micro, meso and macro levels particularly in their discussion of school-based practices: whilst they most frequently discussed digital practices as inflected by personal relationships, at times they explored the influence of individual institutions and at others of global dimensions or national policy. In adopting a theoretical framework to try to conceptualise this, I wanted to use a perspective which could capture this relationship between local and broader influences

whilst at the same time rooting the analysis in their accounts of individualised practices. Exploring the discourses which patterned experience seemed to offer this opportunity. In the next section, I explore the notion of discourse and explain the conceptualisation of discourse used in this study. This draws centrally from Gee's notion of 'Big D' Discourse. This is then used, in Chapters 4 and 5, to support an analysis which explores the relationship between identity and practice in these student-teachers' experiences.

3.2 Sharpening analysis through a focus on discourses

A focus on discourses offers much to understanding the variety in these student-teachers' perceptions of the role of technology in different contexts. It suggests that the significance they ascribe is realised through practice and related to shifting discourses. In exploring the relationship between practice and social, cultural and historical context, Foucault's work on discourse has been used extensively (Hassett, 2006; Garrick and Solomon, 1997). Whilst linguistic discourse analysts focus on how social relations are constructed through language, for Foucault discourses are akin to 'disciplines', structures or ways of being upheld by how people interact, the spaces they inhabit, the kinds of actions and identities that are permitted within those spaces and the way they function as communities (McHoul and Grace, 1995). For Foucault, conventions, or rules, are historically located, reflecting beliefs, values and structures associated with a particular field within a particular period (Foucault, 1972).

This perspective rejects the idea of a single essentialist 'self' and focuses on the varied roles people construct, or are permitted to construct, within different discourses. Positioning within a discourse involves behaving, doing and communicating in ways convergent with that discourse. This positioning in turn maintains the kinds of behaviours, actions and meaning-making deemed appropriate within that discourse. Power therefore is not seen as held by individuals or institutions but developed and maintained through discursive practices. This Foucauldian perspective, however, has been seen to underplay the significance of human agency as it suggests that subjectivity

is created through discourse (Holland, Lachicotte , Skinner and Cain, 1998; Benwell and Stokoe, 2006). As Benwell and Stokoe (2006: 31) write:

in this account, the development of the individual becomes a process of acquiring a particular ideological version of the world, liable to serve hegemonic ends and preserve the status quo. Identity or identification becomes a colonizing force, shaping and directing the individual.

In this study, I was interested particularly in the findings of research into digital practices, summarised in Chapter 1 (Section 1.3), which has highlighted the new kinds of identities and relationships with knowledge developing in digital environments. In attempting to explore the implications of technology for a transformative agenda, I therefore sought a theoretical framework which could accommodate such agency within an exploration of discourses. This study therefore draws from Gee's notion of 'Big D' Discourses (Gee, 1999; 2005).

In navigating theories of discourse, Gee differentiates between 'small d' and 'Big D' discourses. He defines 'small d' discourses as socially and culturally located patterns of language, building on conversation analysis, which explores patterns of language within different contexts (Sacks, 1996; Silverman, 2004), and critical discourse analysis which goes further in articulating the power relations upheld through interactions, showing how ideologies are evident through and reinforced by language. (Fairclough and Wodak, 2004; Christie, 2002). Gee explores how relationships, identities and ideologies are 'actively rebuilt' reflexively through language: people use language to position themselves in ways that are recognisable to others as representing particular identities. Through doing so, they reinforce the expectations associated with that language use.

Whilst 'small d' discourse focuses specifically on language, 'Big D' Discourse refers more broadly to the ways through which social relations are constituted and constrained. As Gee writes, 'when little 'd' discourse (language in use) is melded integrally with non-language 'stuff' to enact specific identities and activities then I say that 'Big D' Discourses are involved' (Gee, 1999: 7). Whilst Foucault focuses on institutional

discourses, Gee locates his analysis of discourses in practices. 'Big D' Discourses involve the activities through which people position themselves in different ways and the places, spaces and objects that construct and constrain social relations. As Gee writes:

Discourses are ways of being in the world, or forms of life which integrate words, acts, values, beliefs and attitudes, and social identities, as well as gestures, glances, body positions, and clothes. A Discourse is a sort of identity kit which comes complete with the appropriate costume and instructions on how to act, talk and often write; so as to take on a particular social role that others will recognize... Discourses create 'social positions' (perspectives) from which people are 'invited' (summoned) to speak, listen, act, read and write, think, feel, believe and value in certain characteristic historically recognizable ways combined with their own individual styles and creativity. (Gee, 1996: 127-128)

For Gee, 'Big D' Discourses offer ways of enacting identities but these are 'combined with individual styles and creativity'. Gee describes this process as 'recognition work' (Gee, 2005): rather than seeing identity as constructed through discourses², individuals 'perform' identity through how they align themselves and others to particular identities. New subjectivities can be created as the process of discourse creation is ongoing and mutually constructive. Agency then arises as people operating in one discourse will have experience of others. It is this that enables them to use varied resources to envision and construct new ways of being. This theorisation of the relationship between discourse, identity and practice can be illustrated by focusing on two examples from the interview data. The first explores how such identity performance may be enacted in digital environments whilst the second hints at how new practices may be associated with new kinds of identities.

² From this point forward, 'Big D' Discourses are referred to simply as 'discourses'.

Kate

Kate, aged 19, was studying for a BA Primary Education with QTS. She used digital communication flexibly, responding to the preferences of others in her choice of medium. She knew, for example, that her father preferred email but hated his mobile phone so exchanged emails with him but used her mobile to stay in contact with his wife. She described herself as *completely dependent on her phone* which she referred to as an *extension of her body*. She frequently texted people to avoid interrupting their lives, although stated that she preferred to talk live. She kept in touch with previous colleagues at the Post Office and also used texting to organise her shifts at the restaurant where she worked. As a key figure in the local Youth Theatre, she also used email and a discussion board to organise others, feeling this made this aspect of her life manageable. During the study, she discovered Facebook and had fun writing on others' walls. After a while she saw the potential of the site to meet her own ends, using it to publicise Youth Theatre productions. Her partner used MSN, which she disliked. However, as it was activated when she turned on her PC, she used it occasionally and, when she did so, was sometimes amused to find herself mistaken for him.

Kate, like other participants, juggled varied relationships and commitments alongside ITE. In outlining her use of email, Kate described the different registers she used to communicate with relatives, friends and colleagues from different domains of her life:

I suppose the way I speak to my family is more formal than the way I speak to my friends. My mum's side is more loving. Whereas they're more formal, not that they're not loving, more professional. So the way I speak to them in the emails and stuff will be more formal but they'll have sent me something first and I'll reply in the same way so I'll have followed their lead but with these this is something I've started and I did find the first one difficult because I didn't know how to address them but then I thought well, I'll have a semi-chatty style and that just seemed to work and I continued it. It's more jokey with the people from the Post Office. Whereas that would be paragraphs and more organised and I'd go through and think about what I'd said and thinking, 'should I have added something or taken it out', with them it would be more jumpy and scatty and more like how I was thinking cos that's more like how they know me as a person so they can relate to that now. If I sent them an email like that they'd think, 'She's changed at university this girl, she wasn't like that when she was in Chesterfield'. They wouldn't like it so I have to write in that way.

In contrasting the *formal, professional* family emails with the *jumpy and scatty* emails to ex-colleagues, Kate was explicit about the different personae she aimed to present. Ironically, whilst this shifting identity performance seemed to be a salient feature of her email practice, this extract suggests that her recognition work was designed to preserve a stable identity within each context. Where possible, she aligned herself with existing conventions - *I'll have followed their lead* - but where she was the initiator, she considered carefully how to perform an old identity in a new environment – *I thought well, I'll have a semi-chatty style*. It seems that conscious identity performance through digital composition was an important part of her email practice. At the same time, however, she also suggested that these identities were themselves subject to change as relationships evolved and were enacted in new contexts. This is seen in her response to my comment that she had suggested that identities performed in different domains were distinct:

Cathyone of the things that came across was being one person here and that person there

Kate I think they sort of cross over quite a bit. The friends at work become close friends and the way I communicate at work comes into my friendships with people at the Post Office [...] It does depend what domain you're in as to how you feel you behave and which sides to you come through.

Kate's comments here outlined a process of performing varied identities, moulding her identity performance to suit varied contexts and fit with others' styles of communication. Whilst no students participated in the kind of fantasy play associated with virtual worlds, and indeed all expressed suspicion of these, Holly hinted at what might be achieved through constructing an online identity on a social networking site. She began by describing the design of her MySpace page:

Holly: It's pink and black.

Cathy: Why pink and black?

Holly: Because I think that's the best colour combination. Pink and black. I used to have black hair and I used to wear pink all the time. I used to be a bit of a Goth and then pink so I like blended the two together, pink

Holly

Holly was 20 years old and studying for a BA Primary Education with QTS. She shared a house with her partner. She had moved away from home to come to university and used digital communication to keep in touch with family and friends. In her words, she was *not a geek*, but was evidently very confident in digital environments and used technology to participate in both local and global networks. She associated different practices with different relationships. For example, she had a friend who was hearing impaired with whom she exchanged lengthy text messages outlining experiences. She had tried to teach her mother to use her mobile phone but found her resistant. Her grandmother, however, was more enthusiastic and the pair used their phones to maintain frequent contact. She was interested in music and used the Internet to keep up to date with bands from the US and download videos from Youtube and other sites. She booked holidays using the web as this enabled her to create holidays suited to her needs and interests. Whilst confident with various forms of digital communication, she expressed an irritation with the kinds of abbreviations used by her friends on MSN. Holly was a keen user of social networking sites, using these particularly to maintain contact with friends from school.

and black. I even have pink nails with black stripes and stuff. I think it's a really nice colour combination.

Cathy So that's you on the web.

Holly: That's me on the web. Pink and black.

Cathy: Are you different on the web to the way you are in real life?

Holly: I'm probably a bit more confident I think. Like I'll talk to people. Like if I hadn't seen them in a long time and saw them on the street see someone I know I might avoid eye contact and walk off. But I can send them something on the web, like a message, 'what're you doing?' I'm a bit more confident in doing things like that and if they don't reply it could be because they haven't got it or something like that. It's nothing to do with them not bothered. It's that they haven't got it..... It's like it's me but it's a bit more of me.

Here Holly described an online identity which enabled her to maintain links with her old community of friends, her use of colour retaining a visual connection to the person her old friends might remember. She composed her online identity using the web-based resources available, and, in re-contextualising her old identity online, perhaps

positioned herself differently to how she had in face-to-face contexts. She stated she was *more confident* on the web, able to generate new kinds of relationship. It is uncertain whether she felt more confident than she was in face-to-face contexts or more confident than she felt whilst at school. Indeed, during participant coding of extracts, she suggested that both were significant. Perhaps this digital performance simply reflected her newfound confidence or perhaps, in this virtual space, she experienced more control over how she presented herself, possibly because she could offer friendship without having to face rejection directly and consequently was able to perform an old identity in a new way. Either way, her representation of her identity performance seemed to represent a shift which referenced both old and new contexts. She saw her page as, *me but a bit more me*: rather than positioning herself as passive, avoiding eye contact, she asserted and perhaps intensified a preferred identity online.

Whilst individuals can be seen as active in upholding discourses, they may draw from elements of other discourses so that one discourse may be 'infected', broadening to accommodate new aspects, although as Gee argues new behaviours, actions, language and so on must not be so far removed from that discourse that they are rejected. At other times, the discourse may retract, rejecting aspects which were previously accepted. Discourses can then shrink, expand or shift as different practices are legitimised or de-legitimised within them. Given this particular orientation towards discursive practice and identity, the diversity of these student-teachers' digital practices assumes a particular significance. For Foucault, 'discursive practices' are determined by accepted ways of understanding the world, reified through the institutions that have grown up around them. For Gee, however, discursive practices involve greater agency as people are able to create new possibilities through how they position themselves through those practices. Holly's presentation of herself could therefore be seen as a discursive act, reflecting her shifting relationship with others and in turn offering her new possibilities.

In clarifying this understanding of agency, it is helpful to distinguish between the kind of agency discussed here and that implied by Goffman's notions of identity performance. Goffman (1969) explores how people achieve 'impression management'

though presenting themselves in accordance with expectations in different contexts. Goffman's premise differentiates between a 'front' and a 'back' region, in which people's behaviour may contradict the identities performed in the front region: teachers in staffrooms, for example, may discuss pupils in ways that could be deemed 'unprofessional'. For Gee, too, identity work involves positioning oneself according to others' expectations - through words, actions, priorities, and so on - and likewise interpreting others' words, actions and priorities as indicative of their position. However, there is no 'backstage' here. The behaviours enacted in unofficial spaces are simply associated with different discourses. Whilst for Goffman, back and front stage performances are clearly delineated, for Gee, the relationship between identities may be less distinct and practices may be inflected by more than one discourse. People achieve this through recognition work, aligning themselves and others to different positions. In doing so, they may draw from resources made available through varied discourses, generating new possible identities as they enact new practices.

The link between identity and practice has particular pertinence for understanding these student-teachers' presentations of their experience and the relevance of this for their professional lives. It draws attention to what they suggested influenced their varied experiences and perspectives, how they positioned themselves within complex contexts and the resources they drew from in doing so. This seemed important for understanding the kinds of practices they saw as appropriate within different domains of their lives. Also, however, it enabled insights into new possible identities, exploring how intersections between discourses seemed to offer new ways of being. In exploring such new possibilities, I became particularly interested in those stories which seemed to exemplify shifts in behaviour. In theorising these, I drew from Gee's work on borderline discourses. In the following section, I explore the notion of borderland discourses, and argue for the significance of this in examining student-teachers' experience.

3.3 Gee and borderland discourses

For Gee, ‘borderland discourses’ are created through the intersection of discourses, which may structure new ways of being: he defines a borderline discourse as a mixture of discourses ‘with emergent propositions of its own’ (Gee, 2005: 31). This reflects work which has focused on ‘third space’ theory which explores the discourses available when the discourse of a ‘first space’ (a familiar environment) interacts with that of a second (Wilson, 2000). Moje, McIntosh Ciechanowski, Kramer and Ellis (2004), for example, explore continuities and discontinuities between home and institutional discourses. They focus upon the ‘funds of knowledge’ (Moll et al, 1992) developed through children’s home lives and how they may be encouraged to draw from these in institutional contexts to create a ‘third space’ in which they can draw from vernacular discourses in an institutional context.

A focus on interactions between discourses offers much to understanding student-teachers’ digital lives and may have implications for their ability to use their experience of varied digital practices in professional contexts as the discourses of their personal lives intersect with professional discourses through ITE. However, as Britsch (2005) building on third space theory explores, discourses may interact in different ways. Investigating the relationship between interpersonal and academic discourses during an email correspondence with a group of children, she noted how different discourses were foregrounded and backgrounded by children at different stages of the correspondence. Interactions between discourses may fluctuate affecting the kinds of behaviour and perspectives highlighted. Indeed this kind of fluctuation seemed evident in these student-teachers’ perspectives. As they described different practices, their presentations of the significance of these changed as they seemed to consider them from within different discourses. Grace for example shifted her perspective on her daughter’s linguistic experimentation using instant messaging. As a mother, she was concerned about the impact this may have on her spelling, commenting, *my daughter’s spelling is very poor anyhow.[...] I don’t know if going on MSN will actually kind of help that, probably compounds the problems she’s got*. As an English-specialist student-teacher, however, she was fascinated by her daughter’s linguistic experimentation, focusing on

Grace

Grace was in her early 40s. She worked hard to manage varied and extensive commitments to her family and her course. Using her mobile phone, she kept in regular contact with her husband and three teenage children. She had an ambivalent attitude towards her daughter's use of MSN, fascinated by her experimentation with language but also worried about the impact on spelling and possible dangers she may encounter online. Before the course she had gained confidence in using IT through paid and voluntary work, learning, for example, to use a computerised catalogue when working at a library and communicating with clients as a family development officer. Grace had had a longstanding interest in family history which was much enhanced through using the Internet: she had managed to locate lost relatives and sometimes found herself diverted from university-based study as she searched through family history websites. She also used the Internet to investigate possible outings for her family and help her children with their homework.

this for her assessed literacy practice investigation during 'Changing Views of Literacy'. Grace's perspective on a single practice seemed to alter as she shifted identities and framed her perspective through different discourses. Analysis in this study focused not just on possibilities for new borderland discourses but on what seemed to happen at the borderlands, the different ways that identities seemed to morph, intensify or evolve as they intersected across different discourses and different discourses were foregrounded or backgrounded, disintegrated or merged .

This focus on multiple discourses reflects a variety of other work that has explored the complexity of student-teachers' experiences by examining this as inflected by discourse. Haworth (2006) for example explored how secondary trainee English teachers accommodated dominant discourses of literacy during ITE. Drawing from Bakhtin's distinction between 'authoritative' and 'internally persuasive' discourses (Bakhtin, 1981), she explored the varied ways that student-teachers navigated the relationship between personal beliefs about literacy and curriculum requirements. She links this to different kinds of teacher professionalism which variously challenge or accommodate externally imposed requirements. Britzman (2003) adopts a similar perspective in her critique of the well-established practice of basing ITE around extensive periods of school-based placement. She shows how student-teachers may suppress possible

identities in order to accommodate culturally accepted modes of being and see themselves as successful beginning teachers. Alsup (2005) builds on this work by using Gee's concept of borderland discourses to focus upon moments when student-teachers seemed to grapple with more than one discourse, such as during clashes between personal ideologies with observed practices. For her, borderland discourses provide possible sites through which students can reconcile such tensions through conceptualising their experience in 'borderland narratives' and, through achieving a critical perspective, arrive at meaningful and sustainable professional identities. These studies demonstrate the agentive ways in which students arrive at professional identities but problematise how induction into professional discourses may limit, sideline or distort the kinds of professional identities deemed appropriate. They highlight the importance of focusing upon intersections between discourses in understanding the process of professional identity formation.

The concepts of 'Big D' and borderland discourse then are used in Chapters 4 and 5 to help understand the experiences presented by these student-teachers. Importantly, Gee also provides a framework for articulating the dimensions of context which reflect discourses. Whilst he uses this primarily to highlight the contexts which frame 'small d' discourses, this framework is helpful in drawing attention to what student-teachers suggested were salient features of their digital practices.

3.4 Situation networks

Gee, drawing from work by Hymes (1974) and Ochs (1996), defines context by describing a network of interconnecting aspects that create a 'situation network' (Gee, 1999: 83-84); semiotic, activity, material, political and sociocultural. The semiotic aspect includes the sign systems privileged within different discourses and the kinds of meanings possible through those systems. If the world can only be understood through available sign systems, this has implications for what appears to be 'real'; as discussed in Section 1.3 and 1.4, digital environments enable particular ways of meaning or behaving which relate to how the world is understood. The activity aspect relates to the

activities enacted within a particular context - what people do through, with and around technology and what social function they perform - whilst the material refers to the physical dimension: the spaces that are available, ways these are used and the objects and people that are present. As Davies (2006) argues, notions of space in networked worlds differ from those in the physical world: spaces are created textually and vary for different users at different times; it is easy to move between spaces and 'presence' is defined by behaviour within texts. At the same time, life in virtual spaces intersects with life in physical space. The political aspect relates to the distribution of 'social goods' (Gee, 2005: 84) which include whatever is deemed of value within a particular discourse and so are associated with power or status. Finally, Gee describes the sociocultural aspect as 'personal, social and cultural knowledge, feelings, values, identities and relationships relevant in the interaction, including, of course, sociocultural knowledge about sign systems, activities, the material world and politics' (Gee, 2005:84). This emphasises how people draw from culturally located ways of understanding the world in enacting and making sense of situations and can be exemplified by considering the following excerpt from the interview data. The commentary shows the relevance of these five dimensions and also highlights how intersections between discourses seemed significant. In it, Kate discusses her father's preferences for using email as a means of communication.

My dad is very different. He cannot speak to anyone on the telephone. He will sit there and grunt. He's really not very good at it but he's quite into email, if you want to speak to him, he wants to email you. He's a lecturer and that's what he does. His life is about communicating with students and professional things and that impinges on his personal life as well. I think he finds it difficult to just sit down and make chitchat. He has to talk about something that he thinks is important. So if he wants to say something to you, he has to email you. So if he goes on holiday and you say, 'Did you have a nice holiday?' he'll say, 'Yes- it was very nice, thank you'. But then a couple of weeks later, you'll get a written report of the holiday with day by day accounts of where they've been, which is quite odd, but it's just what he does.

Kate used mainly texting to communicate with her friends and family so her father's emails (semiotic) were unusual as a prime means of keeping in touch. She presents her father's online identity as one forged through a melding of academic and paternal discourses: his life was about *professional things* and he sent a *written report* and

accounts of his holiday. However, living away from him (material), she was used to her father's use of email and read their father/daughter relationship into the ostensibly impersonal messages. Performing recognition work, she interpreted those messages in the light of her knowledge of him and his use of communication, and seemed to see them as representing affection he felt but did not express (activity). Whilst the activity performed ostensibly involved distributing information about a holiday, she 'read' it as an expression of parental affection, interpreting the semiotic and activity aspects through drawing upon the sociocultural.

Issues of power are interesting in Kate's presentation of her father's practices (political). She suggests that, by refusing to participate in a discourse which values instant and ongoing communication and recruiting his academic discourse to personal interactions, he asserted his control within the relationship. Whilst Kate's account may suggest that she tolerated and perhaps colluded in her father's positioning, she also seemed to see his behaviour as inappropriate and perhaps anachronistic: he was *very different* and *not very good at* oral communication. Her comments perhaps suggest that she failed to challenge the status her father assumed through his messages but felt that it was the flexibility and responsiveness that she showed in her communication which would ultimately afford her power in varied and flexible environments.

This example illustrates how attention to the aspects of Gee's situation network helped focus upon the discourses which seemed to frame practices and also how these discourses appeared to merge and intersect. By highlighting the salient features of these pre-service teachers' digital practices as they moved between different contexts, this informed my interpretations of how different practices and spaces intersected with the identities they constructed and how different kinds of experience were valued (or not). The importance of discourses here was in going beyond a focus on what it might be possible to achieve using new technologies to explore how student-teachers suggested that possibilities were mediated, celebrated, marginalised or ignored. It explored how power was infused and distributed within such discourses, highlighting the kinds of digital practices which student-teachers suggested afforded them status and the extent to which they felt inhibited by or felt able to initiate digital practices. The following

questions were therefore used to support this process of investigating significance and salient features by focusing on discourses:

- How do student-teachers' practices relate to different discourses?
- Which identities are associated with their digital practices?
- What do these identities allow or deny them in their professional lives?
- What tensions do they experience between discourses and how do they position themselves in relation to these?

There are philosophical tensions between the influence of phenomenology and a focus upon discourses. Whilst phenomenology explores subjective experience, a discourse perspective sees that experience as inevitably inflected by social, cultural and historical structures. It is acknowledged that this focus on discourses could have resulted in an overly structured analysis of the data which ignored the complexities and contradictions of lived experience. As Giorgi notes:

An ambiguous description of a phenomenon that is historically ambiguous communicates a type of clarity. It is better to be respectful of the given and capture it as it really is than deal with clarities that do not reflect the true state of affairs. (Giorgi, 2005: 81).

The focus on discourses here however provided a critical stance towards participants' subjective accounts and highlighted how they seemed to experience the patterning of such discourses. This provided insights not only into what they did, but what they felt able to do in different contexts and the factors they felt were influential.

Chapter Summary

This chapter began by exploring the extent and limitations of these student-teachers' digital insidership. Whilst their practices seemed to only partially reflect the distributed, participatory practices that Lankshear and Knobel (2006) associated with new literacies, distinctive aspects of their practice did suggest that at times, technology in their lives was conceptualised not just as 'tool' but as 'way of being'. Particularly significant here

was how technology facilitated rapid movements between multiple roles and this seemed to support the kind of networked individualism described by Wellman (2002). This analysis also highlighted, however, the varied sense of confidence with which student-teachers engaged with digital environments. Gee's theory of 'big D' Discourse was described in establishing a theoretical framework to support further analysis of this variation in Chapters 4 and 5. This asserted a reflexive relationship between discourse, practice and identity and provided a means of examining how student-teachers' practices were both patterned by discourses and ultimately patterned the contexts in which they were located. It drew particular attention to the borderlands between discourses citing previous studies which have gained insights into student-teachers' professional identity development through exploring tensions between different discourses. Finally, Gee's situation network was described. This highlighted dimensions of experience that interact in upholding discourses: political, sociocultural, material, semiotic and activity. It was argued that this provides a framework for examining the aspects of experience which these student-teachers seemed to feel were significant in affecting how they positioned themselves in different contexts. Indeed, reference to these different aspects is threaded through Chapters 4 and 5 and informs reflections on the relationship between context and digital practice which open Chapter 6.

Digital practice, discourse and identity in student-teachers' lives outside the classroom

Introduction

As explored in the previous chapter, Gee's notion of 'Big D' Discourses highlights a reflexive relationship between identity, discourse and practice. At the same time, the concept of 'borderland' discourses allows consideration of how different discourses might intersect and ultimately generate new discourses. Whilst digital practices might emerge within existing relationships and communities, it was possible that, as student-teachers engaged in new kinds of practices, they performed identities in new ways or forged new kinds of relationships. This chapter therefore draws from Gee's notions of 'Big D' Discourse and borderland discourses in analysing student-teachers' experience in their lives outside school and exploring further the nature of their digital insidership. Section 4.1 begins by outlining a matrix used during analysis to highlight different kinds of relationships between identity and practice, considering how participants seemed to use practices to reinforce or reconfigure existing identities and the varying levels of empowerment with which they were associated. This is followed, in Sections 4.2 and 4.3 by analysis of student-teachers' presentation of their digital practices, whilst Section 4.4 draws from this to define the quality of their digital insidership and consider how far these student-teachers seemed to draw from the social affordances of new technologies.

4.1 Analysing student-teachers' experience of between identity and practice

In order to analyse student-teachers' experience in a way relevant to the transformative agenda, there seemed to be a need to differentiate between those digital practices which mediated new possibilities and those which reinforced old ways of being. In supporting

analysis, then, student-teachers' descriptions of practices were considered along a continuum which distinguished between practices which they suggested reinforced the nature and quality of existing identities and those which seemed associated with what might be seen as some reconfiguration of identity.

Reinforcing identities \longleftrightarrow Reconfiguring identities

Practices associated with reinforcing existing identities were seen as those through which participants maintained existing positioning towards others, effectively deploying a new practice within an existing identity. Kathryn, for example, spoke of how she had valued the use of a web-cam in maintaining her relationship with her mother when she first arrived at university. Practices associated with reconfigured identities, however, were those that seemed linked to a shift in the nature or quality of participants' relationships. Charlotte, for example, felt that the respect she should be due as a customer was undermined through the informality of an email exchange with a holiday company representative. In distinguishing between existing and reconfigured identities, no assumptions were made about specific qualities associated with each category.

'Existing' and 'reconfigured', for example, were not intended to be equated with 'reactionary' and 'progressive' or with the two 'mindsets' described by Lankshear and Knobel (2006). Instead the focus was the student-teachers' own perspectives on their experience and how digital practices seemed to entrench or challenge how they performed recognition work in different contexts. The potential breadth of reconfiguration was seen as wide-ranging, encompassing both slight and more radical alterations in how participants felt they positioned themselves and felt positioned towards others. At the same time, shifts in practice sometimes seemed to generate implications for the expectations placed upon student-teachers by themselves and others. Grace, for example, used her mobile phone to stay in constant contact with those around her but, at the same time, commented on how this generated its own pressures: performing identities as mother, friend and student relied on this ability to traverse

social fields and generated an intense sense of responsibility with a consequent risk of failure.

So regardless of how participants positioned themselves through their digital practices, the interview data suggested that they felt empowered through some practices and disempowered through others. This affective dimension seemed important here. It supported a distinction between student-teachers' perceptions of what they felt able to achieve through digital practices and the way they experienced these possibilities. In exploring this experience, I began to differentiate between accounts in which they suggested they felt empowered and those in which they suggested they felt disempowered.

Accounts of disempowerment \longleftrightarrow Accounts of empowerment

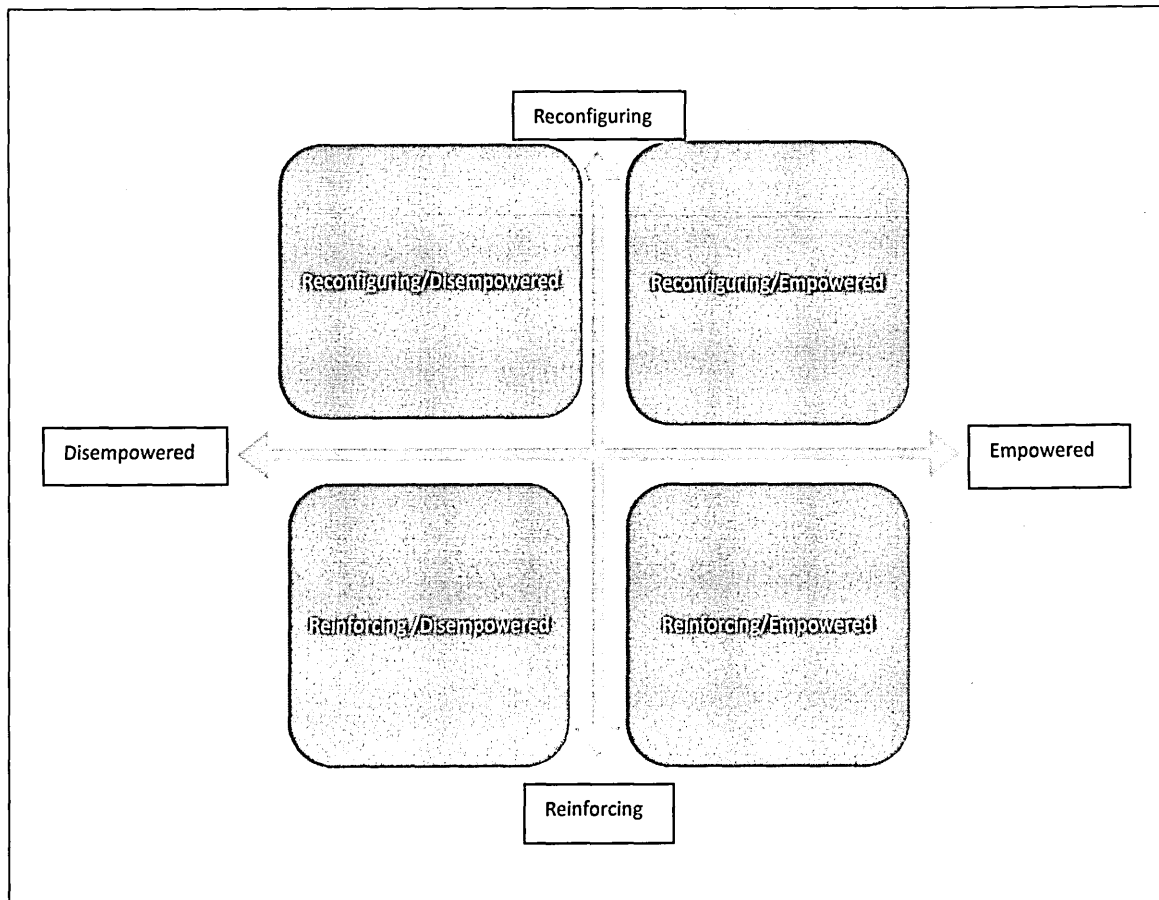
This distinction between accounts of empowerment and disempowerment related to the affective dimension of their narratives. It was not intended to signal levels of empowerment in terms of radical political action. Accounts of empowerment were typically accompanied by reference to success and confidence. In these, participants spoke of effectively negotiating discourses and enacting identities which had status within those discourses. Accounts of disempowerment were often marked by feelings of frustration, irritation, inadequacy or uncertainty. They told of practices in which participants felt unable to be proactive or agential and were associated with uncertainty or discomfort within a discourse or being placed in a position of little status. It is worth emphasising that this focus on empowerment/disempowerment related to feelings associated with digital practices rather than operational dimensions of digital literacy. It included feelings about how they felt positioned by digital practices as well as feelings associated with their confidence in participating in practices.

In order to capture this relationship between what student-teachers seemed to achieve through digital practices and their feelings about doing so, I became interested in the

relationship between feelings of empowerment/disempowerment and the reconfiguration/reinforcement of existing identities. It seemed that this relationship offered potential for understanding these students' experience as they moved between discourses. It juxtaposed what they suggested was enabled by new technologies with their experience of such possibilities. In doing so, it helped explore the nature, quality and conditions of their 'digital insidership' and provided a means of highlighting what happened as different discourses intersected.

In exploring this further, I re-categorised the data, plotting students' accounts of digital practices within a matrix which juxtaposed the reconfiguration or reinforcement of existing identities with feelings of empowerment/disempowerment. (See Figure 4.1.)

Figure 4.1: Matrix used for analysis



Importantly, there was no clear separation between experiences in each quadrant. Student-teachers' feelings about practices and the possibilities they engendered seemed

to alter. As is evident in the commentary which follows, their representations of practices shifted up and down and from left to right. Practices which participants initially seemed to associate with existing identities sometimes seemed to enable reconfigured identities to emerge. Moreover, participants' accounts of disempowerment were often associated with entry to new contexts within which they might eventually feel empowered, and at times practices which were initially empowering had consequences which ultimately seemed to result in disempowerment.

However, the process of allocating practices to quadrants itself drew attention to this shifting nature of experience. The analysis which follows then not only acknowledges this fluidity but sees it as central to their experience. Section 4.2 focuses broadly on accounts of empowerment and 4.3 on accounts of disempowerment. This highlights the varied ways in which student-teachers seemed to experience the relationship between practice and identity. In describing the salient features of that experience, it draws from the five aspects of Gee's situation network, outlined in the previous chapter: material, activity, sociocultural, political and semiotic.

4.2 Accounts of empowerment and reinforcement

All participants provided accounts of empowerment in which they suggested that they engaged in digital practices through which they reinforced existing identities. It seemed, however, that this reinforcement played out in different ways. Sometimes it seemed that their digital practices worked to cement, sometimes mould and sometimes re-cast existing identity positions. These differences are explored below.

Some practices seemed to emerge from and cement existing identities, drawing from ways of being that had been negotiated in previous social interactions. The reasons for a particular practice were often historical. So, for example, Joanne used email to communicate with friends she had made whilst working at the Post Office as this had been the prime mode of communication whilst she was employed there but texted

friends she had met recently at university. Participants also spoke of how they used different media and modes to communicate with different people, often accommodating others' digital preferences. Holly, for example disliked MSN but used it with her partner who relied on it whilst Kate emailed her father, feeling that as a university lecturer he was comfortable in using the medium. This suggested a new dimension to 'knowing' someone: this involved knowing their preferences regarding digital communication and their confidence in using it. This included, as one non-English-specialist suggested, being familiar with how different individuals expressed themselves through digital communication. Some practices therefore seemed to emerge from existing identities, providing new ways of performing, and cementing those identities.

Sometimes digital practices seemed to develop as a change in circumstances demanded new ways of enacting established discourses. Daisy for example described a multimedia text-message sent to her absent sister during a family meal:

.....our family's big on curry and my sister, she's just moved. So she's not in the area for our curry to deliver to her so I videoed myself eating a poppadom and some onion salad and said 'ooooh this is really nice, having a 'Kams and Sams' – that's what they call our takeaway and sent it to her. [Laughter.]...to peeve her off cos she just sent me a picture message with a photo of all curry and things, obviously not knowing that we'd ordered a curry at same time and because ours is better and she's missing it, I thought I'd send her a video....

Texting here seemed to offer Daisy a way to be with her sister that was accommodated within the family discourse. The material aspect was important here - the family was spatially separate but the phone enabled them to meet up, bridging the geographical divide. Through sending the text, Daisy not only seemed to involve her sister in the family evening but did so within existing ways of relating to her sister, generating humour through teasing her about her absence - she could see but not eat the curry- and Daisy, performing recognition work, playfully evoked sibling rivalry through the use of video to outdo her sister's photograph.

Joanne

Joanne was aged 24. She had had a variety of jobs outside education before starting her course, including work at a Post Office, restaurant and leisure centre. She lived with her partner and worked hard to maintain her strong network of friends and family. 'Care' and 'love' featured regularly in Joanne's descriptions of her digital practices. Whilst she described herself as *not computer literate*, she moved between various modes of communication as she maintained contact with different friends and family members and was proactive in encouraging others' use. For example, she bought a mobile phone for her partner's mother to enable constant contact and provide emotional support. She used the Internet extensively to save time and enjoyed receiving the multimedia text messages sent by her partner (who she felt was far more *romantic* in text-messages than in real life). She was very committed to her future career in teaching, and cited her love of children as her main motivation. She had recently been introduced by fellow students to Facebook, and was fascinated by the new communities she found there. She talked frequently about her lack of confidence and suggested that this explained why she did not contribute much to online discussions, although the varied practices she described suggested that she was highly competent in negotiating new environments. She was similarly reluctant to contribute to university-based online discussion boards, feeling her contributions could be viewed negatively by other students.

Some practices which cemented identities seemed to involve using the affordances of new technologies to occupy old positions. At other times, participants described incidents which seemed to involve recruiting practices from one context in order to mould an identity in another. Joanne, for example, had a supervisory role at work and spoke of using text-messages to manage others whilst avoiding offence:

at work, because I work at a health club, cos I work at a health club in town, a lot of what I do is text-messaging...it's mainly to do with, as I say I'm duty manager, if I've gone in and I haven't got a duty team, nobody's turned up which is always quite helpful [laughter], we have to be there at six in the morning because we open at half six, there's something about phoning somebody at that time which I just can't do even if they are meant to be on their shift. I just can't do it so I send a text message [laughter], 'I think you should be here.' Things like me not wanting to impose but also cos I don't want people to think badly of me and I think if I phone them at six in the morning, as soon as the phone goes down, they'll be going, 'what is she up to?' and probably calling me every name under the sun

Joanne seemed to engage in digital practices that enabled her to operate within a discourse of work through practices associated with her personal life. As shift manager, she had to contact absent staff. In doing so, however, she tried to avoid displaying her own power but attempted to perform an identity which was supportive and sensitive: she *just can't* telephone people and wanted to avoid others *thinking badly* of her. Again the material dimension was significant. However, Joanne did not simply use a tool (a phone) in a different context but seemed to hope to transfer with it the identity associated with its use in other contexts. Joanne seemed to be acting at the borderland between her personal and occupational identities. By texting her staff, it seemed that she attempted to fulfil the role demanded by work whilst overlapping this with her preferred identity as supportive and sensitive. Of course there is a danger of over-interpreting the significance of this in the absence of everything else Joanne may have done to perform her supervisor identity. Moreover she could not capture her colleagues' response: they may have interpreted her texting as just as intrusive as a telephone call or, as one of the non-English-specialists suggested, felt less inclined to respond if its tentativeness undermined her authority. However, it did show how participants might transfer digital practices from one discourse to another in order to mould identity performance.

Whilst the practices described above seemed to cement or mould existing identities, at other times, participants described the emergence of new practices, as technologies introduced for one purpose became recruited to another and this perhaps had its own implications for identity performance. In her home life, for example, Charlotte seemed to maintain her role as carer partly through her digital practices. Concerned about her daughter's safety when walking home from school, she bought her a mobile phone. Having done so, however, she found other uses:

Charlotte So my daughter's 10 and she just started walking to school a year ago with lots of friends so I bought her a mobile [laughs]. I sort of rebelled against this mobile because of [indistinct] it'll fry your brain, as you do, but then she started walking and I thought, 'no- I need to get hold of her, I need to know she's all right.' So, I said, 'OK – you can have your mobile but it's for this purpose.' So actually I am really glad I did that now because I spend quite

a lot of time texting H____. She went to guide camp this weekend and we sort of batted back and forwards quite a lot over the weekend, like, 'What are you doing?' 'What are you eating?' You know like really simple things that means you can keep touch but in a different way to phones.

Cathy Why different?

Charlotte I think there's a lot that goes inside a text to H____. It can be just one or two words. You know, it's just to keep hold of home.

Charlotte purchased the mobile phone in order to supervise her daughter's safety. Once introduced to the relationship, however, it seemed to become infused with new meaning and new practices emerged. Whilst initially the text-messages seemed to operate within a family discourse which positioned Charlotte as supervisor, they seemed overlaid by a different kind of maternal identity as she began to regularly exchange text-messages with her daughter. Charlotte suggested that the words in the text-messages took on a significance that went beyond their literal meaning: they were intended, and she hoped read by her daughter, as a link with home. She commented: *there is a lot goes into a text to H____. It can be just one or two words. You know, it's just to keep hold of home.* The semiotic dimension was infused with new meaning when interpreted from the sociocultural. Whilst Charlotte evoked a discourse of parental responsibility in justifying the purchase of the phone, in practice she suggested it became more significant as a way of strengthening her relationship with her daughter. There seemed to be a shift in the kind of recognition work she suggested she did with the phone as she and her daughter developed texting practices, perhaps reflecting the more even power relationships that were developing as her daughter grew older. Whilst it may be presuming too much to conclude that such practices enabled Charlotte to achieve a new kind of identity, it does seem that the identity she performed through her texting practices was re-cast as the phone became more than a tool for reinforcing parental supervision.

In exploring this relationship between existing relationships and new digital practices, it is worth noting the process through which new technologies or digital environments

were introduced. Participants spoke of inducting friends and family into digital environments and being inducted themselves. As illustrated in Joanne's description of how a friend introduced her to the social networking site, Facebook, this process seemed to provide the confidence needed to try new experiences:

Yes- I got an email saying that S_____ had added me as a friend and was just like, what? And followed this link and got onto Facebook and I think I was actually texting him while I was on it, saying, what? What is this? And then I started seeing names of people in the class and I thought, What are these people doing on here and I don't, I just don't know about it. There were so many people that were already on Facebook that I didn't know were there. So I got my little profile, I got that set up. I must admit, S_____ sort of talked me through how to do it [...] I haven't formed any groups....I was sent one by K_____. K_____ sent me the 'I love pens' group [Laughter] So I joined that one.

Here the new practice emerged from an existing identity: Joanne's friend introduced her (electronically) and she found herself in an unfamiliar world. The new practice here was supported by old ones: Joanne texted her friend who guided her through the new site and, whilst surprised by the new environment, she saw it as acceptable as it was already inhabited by her network of friends. Her participation seemed to be both playful and tentative: she stuck with the friends she knew but in doing so seemed to feel she had crossed a border to a new way of behaving, engaging in the kind of participatory new literacies described by Lankshear and Knobel – she joined the 'I love pens' group. Importantly she presented her experimentation as incremental and well-supported: she experimented with new practices with her existing friends and in doing so seemed to find a new way of performing identity through a new medium.

Engaging in practices which seemed to reinforce existing identities then, these student-teachers suggested that they engaged in recognition work through their choice of mode, medium of communication and composition choices (both visual and verbal). Through these, they seemed to align themselves to different identities and manage and maintain sometimes challenging relationships through the activities they enacted using digital media. These examples also highlight the sense of agency associated with their practices. Participants understood how relationships were constructed differently in

different environments and drew from different digital resources in performing recognition work. At the same time, the reflexive relationship between identity and practice was important. Shifts in ‘ways of doing things’ seemed to be accompanied by subtle shifts in modes of interactions which sometimes seemed to tug at existing relationships.

As none of the practices described seemed to represent reconfigured identities, it would be inappropriate to suggest that they could be attributed to borderland discourses. However, they did seem to include some aspects of transition or what might be viewed as borderland activity: digital practices were inflected by different discourses as participants found themselves in borderlands between and within identities and practices. For Daisy, a tool- her mobile phone- enabled her to overcome physical borders to involve her sister. Joanne played the borderland between personal and occupational identities, recontextualising a personal practice in order to achieve recognition work as a sensitive supervisor. Charlotte meanwhile seemed to straddle the border between two dimensions of her maternal identity. The process of crossing borders into unfamiliar environments was explored in Joanne’s description of Facebook and it was notable how this process was eased as it was mediated within existing discourses. In each of these examples, as participants began to discover the social affordances of new tools, they seemed to be empowered to achieve something new. Whilst in no case did the social goods valued seem to shift, the ways in which they were generated perhaps did. As they developed new practices, they developed new ways of performing recognition work within existing identities and, through doing so, perhaps paved the way for more significant shifts in how they related to others and the world around them.

4.3 Accounts of disempowerment

Whilst the accounts referred to above seemed to describe practices through which students felt empowered, at other times they seemed less confident. In commenting on accounts of disempowerment, this section focuses particularly on practices associated

with their university life. This is not to suggest that this was the only context in which they seemed to associate digital practices with disempowerment. All participants and non-English-specialists, for example, spoke of the possible vulnerability caused by misinterpretation within electronic environments and the care they took to compose text-messages and emails in order to avoid this. As all student-teachers, however, associated some university practices with disempowerment, this seemed an area worthy of close analysis, particularly as the characteristics of this experience and its apparent significance for identity performance varied a great deal.

Whilst Kate exhibited considerable confidence in her ability to move between modes and media in her digital communication with friends and family, she expressed unease about using digital communication within the university environment. She described, for example, the dilemmas caused by a requirement to email a tutor:

You know this children's reading group, I had to email T___ to say that I wanted to go and I thought with so many emails I send, I suppose now kids at school got told how to email, but when I was at school, you didn't get told because it was only just starting so with these, I can say, 'Hi everyone, how are you' ... and with my dad I can say what I like and my friends at work, we've got our own greetings for each other [Laughter] But with T___ because it was a formal email, I didn't know how to start it... Because with a letter you'd put 'Dear T___' or a card, you'd put 'To T___'. But I sat there for ages thinking, 'I don't know what's the correct protocol to email a tutor, I really didn't know what to say'. In the end I just put 'T___' cos I couldn't think of the word to put before and I was quite formal and probably sounded quite short and blunt and it wasn't meant to be but I thought I don't know what to do.

Kate reported struggling to find an appropriate register for her communication with a tutor. She suggested that her confidence and sense of control dissipated as she tried to accommodate conventions developed with friends and family with the recognition work she wanted to achieve through her relationships with university tutors. This difficulty could have arisen because, in contrast to her other online relationships, she had not yet established a face-to-face relationship with the tutor. She was not simply transferring a relationship into an online context within an existing identity but grappling with a new

kind of relationship that may, as one non-English-specialist suggested, be quite different to the relationship she had with teachers whilst at school. Kate seemed to feel she must cross a border between discourses but was uncertain how to negotiate this within a digital environment when her experience of using digital communication derived from informal contexts and she was unsure about power relations within a university discourse.

Of course, as suggested during the participant focus group, such concerns may have been short-lived. Once Kate had emailed the tutor and received no reprimand, she may have felt confident when required to send future emails. However, there were other contexts in which this sense of disempowerment seemed more sustained. Particularly notable were references to Blackboard, the university's virtual learning environment, designed to support student autonomy. Through this, student-teachers could access extensive resources, course and module information, along with discussion boards designed to promote dialogue amongst student-teachers and address queries associated with assignments. Grace, for example, commented on the value of the virtual community created through this online resource.

I do think it's useful, I think it links you in more. I suppose without Blackboard, you could be a lot more isolated. You somehow feel part of something because of Blackboard as without it you might feel very much on your own and you might feel you can't ask because you're going to be a nuisance.

Initially this focus on networking could be seen to meet the needs of the networked individual: as Grace stated, connectedness was important here: it *links you in* and makes you *feel part of something*. Despite the possible sense of empowerment, these comments suggest that she positioned herself as a receiver of fixed knowledge: Grace welcomed the resource as without it you *might feel you can't ask*. The network was about reassurance rather than gaining a voice. Similarly, Charlotte noted the role of Blackboard in negotiating the discourses associated with university life:

Blackboard-that's my sanity, really. You feel in control when you're on there-you feel like you know what you're doing. You know, I try to go on every day for at least 20 minutes and I go into all the modules and skirt round, make sure I've

not missed anything, print off any slides that I need, double check the tasks. I sort of read all the assignments at the beginning of the year as well so I actually knew what was coming and somebody said to me yesterday, 'You're really organised.' Actually, I'm really not- I'm absolutely messy to the point of ridiculous but I think Blackboard makes me feel better. It makes me feel like I know what's coming.

Charlotte presented Blackboard as a fixed place – she was *on there* and *goes into* all the modules. Unlike the moving spaces and portable technology which characterised digital practices in her real life, this was fixed institutional space. Blackboard was Charlotte's *sanity*, enabling her to manage the multiple demands of the course. Other students suggested that Blackboard was more than a support. Kate suggested its breadth and reach:

it's almost like a centre for everything at the university for communication and you can't...and that's the centre and everything branches out from it but if you weren't there, you'd completely, everything would bypass you and you wouldn't have a clue, really

Like Charlotte, she saw it as a place necessary to visit – *if you weren't there, you'd completely, everything would bypass you* - but, rather than being characterised by the kind of flexibility and support intended by the course team, it felt dominating: it became *the centre*, a powerhouse of information that must be absorbed and managed. It was only by being *there* that it was possible to navigate the course. What was interesting however was the discourse of learning which seemed to underpin what these student-teachers saw as significant about university-based digital practices. Learning on the course, as exemplified through these practices, seemed to involve managing demands that were externally imposed. From the political dimension this suggested they were positioned very much as passive learners who used Blackboard to ensure they were organised and did not miss or misinterpret requirements. Whilst Grace and Charlotte seemed to link their engagement with feelings of empowerment, enabling them to manage the complex demands of the course, their success seemed framed within a discourse of passive learning.

Whilst these accounts seemed to provide examples of how student-teachers might *assume* identities made available, other available identities were *rejected*. In an attempt to promote student cooperation and collaboration, the course team established various online fora (or ‘discussion boards’) designed to enable student-teachers to discuss issues and post queries. Whilst issue-based discussion boards were often underused, those marked for assignment queries were used extensively by some student-teachers. All those interviewed, however, avoided them, variously irritated or intimidated by others’ behaviour on the boards. Kathryn, for example, commented on why she rarely contributed to discussion boards:

I don’t know. Sometimes I think that the things that have been posted are really stupid so I won’t dignify them with a response. [Laughter] You know things that I think people could look up for themselves and sometimes I think it’s not really used as effectively as it could be [...]. And you can go on and think, ‘Oh- there’s nine new messages’, but half of those are just that kind of response but you think ‘fair enough’ but couldn’t you have done it another way. So you can spend too long looking at these things. Maybe don’t have much relevance to you. I think as I say maybe it could be used more effectively. I wish people could think about things more before posting it straight on...cos I think you’ve got to learn to do things for yourself and then if you’re really struggling post it on.

Kathryn noted her frustration with what she saw as the low level of engagement exhibited by others on the course. Whereas the examples above suggested that Kate and Charlotte saw Blackboard as a place to be visited, Kathryn’s comments here suggested that the discussion board constituted a space through which varying identities were being constructed. Others’ actions defined the kind of space it became and Kathryn performed recognition work by distancing herself from it, rejecting the identity as dependent student she associated with participation. This seemed self-reinforcing; because others used the discussion boards to post what Kathryn *won’t dignify with a response*, other kinds of contributions became inappropriate and excluded those searching for a more considered or critical stance. In this extract it is possible that Kathryn was encouraged to expand on her dismissal of Blackboard by my laughter: I may have encouraged her to overplay her scorn for other users. Moreover, in discussion with me, she may have emphasised the role of students in creating the culture and tactfully ignored the role of staff. This behaviour may have reflected and sustained

Kathryn

Kathryn was 19 years old. She saw herself as a confident user of digital technology. Having grown up in North East England, moving to start the course meant leaving her very close family. Soon after arriving, she set up a webcam for webchats with her mother and used MSN extensively to talk to her brother. She had an interest in fashion, and had considered a career in this area. During her holidays she still worked in a women's clothes shop, advising the owner on recent trends researched using the Internet. At the beginning of this study, she had just set up her own homepage on Facebook, encouraged to do so by a friend. She described herself as an 'observer' rather than a contributor, enjoying lurking on others' pages rather than adding to her own. By the end of the study, she had become a proactive user, recruiting friends to set up their own pages. This paralleled a more general trend across the university for Facebook use. She did, however, carefully guard her own privacy only allowing known friends to visit her page. She was a digital archivist, retaining messages on her Facebook 'wall', text-messages and emails so she could revisit messages she felt were important. She was committed to her academic and professional development and, unlike many of her peers, had drawn extensively from online journals to support her studies.

broader discourses of learning within the course or may have derived from prior assumptions about learning which superimposed a discourse of dependence upon a course designed to promote autonomy. Nevertheless, it seemed that the discussion board gained meaning through behaviour within and around it and participants' comments highlighted the tensions that arose when they entered environments patterned by unfamiliar discourses.

Whilst all participants avoided discussion board practices, participants' feelings about them varied and illustrated how professional, academic and interpersonal discourses interacted differently for each individual. Whilst Kathryn avoided the boards through frustration, Kate expressed concern about maintaining a professional identity in her online presence, unsure how to do this within the discourse of dependence created on the boards:

I wouldn't ask something myself but I would answer something someone else said but anonymously, but I think I've said this before, I don't want people to form an impression of me...[...] I see digital communication as something more formal. Like in the discussion board, I wouldn't want to display my personality.

I see it almost like a professional thing in which I need to conduct myself in a certain way

Kate's reluctance to display vulnerability seemed associated with anxiety about identity performance. Kate seemed to see a contradiction between asking a question and being professional. For her, contribution would involve *displaying* her *personality* and she was concerned that this could jeopardise the professional identity she cultivated. She did not seem to associate professionalism with vulnerability and this meant that, for her, the discussion board was inevitably a formal space rather than one for tentative discussion of emerging thoughts.

In contrast, Grace associated avoidance of the boards with a different perception of professional identity. Whilst Kate could not reconcile vulnerability and tentativeness with professionalism, Grace seemed to view non-participation as unprofessional:

Grace *They're useful sometimes but they are, at other times, quite difficult. And I feel as well a responsibility in replying to something and I'm saying, 'Well, I'm doing it like this' and I think, if people take my word for it and I'm totally wrong then you know that's going to be really awful.*

Cathy *But you still go on there. What makes you go on there?*

Grace *I think because the idea is that it's to help each other, I do feel as if I should contribute...I perhaps don't contribute as much as I should. It's only if I'm quite clear about something.*

Grace seemed to feel an obligation to participate which seemed to have little to do with extending her own learning and more with being a 'good' student. Through Blackboard, it seemed that she felt that the identity of 'good' student was expanded to include responsibility to peers. Indeed, Daisy too seemed to feel this, commenting, *I think I've only done it a couple of times. Just to show that I am actually looking at it as well.* For Grace, however, this responsibility was double-edged: she felt guilty for not contributing more often – *I do feel as if I should contribute* - but, when she did so, worried she may be misleading others: *I think, if people take my word for it and I'm*

totally wrong then you know that's going to be really awful. Once refracted through the discussion board, collaboration became less about negotiating learning and more about *getting it right* or, as one of the non-English-specialists suggested, demonstrating a willingness to collaborate. There seemed to be a clash between discourses of collective and centralised knowledge and Grace seemed to feel disempowered as she was unable to confidently perform the recognition work that she felt would cement her position as good student.

These narratives of disempowerment seemed to highlight feelings of discomfort, confusion or vulnerability caused as students struggled to perform recognition work within unfamiliar discourses. Such problems seemed to be exacerbated when contexts were framed by contradictory discourses: for example, as the discourse of collaborative learning which the course team aimed to promote intersected with a discourse of learning through transmission. These students did not seem to consistently experience the kind of connectedness which has been associated with the building of successful online learning communities (Thurston, 2005). Instead, as Whitworth (2005) suggests, the culture of the virtual learning environment was constructed through use and filtered through values implicit within both its design and mediation within the wider course. Students either opted out or struggled to perform identities which risked undermining their performance of developing professional identities.

Whilst students suggested they were disempowered and even silenced by institutionalised discourses, informal practices sometimes emerged that seemed to both empower and involve some sense of reconfiguration of identity. In response to the demands of the course, for example, Charlotte cultivated what she seemed to feel were more useful, supportive and less visible relationships with peers which seemed to generate the kind of participatory practices and distributed knowledge associated with new literacies. She described for example, her immediate group of seven friends, all of whom supported one another:

I don't know really, it's just, I think we all are really glad we've got each other at university because it's hard. It's hard to balance uni and home and I think all

of us miss something at some point like we're supposed to have read something or supposed to have done something and we all get each others' backs really. We're sort of, 'Have you seen this? Do you know about this?' You know for a fact somebody will know some of it. So we're always in touch with each other, saying, 'Have you seen this- it's been posted- have you read it?' 'I've sent you this because you need to read this.' [...]... Now, S_____ is the king of the discussion board. I think he's got too much time on his hands. He's always on there so if anything ever actually key came up, he'll cut and paste it and send it to me, 'You need to read this email.' So that's nice cos that's the discussion board covered.

Unofficial networks seemed to help Charlotte and her friends manage complex demands and perform recognition work as successful students through meeting deadlines and completing set tasks. In doing so, however, they perhaps still upheld official discourses. From Goffman's perspective, this collaboration might be seen as the backstage work which upholds their identities as good students. This kind of network could be seen as simply re-contextualising the peer support that might always have existed amongst fellow students. However, it could be that the pervasiveness of new technology was subtly changing the relationships between individuals and knowledge as such supportiveness moved towards increasing mutual dependency. Such practices could be seen as creating an alternative, parallel discourse of learning where participation and shared responsibility were central. From this perspective these practices could perhaps be seen as empowering. However, Charlotte suggested that they could also cause disempowerment or vulnerability if networks broke down. She commented, for example, on her frustration regarding lost contact with a peer she was working alongside during her teaching placement:

Actually, on my placement, R_____, for whatever reason her phone had disconnected for six weeks and I couldn't get hold of her. It drove me mad. Just ridiculous things like, I need to just talk to her about something or we're out and about and I'll just confirm that's right with R_____ and taking it in turns to drive as well and you know, not being able to get hold of each other. Because she's not at home that often so you can't really get hold of her on her normal phone and obviously email's OK. Honestly, she sent me a text about a week ago, I'd done something and I thought she might want to see it for an assignment,

Couldn't get hold of her. Anyway, I got this and I couldn't get hold of R _____ and I felt like, she was cut off. She's back online now so that's all right. But it drives me mad. And also there's the response to text messages, that can differ a lot. Some people you can text and it's instant, quicker than a conversation almost. Sometimes it's three hours and I'm thinking, 'Oh for goodness sake.'

Using phone and email to share ideas enabled Charlotte to collaborate more extensively with her partner but this network of expertise and support relied on mutual commitment. The more they used the network the more that knowledge became distributed and the more she became dependent on the network. Consequently, Charlotte was undermined and frustrated when her placement partner lost contact. In this context, this mismatch between digital preferences was not only frustrating but could have endangered the performance of successful professional identity. She suggested that, as knowledge became distributed, she became dependent on the collaborative relationship. The significance of this was emphasised during the participant focus group meeting, as Holly expressed concern that this kind of practice could be disempowering as Charlotte was not learning to work by herself. Whilst networked communities may be increasingly important, Holly's comment perhaps reflected a dominant discourse of learning where academic and professional success depended upon individual achievement. Indeed, Charlotte seemed to be operating in the borderlands between dominant discourses of university and vernacular discourses associated with peer networks. She suggested that she not only shifted identity performance between discourses but positioned herself in different ways as these discourses evolved. The peer network seemed to host valued borderland practices which enabled her to succeed within university discourses through drawing from unofficial practices. However, as dependence increased, she became more vulnerable, as achievement would still only be judged in terms of dominant discourses.

4.4 Digital Insidership

As these students navigated multiple discourses, it seemed that their digital practices both reflected differing identities and supported their identity performance. Where these students had been instrumental in introducing digital practices or had been inducted to them by their peers, they did seem to be experiencing new ways of relating to others. They not only managed to maintain networks with family and old friends but suggested that they generated new ways of being with and supporting one another as they negotiated their surroundings. Sometimes the performance of existing identities seemed re-cast as digital environments afforded new possibilities in unanticipated ways. At the same time, existing identities could pave the way for new digital practices and possibly reconfigured identities: as students engaged in borderland practices, they found new ways of doing things.

This flexibility perhaps afforded each a new identity as a shape shifter. Most of the time this shape shifting worked, but at times there was uncertainty. Kate and Joanne spoke of the risks associated with mistaken identity, unsure how to present themselves within changing circumstances. Grace and Charlotte spoke of entering new spaces through family history research and Internet browsing but felt guilty about indulging these online hobbies, when these seemed at odds with their more tangible identities as mothers, students or friends. It is even possible that through their digital practices, these shifts in identity performance became particularly salient. Turkle (1995) argues that people become more aware of identity performance through digital practices as they make decisions about how to represent themselves on screen. Indeed this conscious composition of identity was also apparent in Kathryn, Joanne and Holly's descriptions of composition of their social networking pages.

As the student-teachers described their digital practices, their experience seemed to be patterned by a fluctuating sense of power. Sometimes, their use of digital texts seemed to mediate or enable control over their lives, facilitating the management of varied roles and opening up new opportunities. This control was accompanied by a sense of

competence, not only in using digital texts but in selecting which texts to use and how to use them in different contexts. In existing relationships they often felt empowered through their digital practices, knowing something about others' digital practices and being confident in how to use their digital experience to perform recognition work to achieve an appropriate identity. When identities were well-rehearsed, having evolved over time and became embedded within particular relationships, digital practices extended the opportunities available to them. At other times, however, the use of these same texts was marked by uncertainty and frustration. Where they entered new discourses, their frustration or vulnerability led to uncertainty about how to operate in digital worlds. Accounts of disempowerment were associated with unfamiliar discourses, encountered in new environments or as others positioned them in ways that clashed with their understanding of relationships between power and identity. Participants sometimes seemed to use digital technology to re-gain power over their development, for example, establishing networks to increase their chances of success within university discourses, but which ultimately could place them at risk through delegating responsibility for their own identity performance. Just as different kinds of digital practices were associated with different identities, so their identity as technology users altered as they moved between different discourses.

These students' experiences qualify our understanding of what it means to be a digital insider: they embraced some digital practices but shunned others; at times they were enthusiastic pioneers whilst at others rejected digital possibilities; sometimes they positioned themselves as experts and at others as novices. The way they shifted between different identities (digital and not) was rooted in personal preferences and shaped by social, cultural and historical factors. When empowered within a discourse, digital practices seemed to emerge in response to genuine need or interest. When positioned as powerless, however, there was a lack of confidence to participate. These students' sense of 'insidership' therefore varied according to context as their digital practices were filtered through different discourses.

Chapter summary

This chapter investigated the intersection between participants' feelings about their digital practices and what these experiences seemed to enable them to achieve. Drawing from student-teachers' accounts, it highlighted the reflexive relationship between identity, discourse and digital practices, exploring how new practices sometimes seemed to work discursively to preserve existing identities whilst at other times allowed new ways of performing identities that offered new opportunities. It explored how participants' experience was patterned by a fluctuating sense of empowerment, prompting a focus on how varying feelings of empowerment intersected with different identities which variously seemed to challenge or reinforce existing relationships. This in itself highlighted the significance of practices at the borderlands between discourses exploring how practices were recruited from one discourse to another and the way this limited or enabled new possibilities. This chapter highlighted therefore the varied and contingent nature of the 'digital insidership' brought by student-teachers to ITE.

Student-teachers' narratives of classroom digital practices

Introduction

This 2-part chapter complements Chapter 4's commentary on participants' perceptions of digital practices outside school with a focus on their perceptions of school-based digital practices. It is worth emphasising that these student-teachers' stories of teachers and classrooms were disclosed during interviews with me. As discussed in Chapter 2, their accounts were situated within a very particular relationship, patterned by varying discourses evoked within the context of the interviews and our ongoing relationship as tutor and students on a course of ITE. The focus of this chapter is upon students' own narratives of experience, providing a positioned stance on the discourses which seemed to texture their descriptions of classroom practice.

The first part of this chapter begins, in Section 5.1.1, by exploring the broader context for student-teachers' experience by summarising relevant policies relating to ITE. This is followed, in Sections 5.1.2-5.1.6, by an exploration of participants' stories of technology-use by teachers. It considers how participants presented the accommodation of technology-use within teaching identities and explores how they suggested discourses framed technology-use on school placement. The second part of this chapter investigates student-teachers' stories of using digital technologies themselves as developing professionals, focusing on their varying sense of empowerment and disempowerment. Again, Gee's situation network is used to highlight dimensions of context which seemed pertinent to participants' representations of their experience.

5.1 Discourses of technology integration within classrooms

5.1.1 Dominant Discourses in ITE

It has been argued that learning to be a teacher becomes a process of being inducted into authorised discourses (Britzman, 2003). During ITE, student-teachers may encounter various discourses during their school-based and university-based experience (Miller Marsh, 2002). However, the dominant discourses which pervade government policy informing ITE in England include those associated with government policies regarding literacy and technology (explored in Chapter 1) but also ITE and broader educational goals. Since the 1990s, the curriculum for ITE has been structured around requirements established by The Training and Development Agency for Schools (TDA), previously The Teacher Training Agency, set out as frameworks of 'Standards' for qualified teacher status. In relation to new technologies, the current framework requires student-teachers to: pass a national test of their skill in using ICT; use ICT in their broader professional role; and make use of loosely defined 'e-learning' (TDA, 2007a). Whilst the Standards also specify that students should have a 'constructively critical approach to innovation' (TDA, 2007a), requirements for ITE institutions state that students must be equipped to deliver curricula in line with guidelines established through national strategies (TDA, 2007b). Within this discourse, 'criticality' seems located within a model of personal reflection on practice rather the kind of critical analysis or critical action associated with a transformative agenda.

The significant proportion of ITE devoted to school placement potentially offers opportunities for student-teachers to encounter different classroom cultures. Whilst many primary schools previously espoused aims associated with autonomy and flexibility based on the needs of individual children (McCulloch, 1997), recent years have seen increasing standardisation of the curriculum and the prevalence of a managerialist discourse which emphasises competition and accountability (Exworthy and Halford, 1999; Menter and Muschamp, 1999; Nixon, Martin, McKeown, and Ranson, 1997; Sachs, 2001). Whilst recent policy statements have focused on

personalised provision (DCSF, 2008; Becta, 2008d), the emphasis on teacher and school accountability remains entrenched in arrangements for pupil testing, league tables, OFSTED inspections and performance management. Despite this, various studies have shown how teachers are active in interpreting national guidelines (Acker, 1997; Menter and Muschamp, 1997; Bowe, Ball and Gold, 1992; Helsby and McCulloch, 1997; Honan, 2004). Such studies suggest that responses to legislation and guidance are influenced by the culture of individual schools and teachers' existing practice. Consequently, it was possible that these student-teachers' school experiences had been patterned by alternative discourses and that they may have experienced new kinds of school-based digital practices at the borderlands between discourses.

The rest of this part of the chapter draws from the interview data to provide an insight into student-teachers' perspectives on the role of technology within the classrooms they visited. It draws from both participants' evaluations of individual teachers' practices and their broader statements on classroom practice. In articulating the range of experience participants described, I organise their descriptions of classroom practitioners, in Sections 5.1.2 to 5.1.5, by referring to them within four categories:

- technology avoiders;
- technology assimilators;
- mavericks;
- networked professionals.

This is not intended to suggest that the category to which individual teachers were assigned fully reflected their classroom practice regarding technology. Categories were devised to reflect participants' representations of what they observed about how different teachers accommodated technology within their professional role. The analysis which follows therefore explores how their presentations suggested that different discourses intersected within the contexts in which they found themselves on placement. This is complemented in Section 5.1.6 by statements made by participants that seemed to explicitly address their own analysis of dominant discourses.

5.1.2 Technology avoiders

All participants told stories of classroom teachers who they presented as technophobes or technically incompetent: all described at least one teacher, always an older teacher, who had readily confessed their lack of expertise in using technology and all described classrooms where technology-use was seen as peripheral to the classroom and used minimally and under duress. It is unsurprising that these student-teachers were disparaging about teachers' lack of use of technology. This disparagement was perhaps part of the recognition work they did in performing identities congruent with the discourses which shaped 'Changing Views of Literacy' (and indeed this study). However the ways that they framed this disapproval or explained teachers' actions seemed significant to understanding how they experienced the assimilation of technology within classroom cultures. The students evoked varying aspects of Gee's situation network in exploring possible reasons.

Sometimes, student-teachers linked teachers' rejection of technology to other aspects of their teaching identity, as illustrated in the following extract from an interview with Grace:

Grace ... it was an older teacher and she really didn't like it. She let the children go on the computers but it was because children have got to go on the computers. She never uses her whiteboard and it was very inaccessible.

Cathy Was there anything she said to you or did while you were here that kind of suggested she didn't like computers?

Grace She was just very disparaging about computers in general. She didn't like using them herself. She didn't like the fact that they had to be...She was report writing and she didn't like the... they'd brought a Report Writer and she didn't like using that. She found that too time-consuming. She didn't like the fact that she

had to pick from sentence banks. She continually moaned about that.

Cathy So what did she dislike about that?

Grace I think she didn't feel that it perhaps tailored to the children.

In this extract, Grace seemed to represent the teacher's avoidance of technology in negative terms: she *moaned*, *never used her whiteboard* and only used technology under duress. For Grace, this teacher's reluctance was reflected, or perhaps reinforced, by material dimensions: the whiteboard was inaccessible. However she went further in exploring possible reasons for this, suggesting that avoidance might be rooted in a tension between a discourse of concern for individual children and a discourse of standardisation. Grace's implication seemed to be that the impersonal language of the report-writing program devalued the teacher's personalised knowledge of the children.

Kate described a similar perceived clash of discourses in reporting the practices of a pair of job-sharing teachers:

They're trying to work in a sort of hands-on, creative way and I think, in their minds, IT doesn't do that because they're more interested in developing motor skills and things like that. And also there's a big thing about the children being able to socially interact well and communicate with each other, which if they were stuck with computers all the time, they might be inhibited a bit... so... yeah, I don't think they use ICT really much in the classroom.

Again, Kate associated the rejection of technology with pedagogical beliefs. Whilst in participants' lives, and possibly in the lives of these teachers too, technology provided a means of managing multiple relationships in flexible and creative ways, Kate suggested that classroom technology was seen by these teachers as restrictive, unsociable and consequently inappropriate within a child-centred discourse of early childhood education. Listening to Kate and Grace's accounts, it seemed that these student-teachers had not been encouraged to investigate how technology could be accommodated within such a discourse. Had they done so, through being encouraged to reflect at the

borderland between discourses, they may have generated innovative ways of involving children in their own technology-use for meaningful purposes.

Whilst Kate and Grace suggested reasons for teachers' technology avoidance, others presented such avoidance as anachronistic. Charlotte, for example, commented on a teacher's use of PowerPoint:

Yeah- she would pull up something that was prepared by someone else or loaded up by someone else. Cos she didn't even turn it on. Somebody else turned it on for her, found where she needed to be and brought it up. And then she was showing some slides with some art work. She was showing some pictures of Picasso or something...there was like 4 per page. First 4 - fine, she just whizzed through those. Got the TA to walk from the back of the classroom to press the button for the next slide and I'm not joking. And I'm like, 'She's joking'. She didn't know which button to press to get the next slide. It was that fundamental.

Here Charlotte suggested that technology played no direct part in how this teacher enacted her professional identity: she deferred use to the teaching assistant. Again, possibly exaggerated by the fact that she was talking with me, Charlotte's presentation of this teacher seemed patterned by frustration and even incredulity at the teacher's technical inability: *she didn't even turn it on; I'm like she's joking*. Notably, her narrative told of structures created to enable this avoidance- *somebody else turned it on* and the teaching assistant *had to walk from the back of the classroom to press the button*. This description seemed to simultaneously emphasise the teacher's power in organising for this avoidance and the vulnerability caused by what Charlotte presented as her incompetence. On one level, Charlotte seemed to see the teacher at the centre of a network which asserted her power: she remained at the front of the class, directed children's activity and organised for others to manage technology for her. On another, she suggested that the teacher was dependent on her colleagues, only maintaining power through a network of support. Charlotte's critique suggested that a professional identity that rejected technology would not be available indefinitely. Similarly, both Joanne and Daisy referred explicitly to teachers who did not use technology as *old-fashioned*. Daisy, for example, commented:

She didn't have an interactive whiteboard but she didn't see that it was a big significant thing. She felt that she'd always got along without it anyway and didn't need it...that's why I see her as old-fashioned because I see my role as a teacher to be always ready for new things and to experiment with them to enhance not only the children but your teaching style as well because you've got to have a change because we're in an ever changing world. I'm not saying that she was wrong but that I would prefer to use it or to have a little board.

[Laughter.] It was very much, 'Oh yeah- that was how I was taught.'

Again it is unclear how far Daisy's declaration was prompted by the identity work she was doing through the interview in presenting herself to me as enthusiastic about change. However, her narrative suggested that she felt schools were poised in a period of transition between *old fashioned* teachers who did not use technology and younger ones that did. This suggested that by refusing to accommodate technology within her teaching, the observed teacher was excluding herself from a discourse which saw technology as an important part of professional identity. Whilst such refusal may have initially been empowering, the students hinted that they felt that such positioning would ultimately disempower. It is notable however that neither Joanne, Charlotte nor Daisy's comments provided any insights into the kind of pedagogies that might be associated with technology-use. Daisy prioritised *change* but did not explore what this change might achieve in relation to learning. It was interesting here that comments focused particularly on the material dimension: she associated 'old-fashioned' teaching with the absence of an IWB. Again it was possible that the interview context generated this perspective, and indeed I failed to probe her to explore this further. However it did evoke a discourse which associates any technology-use with innovation and underplays the ideological implications of different kinds of use. These comments suggested that technology-use may be becoming essential recognition work for teaching identities but there was less certainty about what kind of use might be appropriate.

5.1.3 Technology assimilators

Whilst student-teachers seemed to suggest that technology avoiders might be increasingly excluded from evolving classroom discourses, participants' descriptions of technology assimilators often suggested that their digital practices reflected rather than challenged established teaching identities, reflecting what Lankshear and Knobel (2006) describe as 'old wine in new bottles'. This was evident in the many descriptions of uses of interactive whiteboards (IWBs). Of the 41 narratives about observed classroom technology-use, 28 concerned IWBs and of these 27 were used for whole class teaching. It is worth noting that whilst, as Merchant (2007a) signals, in real life, screens have become smaller, more portable and personalised, in classrooms screens have become larger and fixed. Although IWBs could provide a platform for child-led or collaborative activity, they were described by participants as 'teaching tools'. IWBs were used to show videos, project interactive teaching programmes, give instructions for activities, display PowerPoint presentations or engage in collaborative writing. Indeed participants' descriptions reflected findings from studies of IWB-use which have suggested that this has typically reinforced rather than challenged existing pedagogy (Moss, 2007; Smith et al, 2006). No students described incidents where children had used the boards without teacher supervision and all but one instance described involved presentations to the whole class. Daisy, for example, described a teacher's use of an IWB, which exemplified how interactions between teachers, pupils and technology configured a discourse of teaching by transmission.

They had a Y3 class and he used interactive whiteboard to get a news story up that day and it had been about a certain country and then they had to locate that country on the map that they had at the back of the class and they'd write a caption together. Just from that news piece and they'd put the date and then they'd go up and they'd find where on the world map.

Daisy presented this as a positive example of how technology-use could engage children, enabling the class to access recent and relevant information from the Internet. However, the narration suggests that this example reflected a classroom discourse of teacher control. It was the teacher who was active in searching for digital texts: he *used* the whiteboard to *get a news story*. The children physically interacted with the map:

they *got up* to find the country but the news story was owned by the teacher. This activity seemed to sustain established relationships in the classroom: the teacher directed and *the class* had a single identity; their interactions managed by the teacher: *they had to* engage in certain activities. Notably their composition too was directed by the teacher with the whole class as designated author.

Advantages of IWBs were described by participants in terms of teachers' organisational aims: there was more space to write and the boards kept the children *involved*. However, 'involvement' seemed limited to visual stimulation and physical movement as children stood up to operate interactive teaching programs. This physical relationship between learners, technology and teachers contrasted starkly with the digital spaces student-teachers traversed beyond the classroom which challenged spatial and temporal constraints, through enabling instant or rapid communication in multiple locations. The IWBs seemed to reinforce the physical confines of the classroom: children moved within it by *coming up to the board*, the very action reinforcing the configuration of the classroom which reifies the power and control of the teacher at the front of the class. Whilst networked technology was sometimes used to stimulate or motivate, the main focus of activity seemed mainly situated within the class community and led by the teacher who acted as gatekeeper, framing and directing learners' encounters with digital texts. Learners in whiteboard-focused lessons were offered identities as knowledge-consumers rather than 'knowledge-producers' (Bigum, 2002): knowledge was delivered to them, with digital technology being used to make this more palatable. Whilst Holly did describe children using the Internet to access the wider world during whole class sessions in computer suites, again this involved the collection rather than generation or sharing of knowledge. It seemed that digital texts were being used to find out about the world rather than participate within it.

This positioning of teacher as holder of knowledge was particularly evident in student-teachers' descriptions of literacy provision. The majority of examples focused on the use of technology to support print literacy rather than engaging children in operational, cultural or critical aspects of digital literacy: children used digital technology to sequence stories, type up work, punctuate poems and play spelling games. Only two

teachers were reported using networked texts – one used a series of online news reports in a lesson exploring the conventions of writing a report and an online discussion forum whilst another used the Internet to explore locations in a novel being studied. Participants' narratives suggested that technology was being used primarily to support an autonomous model of literacy. Earlier, I referred to Markham's work on metaphors for technology-use, exploring how such metaphors reflect but ultimately reinforce classroom discourses. In describing the technology-use in the classrooms they visited, it seemed that technology was construed primarily as a tool to achieve other educational purposes.

5.1.4 Mavericks

Despite stories of technology-use which seemed to reinforce transmission models of teaching, participants provided some narratives of technology-users who they suggested were generating new relationships between themselves, learners and knowledge. Charlotte for example described a teacher she had met during a short observational placement:

...he wasn't so hung up on producing things...he was quite happy to spend 40 minutes of the lesson pulling apart a video and having a verbal discussion and getting a few notes on the board and getting them to verbalise some wow words or something. Cos I was like, I think it was really early on in the first year, 'How do you know what they've done? Where is it?' And he'd say, 'I know what I've done, my plan tells me what I've done. I'll make some notes on who didn't get it or if we need to revisit certain areas but you don't need to produce masses of paper at the end of every lesson just to prove you've done something.' [...] He'd get them up, it was bit haphazard, and he'd get the group that didn't understand it or were like asking questions, to the interactive whiteboard and he again must have spent hours knowing where everything was and examples because he could pull things up, go on the internet and show them an example of something and show them in a graphic way or he'd be drawing things on it.

This teacher still seemed to use technology to support teacher-led learning. As in Daisy's example cited earlier, the material dimension was salient in Charlotte's description of how he organised the children physically – *he'd get them up-* and managed their engagement with resources: *he'd pull them up and show them an example*. Nevertheless there were elements of this teacher's behaviour which Charlotte suggests were unusual. He seemed to use technology to respond flexibly to children's misconceptions, drawing from varied resources and for Charlotte, this practice was significant as it suggested he was more concerned with pupils' learning than measurable outcomes. Whilst his lesson still seemed to approach the Internet as a 'tool' for teaching, the nature of the tool perhaps differed from those in previous examples: it seemed more of a 'prosthesis' than a 'conduit', used as an extension of this teacher's teaching self rather than simply a means of achieving something (Markham, 2003). By describing this teacher as *haphazard* and *not hung up on producing things*, Charlotte seemed to position him in opposition to dominant discourses, not confined by limitations of space and curriculum. Indeed his approach seemed to echo the 'playful social' orientation towards technology that Graham (2008) described, which contrasted with the formality and caution associated with less confident users. It was his relaxed attitude that impressed Charlotte in contrast to the constrained and inflexible approach exhibited by others she observed.

Whilst apparently operating within a regulated curriculum, this teacher seemed to offer Charlotte an alternative model of integrating technology within a teacher identity. It is interesting, however, to note how Charlotte explains what she saw as this unusual practice:

He was quite enthusiastic, though. He was really... I think that's an absolutely classic example to me of, this is obvious really, that the teacher is the be all and end all of the class. What you do and how you are totally dictate how that class goes. They were both quite low achieving schools but the difference in the attitude.

As explored further in the second part of this chapter, Charlotte seemed inspired by this teacher's flexibility and confidence and was determined to explore innovative approaches to using technology in her own teaching. However it is notable that she

associated his behaviour with personality rather than discourse. Again, Charlotte's comments may have been prompted by my research design which asked participants to describe individual teachers. However her account prompts consideration of the significance of seeing unusual practice as rooted in maverick behaviour. As Britzman (2003) warns, such constructs of 'natural teachers' can be problematic as they may deflect from the social contexts which inflect subjectivity. For her:

Individualising the social basis of teaching dissolves the social context and dismisses the social meanings that constitute experience as lived. These forces are displaced by the supposed autonomy and very real isolation of the teacher in the current school structure. Once student teachers are severed from the social context of teaching, the compulsion is to reproduce rather than transform the institutional biography. (Britzman, 2003: 236)

Whilst Charlotte's narration suggests that this teacher's flexibility was recruited to a teacher-led curriculum, she seemed to position him as a maverick who, by force of personality, managed to challenge dominant discourses. Her focus on individual teaching style may have distracted from consideration of the ideology which underpinned his approach and the aspects of context that may have shaped this. Had she been encouraged to critique the discourses evident within classroom practice, she may have reflected more explicitly on the values and assumptions that characterised his teaching and indeed the aspects of context which may have shaped this.

5.1.5 Networked professionals

A further dimension of professional digital practices reported by participants was teachers' use of new technologies in their professional role beyond the classroom. Many of these practices seemed to use technology to support existing purposes: assessments and reports were recorded on laptops, enabling information to be easily forwarded; teachers planned on PCs and used the Internet to search for resources which were then brought into the classroom; when off ill, they emailed their plans for others to use. However, participants' descriptions of digital practices beyond the classroom suggested that new networked practices were possibly affecting relationships between teachers and

their peers. As Cunningham and Harris's study of the feasibility of the 'ever-open school' highlights (Cunningham and Harris, 2003), whilst schools may be nervous about enabling pupil access to networks (Hope, 2006), most allow networking amongst staff. As described above, networked environments were used little by pupils in classrooms visited. However, they were used by networked professionals in two ways that seemed significant for the boundaries of their teaching identities: access to resources and peer networks.

Kathryn described how a file-sharing system had been established at a placement school and concluded that, in a very short time, this had become central to the way teachers there worked.

Kathryn ..., not to generalise, but the younger ones that maybe had qualified only a few years ago were the ones that were using the computers a lot in the class, were using the computers for their own planning, were emailing, you know. You could tell which teachers were emailing each other to communicate outside the school.

Cathy How could you tell that?

Kathryn You know, just because you would overhear things in the staffroom – 'Oh-did you get my email last night? Oh- I sent you those attachments, did you get them all right? Did you use them with your class?' So it was obviously an efficient way for them to communicate with each other outside school and they knew that they would always be able to access...

This networking seemed to push the barriers of professional identity in terms of both space and time as digital technology removed temporal and spatial restrictions to communication amongst colleagues. However, just as the personal networks described in Chapter 4 may have generated their own pressures, so this professional network perhaps generated new expectations for teachers to be accountable outside the school day. Kathryn, for example, described the effect on one teacher when her planning partner dropped out of the network:

- KathrynI think she really struggled not having that communication path with that teacher.*
- Cathy Really- in what way?*
- Kathryn Just not being able, just the communication. I could tell there was like a barrier up. You could tell, she was very good with technology. She really wanted to be able to communicate with him, even like texts as well. I know he had a phone but he didn't know how to work it. I'm sure she would have liked to text him and say, 'Have you got that planning done,' like reassurance because you're relying on somebody else I suppose, and if you can't communicate with that person for two days which is really quite a long period of time in some respects...I think she liked the reassurance of knowing that the planning was done and she could ask any questions but she couldn't really do that and I think the other teachers had the advantage of being able to do that with their colleagues.*

As the network became established, Kathryn suggested that it not only generated a support system but ensured that colleagues were responsible to one another. Consequently, teachers were disadvantaged if colleagues opted out and, by implication, those that did not contribute risked being marginalised from the teaching team.

Also significant was the way that participants described use of the Internet to trawl for teaching resources such as interactive teaching programs, educational computer games and animations for use in PowerPoint presentations. Primary school teachers have long been unofficial resourcers of their classrooms, collecting artefacts, images and books for use by their pupils. The students' narratives told of how the Internet was being recruited to these hoarding practices: teachers were still positioned as resourcers of their classrooms but financial outlay was replaced by investment of time. Bringing resources to the classroom, they reinforced their identities as providers rather than negotiators of learning. However, as Nicholls (2006) cautions, in her analysis of use of online thinking

skills resources, use of the worldwide access to online resources can result in applications being used in ways that contradict initial purposes.

These networking and resourcing practices were often combined. Kate, for example, described a teacher who regularly emailed her with teaching resources:

I think it's a way of keeping in touch with them, being a friend, you know, being supportive. Because she doesn't need to send any resources to me, yet she does. You know, 'If you need any help, get in touch. Hope you're well- have a look at this.' But also it's because it's quick and efficient isn't it. She can send that list and it's gone to everyone or even within school, if she wants to tell people about it, it would take her quite a long time to go round everyone and for them to write it down. And even if they write it down and put it in their handbag, it doesn't mean it's going to get somewhere where they're going to be able to actually use it. Whereas if she's emailed it, if they've got their link on their computer, they're already on the Internet. So they're probably going to have a look and it's stored in their inbox. So it's accessible.

Acting as a networked professional, this teacher readily added Kate to her email list who remained part of this teacher network even when the placement was over. Just as being a 'good' student at university seemed to involve supporting peers through Blackboard contributions, so the 'good' teaching colleague gave support through sharing resources and keeping in touch. Kathryn, Joanne and Kate all described being invited into such networks and indeed creating their own peer networks to share and locate resources in a similar way. Kathryn describes how such contact with her teacher provided support and guidance:

It made me feel reassured that she was always there and it was a way of being able to contact her without being in her face, if you know what I mean. If I rang her by phone I'd almost feel like I was bothering her but because it was an email she could reply when she had the time and even if she didn't reply it would have been OK, it was just I emailed her on the off chance she would be able to see it and would be able to email me back in time for, well, making a difference with

my planning I suppose. It was so beneficial because it meant that maybe she'd give me an idea and that would give me lots of ideas to get on with planning.

Whilst the networks described by participants seemed to support the kind of distributed expertise afforded by new technology, the impact of this on classroom practice seemed more aligned to more traditional teacher identities. These networks seemed to involve professionals in cooperating to support convergence and uphold existing classroom practice; the sharing of classroom resources and constant contact seemed to act to increase conformity. Kathryn described the teacher using the network to *tell people* things or ensure that everyone had received the resources she suggested they use.

Whilst, during recent years, there have been arguments for using technology to establish networks through which teachers collaborate within and across schools to effect change (Hargreaves, 2003; Hargreaves, 2007), such practices seemed to support what Hargreaves describes as 'bounded collaboration' where collaboration emerges in order to cope with demands rather than examining values and beliefs. This he sees as leading to 'continued collegiality' where strategies such as peer coaching and joint planning work to sustain existing practices (Hargreaves, 1992: 226). Indeed these student-teachers described practices which suggested that classrooms were positioned as very static spaces to which children and resources were brought. The networked individualism of teachers seemed to maintain classrooms as 'little boxes' (Wellman, 2002).

5.1.6 Participants' accounts of discourses

Whilst participants told stories of different ways in which teachers had responded to the challenge of integrating technology within their professional role, the majority suggested that technology was accommodated within a classroom discourse of standardisation. Where other discourses were apparent (for example in the child-centred discourse that pervaded some teachers' orientations to teaching), technology seemed to have been rejected or marginalised. In all stories, however, technology seemed to be constituted as a 'tool'. Sometimes this tool was rejected, as by technology avoiders, whilst at other times it was accommodated within teacher-led classroom practices.

Sometimes this tool was used confidently and flexibly, as by mavericks, whilst at others use was more restrictive. The stories student-teachers told suggested that they had gained little experience in exploring the borderlands between conflicting discourses or investigating how technology might be assimilated in other models of teaching. Importantly, however, Charlotte and Grace commented explicitly on their own interpretation of competing discourses. These comments are explored here.

When asked specifically why she thought they had not seen children using digital communication, Charlotte suggested different kinds of tensions within existing classroom practice. She described the possible risks involved, feeling that some teachers thought such risks were incompatible with their duty of care and challenged their control over classroom learning. Moreover, she commented on how the school infrastructure militated against an environment where ownership of technology rested with the children:

Within the whole school, creativity wasn't an issue, it wasn't embraced, it was just 'Don't go there. We have to hit these targets we have to hit these SATs, we have to tick these boxes' and several times, I heard the sentence, 'We can't waste an hour of children's education. We have to prove we've done something in that hour that ticks a box that links to SATs.' So you had to produce a piece of paper, a piece of work...[...] We're talking on one hand about being creative and you know, Excellence and Enjoyment and all this sort of stuff but it's like they're saying one thing and then saying to you, 'Yeah- you've got to get your level 5 SATs and if you don't you're a terrible teacher.'

Charlotte's account explored how she felt classroom practice was constrained by standards and accountability, suggesting that she felt the impact of the dominant discourses outlined in Section 5.1.1. The prescriptive curriculum and emphasis on national tests took precedence and prevented the kind of flexibility and autonomy associated with experimentation within digital environments. Charlotte's comments suggest that the political exigency for demonstrating achievement was reproduced in the material dimension: teachers must tick boxes and produce pieces of paper. For Charlotte, educational discourses valued 'proving' a commitment to high standards which displaced attention from developing learning and, consequently, the only

activities sanctioned were those with a visible outcome. In this context it seemed that technology was recruited to a discourse which prioritised display and rewarded those who were most successful at appearing successful. This she suggested, in her view, reflected an officially sanctioned professional identity: a *terrible* teacher was one who failed to ensure his/her pupils' high attainment in standardised attainment tests (SATs).

Whilst Charlotte seemed to associate schools' reluctance to innovate with a discourse of accountability, Grace seemed to link this to more longstanding discourses of schooled literacy. She commented on why she thought it was seen as inappropriate to use digital communication in classrooms:

Grace I don't think they'd be considered...worthy.

Cathy Why not?

Grace Because it's almost like a...I don't know...it's not a formal... it's not like a...I think schools are very formal, aren't they, and it's still, you know, historical expectations of teachers and, I think they see the new technology, I think like people view television, it's not perhaps as valuable as kind of... it's a schooled kind of thing that we're still very much stuck in the past. [.....]I don't know but I think probably in terms of school, it's too much of a casual thing [.....], to perhaps be using things like email in school. Now I know email, it could be... I can see that teachers might start doing things with that but I think they'd still expect children to write something more formal almost like a letter. I can't imagine them welcoming children writing text language at school because they wouldn't see that that was doing anything to help with the grammar and the spelling and things they're supposed to be teaching. It would almost be like they were working at odds with what the school idea of 'literacy' is.

Grace here seemed to see a clash between discourses she associated with school and with digital communication. She saw school discourses in terms of 'historical expectations' which did not value informal uses and upheld an autonomous view of literacy. Whilst stating her own interest in exploring the educational potential of such

texts, she saw the kinds of texts produced in her own life (and pupils' lives) as incongruous with a discourse which valued assimilation of learners to autonomous (if outdated) models of literacy. If such texts were introduced to the classroom, she felt they could only be accommodated within such existing discourses.

Charlotte and Grace's critiques of classroom practice seemed to represent a broad analysis of classroom practices which, indeed, reflected some of the debates held during 'Changing Views of Literacy'. However, comments by one anonymous participant during the review of initial analysis (outlined in Section 2.2.7) suggested a more personal response to the challenge of using less formal, more social technology in classrooms. This student-teacher shared her feelings about negotiating such competing discourses, associating being *at the cutting edge* through attempting to use technology in innovative ways with *guilt* generated with being thought to be *dumbing down* by using popular texts. This comment captured the difficulties that could be faced as student-teachers tried to accommodate competing discourses in their training. The technology assimilators provided models for technology-use but, perhaps unsurprisingly, did so in ways that were aligned to a professional identity aligned to dominant discourses. Attempts to use technology in other ways could conflict with such discourses and risk undermining student-teachers' sense of professional credibility. The prevalence of these teacher-led examples suggested that student-teachers saw few examples of practice that modelled more innovative uses of new technologies.

5.2 Participants' narratives of their own classroom digital practices

Against the background of student-teachers' stories of observing technology-use in classrooms, the second part of this chapter explores participants' presentations of their own experience of integrating digital technology whilst on placement. As in Chapter 4, I distinguish between accounts of empowerment and disempowerment. Here however these relate directly to student-teachers' performance of a professional identity, highlighting the kinds of digital practices which they felt able to accommodate in the classroom. I explore how they suggested different discourses inflected their experience,

with a particular focus on the extent to which digital practices seemed associated with transformed relationships between teachers, learners and knowledge. Reference is made to the kinds of teacher models introduced in the first part of the chapter, exploring how student-teachers seemed to position themselves or be positioned by others through their classroom digital practices and the ways in which their own practices seemed to reflect or challenge these models. Again aspects of Gee's situation network (Gee, 2005) are used to explore salient features of their experience.

In contextualising the commentary that follows, it is worth noting that these student-teachers had only completed one block placement at the time of the study and this had occurred prior to 'Changing Views of Literacy'. Their accounts derived chiefly from this placement along with some experience of preparing for their second block placement. In commenting on their accounts, I imply no criticism of their classroom practice. All participants were highly committed to their professional development and their accounts suggested that they all responded appropriately and imaginatively within the contexts in which they were placed. My commentary is intended only to highlight different ways in which they presented their experience as framed by the contexts in which they were placed.

5.2.1 Disempowerment and empowerment in classroom digital practices

In accounts which seemed to link classroom digital practices to empowerment, it appeared that the integration of technology within a teaching identity was often constricted by and refracted through material dimensions of technology-use, including access, location and condition. In participants' lives beyond the classroom, technology provided the network which overcame spatial and temporal location. Technologies were portable, readily available and both crossed sites (travelling from home to school to university) and domains (used for university and personal interest). In school, however, their descriptions of classroom PCs suggested that these were often sites of neglect: marginalised within the classroom, PCs were frequently out of order, dusty or inaccessible. Whilst all had had opportunities to use computer suites, time was carefully

rationed. Other problems were caused by sunshine obliterating the projections on an electronic whiteboard, the fragility of equipment, lack of technical support and the risks presented by trailing wires and projectors propped up on books. Kathryn, for example, spoke of being unable to print out resources she had prepared or access a network to email work between home and school. For participants, these technical limitations assumed intensified significance, because of the relationship between use and their developing professional identity. Whilst it could be argued that, for practising teachers, professional identity becomes primarily located within a particular school, student-teachers' professional identity must be portable: inevitably shaped by the discourses of schools where they are placed, they must also meet the requirements specified by universities and the institutions which regulate them.

Placed with a teacher she seemed to characterise as a technology avoider, Kathryn expressed frustration at the lack of opportunities to use technology. As her comments indicate, this undermined her feelings of success as a student-teacher:

He was sort of saying, 'Why do you need to do that? Why do you need to move them? Can you not just do it on the overhead projector?' I could have done but I just wanted to do... I wanted to have a go at using the interactive whiteboard because I felt like I've had no practice on it and it's one of your targets, it's one of the standards you've got to meet...but just the sort of reaction from him was almost enough to think, 'should I be bothering.'

Kathryn suggested here that she felt that the limitations this teacher placed on her practices conflicted with the requirements of the QTS Standards. Whilst the teacher seemed to have accommodated the marginalisation of technology within his professional identity, she felt she should be experimenting and that this expectation was ratified through the external requirements of her course. In this encounter, there seemed to be a clash between the social goods valued by Kathryn and her teacher. Whilst he prioritised order and control, reluctant to move his class to another room, she needed the breadth of experience required by QTS standards. This mismatch meant that in order to stay in charge of her development, Kathryn had to find a way of bridging two discourses during her placement or face frustration.

At other times, such tensions between discourses were evident during lessons involving technology. Again, it was the material dimension evident in spatial and temporal pressures that was particularly salient. As Britzman (2003) argues, establishing a credible professional identity for student-teachers can seem to depend upon 'controlling' a class, or ensuring that children conform to how 'appropriate behaviour' is determined within a particular classroom discourse. It was therefore perhaps not surprising that the disruption caused by organising for children to move to and work within computer suites became a common theme in their descriptions of school digital practice. Holly for example described the transition to the IT suite:

It was really strange actually because they only had IT for like half an hour once a week and they'd get so excited about it. It would take them ten minutes to get to the room, then you've got to turn the computer on and then it takes one minute to leave the room so you've only got like five minutes for a lesson which wasn't particularly good. They really enjoyed being in there but it was just the fact that it was overwhelming to get into the room. You couldn't really do very much with them in that amount of time.

Within a classroom discourse of order and fixed knowledge, technology had the power to disrupt. Moving to and working in an unusual location could shift student-teachers' relationship with pupils. Holly suggested that, in order to preserve the 'order' emblematic of successful teacher identity, children's activity during the transition to and within the suite had to be tightly controlled. Such challenges were reproduced in virtual space when children had opportunities to use networked technologies. For example, Holly described a lesson where children were conducting Internet research in preparation for creating a booklet on a chosen topic:

We gave them different websites to go to but because they had so many different topics it's quite hard and they ended up just looking at music websites and stuff and you'd constantly be checking every single person to check what they were doing cos you couldn't spend your time with one person. You had to be constantly checking everyone else. 'Look – you can't go on that website- you have to be working.'

Holly suggested that the constraining boundaries of the classroom were pushed as children moved into the more fluid spaces of the Internet and her authority as teacher

was challenged as children started exploring their own paths and browsed in a way that did not support task completion. These networked practices however seemed to challenge the teacher identity she aspired to as the children, though their networked practices perhaps, placed themselves in new power relationships with Holly. In such a context, Holly could perhaps have responded in two ways: either she could have experimented with a new kind of teacher identity and attempted to find new ways of positioning herself in relation to the children, or she could have found a way of re-establishing a more traditional teacher identity. Given that Holly was on her first teaching placement and had worked only alongside technology assimilators and avoiders, it was unsurprising that she opted to enact a traditional teacher identity.

In order to maintain her teacherly identity, Holly, faced with planning another lesson involving Internet research, structured this tightly:

I did a lesson where they had research about rivers. We gave them a lot more guidance and we told them, 'These are the things you've got to search for.' We gave them three different topics they could pick. For each topic we said, 'You've got to search for these key words, make sure you've got...we only want about three sentences on each slide. We don't want reams and reams of information.' We were a lot more specific about the way they should do it. They found it quite good actually, cos they weren't just Googling random words getting more results. You still had to go round and check they were on task cos if you turned your back, they were on 50 Cent's website or something.

Whilst forced to retain her role as monitor, Holly was justifiably pleased with how her structure enabled the children to complete the task. What she achieved here was successful in terms of the task she was set and she suggested she felt empowered in successfully maintaining a teaching identity within this challenging context. Indeed her structure followed the kinds of recommendations that have been made by Pritchard and Cartwright (2004) in enabling children's more focused use of the Internet. However, in structuring the activity in this way, it could be argued that she brought the task of Internet searching more in line with established classroom discourses: by providing frameworks, she created a new bounded space on the Internet and in doing so increased her own authorial contribution to the texts they produced. As the activity moved more in

line with dominant classroom discourses, the children became more inclined to complete the task. However, it is unclear how this task supported operational, cultural or critical digital literacy: it could be that this kind of approach meant that task completion was achieved at the expense of developing the children as readers and writers of digital texts. Holly's example is useful in signalling how digital practices may be interpreted within a schooled discourse and how students' digital experience may be recruited to identities as technology assimilators.

As explored in Part 1, student-teachers' descriptions of teachers' uses of technology focused primarily on the use of technology as a tool. It was therefore perhaps not surprising that the majority of student-teachers' narratives of classroom digital practices involved student-teachers' use of PowerPoint to support teacher-led interactions with children: out of 22 narratives of technology-use, 17 involved interactive whiteboards and, of these, 10 focused on the use of PowerPoint. For example, Holly used an animation found on the Internet to explain evaporation and created a PowerPoint presentation on Sikhism, Charlotte downloaded and used Maths games whilst Grace created a PowerPoint and presentation about Van Gogh, and Kate projected digital photographs taken on a class trip as a stimulus for writing. All these examples could be seen to represent the student-teachers' commitment to effectively resourcing their practice and their confidence within a teaching identity which spanned both the 'technology assimilator' and 'networked professional' categories described in the first part of this chapter. It seemed that they drew from their own experience of digital environments not in order to plan opportunities for children to engage with digital texts, but in producing texts to motivate children. All participants commented on how children became engaged when the lesson involved such texts. Joanne for example, described a PowerPoint presentation she produced to support children's learning of their multiplication tables:

And when it was the World Cup, I was doing a numeracy lesson, I'd made this football picture on one of the PowerPoint slides. I managed to get proper football shirts with the numbers they were times-ing by and if they got it right, I managed to put some sound on and it said 'goal' and all that. I remember D_____ really enjoyed that. She said that it was great because the kids enjoyed

it and spoke to me about it afterwards and wanted to do it. Even if they'd done it, they wanted to play it. I think it is because it was up there and it was all colourful.

Here, the task was a traditional one and it highlighted the very limited control that many student-teachers have over the scope of learning in classrooms. Joanne showed initiative in designing her own PowerPoint but had to do so within the framework of learning objectives supplied by the teacher, planning an activity which supported the reinforcement of learned facts. Joanne's PowerPoint slides seemed to represent a genuine commitment to finding imaginative and relevant ways to present possibly mundane curriculum content. Her internet research and skills in creating multimodal texts enabled her to involve children in consolidating skills seen as important within the current mathematics curriculum. Indeed, this did seem to have empowered her within a professional discourse. Her description of the event suggested that she felt she gained approval from her class teacher, who saw her use of technology as successful and appropriate. However, the classroom discourse seemed to prompt her (and her teacher) to judge the activity's success in terms of the children's motivation, or as in Holly's example, on-task behaviour, rather than their learning. As a committed student-teacher keen to meet demands placed upon her, Joanne suggested that she drew on her experience in ways that made sense within the dominant classroom discourse and so gained credibility and strengthened her personal sense of professional identity. Her PowerPoint represented a successful attempt to use technology in ways convergent with the dominant classroom discourse and she deserved the praise given for her skill and imagination in creating it. However, she seemed to be empowered here by finding new ways to maintain a traditional teacher identity.

Whilst at times student-teachers told stories of gaining empowerment through emulating the teaching models they observed, at others they told narratives of being rendered experts with valuable knowledge to impart. Holly, for example, described how she had shown her class teacher how to email plans between home and school:

Holly I showed her how to email it to herself. She didn't have to carry a disk about but send it as an attachment on an email and pick it up at school and just download it all.

Cathy And what did she think of that?

Holly She thought it was brilliant because she'd seen us doing it and she was like, 'Oh- how've you done that?' We were, 'We've just emailed it because we don't want to be messing about with disks' ...because a CD, once you've used it, that's it – 'Well, I'll throw it away now'.

Cathy You said you thought she wasn't very keen. What was it that she did or said that suggested that?

Holly She told us. She said, 'I don't know anything about computers - show me everything.' She said, 'I don't know anything. We've had a half hour training session on how to use the whiteboard and that's it.'

Cathy At what point did she say that to you?

Holly Pretty early on. She was a great teacher. She was really open about everything: 'I don't know how to do this? I don't know how to do that. Show me.'

Cathy And how did that feel to you?

Holly Pretty good actually. Like, well, she's been teaching for like twenty odd years and she knows all this stuff and then we come in and we've just been a few months on this course but we know something that she doesn't. Kind of like, 'We know something'. At first, like all the teaching we were doing, we felt really nervous but then because, OK - teachers aren't these superhuman creatures who know everything. They do make mistakes and don't know everything. It felt really good.

Here Holly told how she felt encouraged to share her superior expertise and welcomed this. Being awarded the status of expert seemed to reinforce her own sense of credibility and validate this experience within her teaching identity. Moreover, she felt that her skills were accepted as valuable within the school and this in itself afforded her power. This incident highlights the value of encouraging students to draw from their 'funds of knowledge' (Moll et al, 1992) in their professional education. Firstly, it challenged the notion that becoming a teacher means assuming a fixed professional identity - the teacher in inviting Holly's input showed that she too was continuing to learn – and

secondly, the response legitimised aspects of Holly's non-teaching identity within classroom discourses. However, whilst Holly was encouraged to show the teacher what she knew, her narration suggested that her experience was designated purely as technical skill: invited to *show* the teacher everything, she seemed positioned as 'technology assimilator' rather than innovator in teaching and learning. This raises questions about how discourses associated with personal and professional practice might intersect. In negotiating the borderlands between personal and professional discourses, the teacher was positioned as the one with pedagogical expertise and from this perspective it was possible that Holly's experience was seen, both by her teacher and by Holly herself, as only relevant regarding technical skills.

These interviews yielded no narratives of empowerment linked to the kinds of technology-use that might address an agenda of transformation. Given that these student-teachers were at the early stages of a professional course, it was unsurprising that their stories focused on practices which accorded with dominant discourses. Occasional narratives however, seemed to be inflected by a fluctuating sense of disempowerment and empowerment and perhaps paved the way for integrating technology in ways that challenged traditional teacher identities. Charlotte, for example, told a story which suggested that the tensions between classroom practice and her pedagogical beliefs had highlighted new kinds of possibilities and generated a determination to effect changes despite barriers faced. Whilst feeling disempowered within her placement context, she felt empowered to pursue her own commitment to finding innovative ways of integrating technology within her classroom practice. This is illustrated in the following excerpt, which recounts a discussion with her teacher in preparation for placement

...every time I suggest sometime that's slightly out there. I wanted to, in science, I wanted to record the growth of a plant with the Digital Blue and make it into an animation over a six week period, with a fast-growing plant you could do it. 'When are you going to do that?' she said. 'There's no time in the curriculum for messing about with cameras.' [...] I want them to make their own film of an interview with something and she's very anti, she thinks it's time-wasting and it's messing around with a curriculum that's already packed. Um and I'm

fighting, I'm not fighting in an aggressive way but I'm not giving up and I'll sort of say, 'OK, I'll let that go, what about this' and I'll get one or two of them but I'll not get all of them. [...] I think to be honest it would take a relatively brave school to let me loose with my lesson plans. It's not a bad set of lesson plans. It does involve some things like taped interviews, children in role and I've done things like a really boring lesson like take a statement and turning it into questions but I've taken it a step further into drama and into recording. And they say this should be one lesson but actually you've turned it into two and where's our written evidence.

For Charlotte, *messing about* seemed to be an important part of pedagogy: indeed it was the flexible playful use of technology that she rated so highly in the maverick male teacher's practice that she observed (see Section 5.1.4). Moreover, in discussing technology here she also referred to other activities - drama and talk - placing technology within a discourse which values approaches that involve children more centrally in their learning. In her placement school, however, she felt *messing about* was incompatible with a discourse which prioritised written outcomes; she felt that she could not challenge this but, as student-teacher, had to work within it. However, it seemed that her observations and experience on the course might have offered her an alternative way of integrating her professional and digital identities. On placement, she was able to gain a critical stance on how her practice was framed and asserted a professional identity which valued *messing*. Whilst there was no evidence that her strategies would have been successful in reconfiguring relationships between teachers and learners, in her critique, Charlotte seemed to be operating very much within the borderlands between discourses. She demonstrated both an awareness of the stark differences between informal digital practices and formal educational discourses and a strategy for beginning to tackle these inconsistencies. She recognised the difficulties she faced and characterised these at macro, meso and micro level (nationally; within the school; and within the class).

Chapter Summary

This chapter has explored student-teachers' narratives of digital practices in different classroom contexts. It suggested that students saw technology-use as an increasingly essential part of the recognition work of becoming a teacher both in relation to preparation and classroom practice. Whilst student-teachers encountered different discourses, a discourse of standardisation and accountability dominated their narratives. Through such narratives, they suggested that technology-use tended to bolster rather than challenge existing teacher/learner relationships: technology was constituted as a tool, used to make teaching by transmission visually appealing as children were encouraged to stay on task through motivation rather than coercion. Teacher networks strengthened the support available in meeting the demands of the curriculum and resourcing visually appealing lessons. These student-teachers seemed to feel most empowered when their digital practices were aligned to dominant discourses, and gained praise for drawing from operational competence within the classroom. Feelings of disempowerment seemed to emerge when they were prevented from using technology due to teacher discouragement, lack of opportunity or access to working technology. Against this background, the chapter has also highlighted various ways that student-teachers seemed to find themselves in borderlands between discourses, sometimes stranded, sometimes finding ways to bridge discourses and sometimes determined to build new possibilities to contrast with the practices they encountered.

Learning from student-teachers' perceptions of the role of their digital practices

Introduction

This study aimed to complement existing research into technology-use in initial teacher education by exploring student-teachers' perspectives on the role of digital literacy in their lives. By juxtaposing experience within and beyond school, the study draws attention to some of the connections and contrasts between student-teachers' digital experience in different domains. Focusing on this experience as social practice highlighted not just what student-teachers did with digital texts but the discourses and identities associated with their digital practices. This allowed a focus upon how they approached and mediated practices as they shifted between different identities. During the 7-month period during which interviews were conducted, these students evolved in their technology-use and the significance of technology varied as its value was perceived in different ways according to context.

Exploring the significance of student-teachers' experience highlighted the unease, concerns, enthusiasm and pride variously associated with using digital texts and also the vulnerability this may engender. Whilst digital environments offered possibilities for managing identity, such management was sometimes associated with anxiety, embarrassment and frustration. Perhaps for this reason, these student-teachers seemed to engage mainly in digital practices that intersected with relationships developed face-to-face, achieving what Benkler (2006: 357) describes as 'thickening social ties'. They used technology chiefly to maintain networks of families and friends and expressed suspicion of less known networks or those existing in less bounded spaces. Within the classroom, digital practices observed and enacted tended to support assimilation to existing discourses. At the same time, tensions and new opportunities emerged as they experimented with digital technology. Out of school, they discovered new ways of performing identities whilst, in school, they sometimes encountered competing

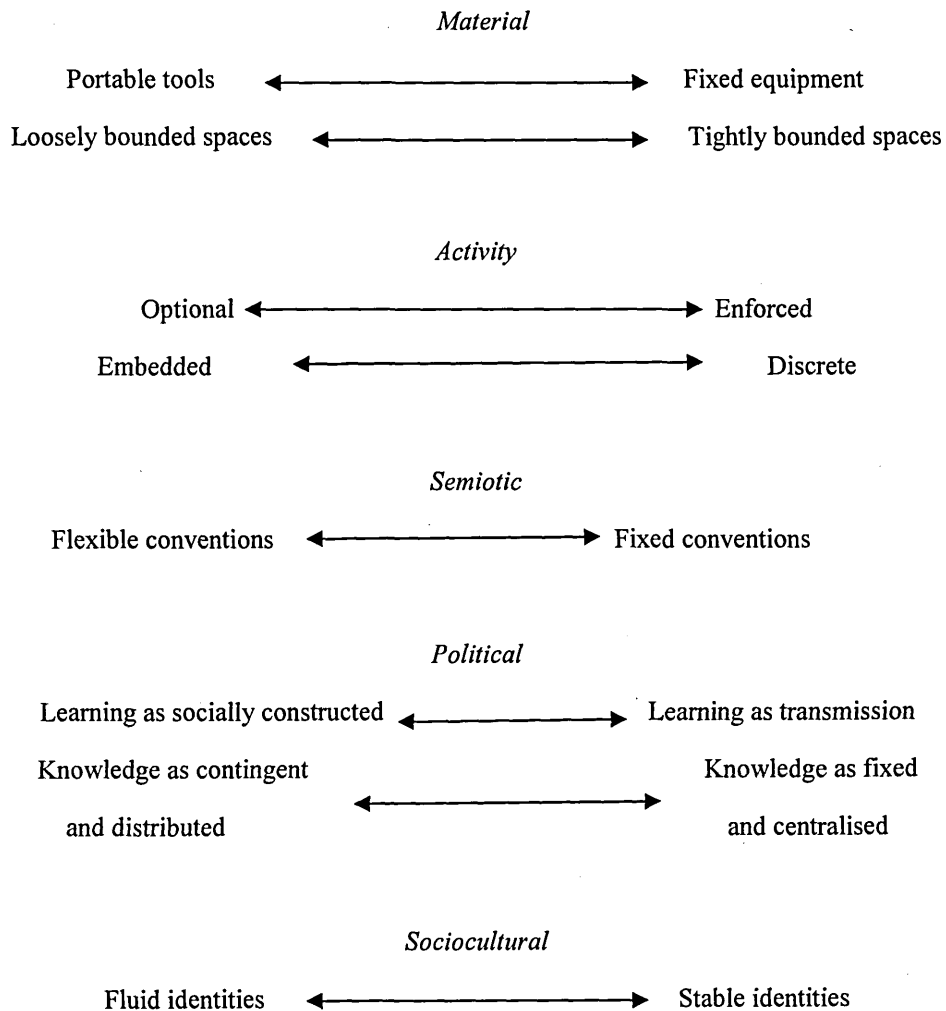
discourses or planned to carve out new opportunities for experimentation. Section 6.1 therefore explores considerations relevant to investigating the extent of student-teachers' digital insidership whilst Section 6.2 focuses on student-teachers' experience at the borderlands between discourses. This study concludes, in Sections 6.3-6.5 by exploring the implications for further research, policy-makers and teacher-educators.

6.1 Investigating digital insidership

This study highlighted the complexities of the quality of digital insidership that student-teachers brought to ITE. Whilst interviews highlighted the variety of digital environments in which they participated, no participants presented themselves as the kind of digital 'insiders' described by Lankshear and Knobel (2006). Much of their networked individualism supported established personal relationships and where they did enter global networks – as in Grace's family history research or participation in Facebook - their practices were chiefly referenced against local contexts. Web-based activity was mainly associated with consumption not production. These findings reflect work which has investigated the complexities of understanding reasons for differences in technology-use (Burbules and Callister, 2000; Facer et al, 2001; Holloway and Valentine, 2002; Selwyn, 2004). Whilst these student-teachers apparently had physical access and the skills needed for using a range of technologies, sociocultural factors affected the extent and nature of their use in different contexts. Sometimes these variations seemed to represent stark contrasts. For example, when discussing their lives outside the classroom they focused mainly on digital practices involving written communication, whilst in discussing classroom practices they chiefly discussed practices involving multimodal elements of presentational software. At other times these variations were more subtle, associated with shifting feelings of empowerment. Their stories told of varying levels of confidence and enthusiasm at different times, within different domains, and within different relationships within those domains. Avoidance was not linked to lack of skill but lack of certainty about appropriate behaviour in digital environments and with concerns about lack of control in identity performance.

In exploring such variations, the five aspects of Gee's situation network (material, sociocultural, activity, politic and semiotic) were used to highlight contextual dimensions which these student-teachers seemed to feel were significant to their practices. This process began to unravel what student-teachers suggested were the conditions for these differences. In order to illustrate this, Figure 6.1 includes a series of continua (mapped onto Gee's aspects) which highlight what seemed to be salient features of their practices. Each continuum highlights a range of experience in relation to an aspect.

Figure 6.1 Continua drawing from Gee's situation network



Regarding the material aspect, tools used varied between portable and fixed: small portable devices such as mobile phones contrasted with large fixed equipment such as IWBs. Even when equipment was physically fixed, however, the kinds of spaces it hosted seemed to shift: at times networked worlds were loosely bounded, as in open-ended browsing on the Internet, whilst at others new tightly bounded spaces were created within these worlds, as in classroom uses of the Internet or the local networks supported by Facebook, MSN and texting. Activities seemed to be associated with different kinds of purposes. Sometimes these were embedded in everyday life and driven by participants' own purposes, whilst at others they seemed linked to imposed purposes, as in the Blackboard discussion boards to which some felt compelled to contribute in order to comply with university requirements. Also significant was the semiotic aspect. Participants seemed to approach communication with varying levels of certainty, some confidently experimented with multimedia text-messages with family members but were unsure how to email a tutor. The political aspect highlighted differing relationships with knowledge. At times, as in institutionalised education, value seemed to be given to knowledge that was fixed and centralised, whilst in other contexts, such as networks of friends or colleagues, power seemed associated with knowledge that was contingent and distributed. With regard to the sociocultural dimension, participants sometimes spoke of fluid identities whilst at other times seemed to aspire to stable identities, finding ways of enacting existing identities in new contexts. Importantly these aspects were mutually constitutive: for example, different spaces enabled different kinds of identities but the way people positioned themselves also helped characterise those spaces, as for example seemed to be the case with the Blackboard discussion board.

Descriptions on the left in Figure 6.1 might be associated with the kinds of practices which, as outlined in Chapter 1, seem to offer potential for a transformative agenda for education, whilst those on the right might be linked to more established educational practice. In some ways these polarities echo the distinction drawn by Lankshear and Knobel (2006) between new and old literacies. However, participants' presentation of their experience suggested that practices were not placed at comparable points on each continuum. Students did not seem to operate within a particular mindset but bring different assumptions and practices to different contexts. In practice, these dimensions

intersected in different ways. So, for example, teachers used portable equipment to maintain networks and used the unbounded spaces of the Internet to search for classroom resources which helped to preserve stable traditional teaching identities. Or student-teachers developed networks in bounded online spaces, through which they engaged with centralised, fixed versions of knowledge. Different continua, then, seemed to merge and cross at different points.

This has significance for understanding how student-teachers may draw from their experience of digital literacy within ITE. Recent TDA regulations require ITE institutions to acknowledge and build upon student-teachers' prior learning (TDA, 2007) and this chimes with the emphasis on personalised learning in broader educational policy in England (DCSF, 2008; Becta, 2008d). However, this study suggests that the perceived relevance of prior learning may be shaped by existing discourses. As Garrick and Solomon (1997) write:

Recognition of prior learning, heralded as one of the key conceptual shifts that acknowledge and accredit learning outside formal institutions, potentially provides the opportunity for giving space and reward for individual's (sic) diverse knowledges, experiences and skills. But when this meaning is recognised and assessed it is being framed within monocultural classifications of competence. (Garrick and Solomon, 1997 [Online])

Prior experience may only be seen as relevant when it accords with dominant discourses or is recruited in ways that support these. Given that it is likely that student-teachers may experience competing discourses of literacy, technology and pedagogy, the extent to which they can draw from their own digital practices may be influenced by the value that is placed on this within educational environments.

6.2 Negotiating the borderlands

As explored in Chapter 3, writers have explored the new kinds of spaces that may open up as different discourses intersect and, consequently, the new possibilities that may emerge (Moje et al, 2004; Wilson, 2000). Indeed, Alsup (2006) links student-teachers' successful professional development to their ability to negotiate such borderlands. Whilst this study does not provide evidence to uphold the worth of such borderland activity, it does draw from student-teachers' experiences both in and outside school to illuminate aspects of its nature and, in doing so, suggests that this is an area worthy of further research. This study adds to research (Britsch, 2005), which has described a murkier picture of the borderlands between discourses. It suggests that digital practices merge, blend and collide in different contexts as they are accommodated within existing discourses or translated from one discourse to another. As the re-enactment of old discourses becomes patterned by new stuff (new modes of communication, new spatial and temporal relationships), so relationships take on new dimensions: networked individualism for example offers ways of maintaining ongoing connectedness in multiple networks. Often participants simply seemed to perform old identities in new ways but sometimes new practices were associated with the performance of new kinds of identities: Facebook for example offered Joanne a new way to interact with her network of friends but perhaps provided Holly with a medium through which she was able to perform a more confident and assertive identity.

Like other research which has explored barriers to technology-use in classrooms (Barton and Hadyn, 2006), this study highlights aspects which supported or undermined classroom integration: the significance of role models, availability and access to equipment and attitudes of staff. Exploring this experience as patterned by discourses, however, highlights that whilst student-teachers are expected to use digital technology within classrooms, tensions within research, policy and practice may mean that they face competing discourses related to the nature of literacy and role of technology which intersect in different ways in different school environments. Whilst policy rhetoric has lauded the value of new technologies, students' descriptions of teachers' use suggested that they saw digital technology as chiefly accommodated within established discourses,

in which school accountability systems prioritised children's attainment in standardised tests and traditional relationships between teachers and learners were reified in the materiality of the classroom. At times student-teachers felt that teachers challenged those discourses through practices inflected by other belief systems or simply exempted themselves through technology avoidance. The borderlands between discourses therefore have implications for student-teachers' classroom practice and for the transformative agenda in possibly opening spaces for more innovative technology use.

Importantly, if unsurprisingly, there were borderlands between discourses that none seemed to enter. For example, it seemed there was no overlap between the distributed expertise developed in student-teachers' lives outside the classroom and a movement towards more distributed knowledge with children in classrooms. Indeed, they provided no descriptions of teachers who had used portable or networked technologies with pupils in ways that challenged established relationships between teachers and learners. Whilst student-teachers seemed to see technology-use as increasingly central to the performance of teacher identities, there were few, if any, examples where such use had been recruited to anything other than established teaching identities. As explored earlier, Gee (2005) argued that new practices can only be accommodated within discourses if they are recognisable within them and, indeed it seemed that for some student-teachers, only certain aspects of practices survived the transition from personal to professional practice. For example, teachers encouraged Holly and Joanne to make use of their digital experience, although this was validated chiefly as technical skill. For others, the discourses that framed classroom practice in the schools they worked in were so removed from discourses associated with their digital practices that their experience seemed not to be deemed relevant.

This analysis suggests that these students' experiences of digital practices outside ITE only supported the development of their teacherly identity in ways that were acceptable within existing classroom discourses. Participants all commented on how children were motivated when technology was used within lessons and it seemed that in describing their classroom experiences of digital literacy, the focus was on their role in resourcing the existing curriculum. Drawing from experience in digital environments they

suggested that they behaved in ways aligned to new professional identities, collecting resources and participating in networks with peers and teachers. They became gatherers and presenters of resources and supported one another through an online network. As 'networked professionals' they could be positioned as experts, as long as their practices were aligned with existing school discourses, and as long as the school infrastructure could support them. Such activities however seemed to support their induction into existing discourses rather than exploring new kinds of possibilities. Opportunities for transformation seemed limited as technology was accommodated within existing discourses.

Importantly, however, whilst student-teachers' descriptions of activities suggested that they largely accommodated their skills within existing discourses, their comments on these experiences suggested that the borderlands between discourses were often highly salient. Whilst opportunities for innovation seemed limited, accounts sometimes suggested a determination to continue experimentation despite the limited role models available. It seemed that the values and practices upheld through school discourses clashed with discourses developed in other contexts and these clashes generated a critical perspective on practice. For Charlotte, for example, the contrast between discourses was so stark that she stated that she suggested she had left her placement determined to experiment. During interviews, student-teachers suggested various influences which shaped this kind of determination, including their awareness of the QTS standards; experience of observing other teachers; and 'Changing Views of Literacy'. Of course, many other influences may have influenced these perspectives. As life history research into teachers' professional identities has explored, student teachers bring to ITE varied assumptions wrought through previous and continuing life experience (Ball, 1985; Goodson, 1992; Goodson and Hargreaves, 2003; Knowles, 1992; Woods, 1984). Such assumptions might have also intersected with institutional discourses relating to technology and done so in ways that challenged or reinforced established identities.

As Alsup (2006) argues, some student-teachers are well-equipped to engage with such tensions whilst others find these confusing, de-moralising and de-motivating. In this

study, such responses seemed to be apparent in stories of disempowerment, which told of students struggling to accommodate or navigate their ways through competing discourses. Such disempowerment seemed particularly concerning when opportunities for exploring the borderlands between discourses were apparently missed. Kate and Grace, for example, both described classrooms where teachers disapproved of new technologies from a child-centred discourse. This perspective could have allowed them insights which challenged the discourse of teacher-led, standardised learning which dominated other accounts. Had these teachers supported students in exploring how to accommodate digital practices within a child-centred discourse, they may have found new ways of experimenting at the borderlands. Whilst, as Alsup argues, it may be in the borders between discourses that new opportunities for transformation emerge, student-teachers may need support in exploring these borderlands.

Various studies have outlined the difficulties associated with trying to force what might be termed ‘border-crossings’ by transferring practices from one domain to another. Projects designed to link curriculum learning and the funds of knowledge brought by young people to education (Lee, 2007) have shown how the focus should not simply be on applying skills or semiotic systems developed in one domain within another. Knobel and Lankshear (2006), for example, explore the difficulties of attempting to appropriate digital practices developed from outside school for educational purposes, demonstrating how blogs often become impoverished and inauthentic once recruited within a school discourse. School priorities, such as acquisition of skills in composition of school-based genres, undermine what they see as the features of successful blogging: strong sense of purpose, clear point of view and high quality presentation. In this study a similar effect was seen in student-teachers’ presentation of their experience of the university’s virtual learning environment: as networking opportunities developed in less formal sites were recreated within a university context, people behaved in ways that seemed to reinforce rather than challenge dependency. Online discussion seemed accommodated within an existing discourse and then became part of the machinery which upheld this discourse.

Whilst this study therefore suggests that the borderlands between discourses could provide opportunities for student-teachers to explore new possibilities, it also suggests

that work at the borderlands requires something subtler than transference. The remainder of this chapter therefore highlights some possible areas for research, policy and ITE practice which might support analysis of and experimentation with digital practices in order to explore these borderlands in ways that could promote a transformative agenda.

6.3 Implications for Further Research

By focusing on digital practices from an ideological perspective, this study highlights the significance of socio-cultural context for technology-use. The qualitative methodology allows insights into the variations in values, beliefs, thoughts and feelings associated with using technology in different contexts. Moreover, the layers of interpretation involved in making sense of student-teachers' stories also signal ways in which meaning-making around technology-use is contingent and itself subject to competing discourses. Further qualitative research would seem to be needed to investigate further these contradictions and variations in both practice and meaning-making.

As explored in Chapter 2, the study was not intended to present either a comprehensive overview of the role of digital practices in these student-teachers' lives or an in-depth analysis of particular practices. In providing insights into aspects of their experience across a broad range of contexts, however, it raises questions about digital practices which deserve further empirical research. Longitudinal studies are needed to explore how student-teachers manage transitions between different discourses over time. Joanne for example described her first experiences with Facebook, which seemed to place her at a borderland between old and new ways of enacting friendship. A longitudinal study might reveal how her practices evolved and if and how their significance changed. Similarly longitudinal studies might explore how student-teachers manage competing discourses over the duration of their course and into their professional career, and investigate more fully how such tensions play out in practice.

This study also highlights the need for further research to explore specific practices. For example, it could be that, through their lack of presence on Blackboard discussion boards, student-teachers were upholding a culture of dependency or that, through avoiding technology-use, some teachers were undermining their professional credibility. More detailed ethnographic work which investigates particular practices is needed to fully explore the discourses which pattern technology-use within different contexts. There is also a need to better understand the conditions which shape classroom digital practices and know more about how conflicts between discourses are experienced by those working in classrooms. These include difficulties associated with availability of and access to equipment as well as the difficulties associated with innovative uses of technology within the current climate of accountability. The study suggests there is a need for further exploration of practising teachers' perspectives on the role of new technologies, possibly using as a starting point the different ways in which these students suggested technology was accommodated within teacher identities.

Whilst this study's design encouraged participants to reflect upon and review their experience, further studies might usefully draw more centrally from participants' analysis of their experience, engaging participants more directly in commenting on the discourses they feel structure their experience. There is also a need for more collaborative studies which enable researchers to work with student-teachers to investigate experience. Studies of practitioners' and student-teachers' own experiences may not only provide insights more firmly rooted in student-teachers' experience but the process of such research might, as Barton (2000) suggests, support student-teachers themselves in critiquing and developing classroom practice.

6.4 Implications for policy-makers

The mixed picture of technology integration in schools reported by these students also has implications for policy makers. The QTS Standards (TDA, 2007a) state that student-teachers must demonstrate they can implement a wide variety of approaches to

using technology. This standards-based approach implies that professional knowledge can be gained incrementally and absolutely, taking little account of the varied contexts in which student-teachers might find themselves, the different ways in which technology may be constructed in those environments or indeed the ongoing journey into early career development. At the same time, emphasis on school-based training and the pivotal role of the mentor in leading and assessing school experience means that ITE seems often based around a model of acculturation into school environments.

Britzman (2003) questions the dominance of this model, arguing that learning to teach involves a tension between 'biography and social structure' (Britzman, 2003:240). She notes the impact of teacher education which involves extensive periods of classroom-based experience and explores how this intersects with pre-service teachers' beliefs and assumptions gained through observing teachers throughout their school career. For Britzman, extended periods of classroom practice can serve to reinforce existing assumptions about the teacher's role wrought through years of schooling. Alternative perspectives, such as those explored during university-based ITE may therefore be sidelined if deemed irrelevant to the classroom discourses experienced on practice, and contradictory identities may be silenced. Consequently, there would seem to be a need to raise the status of the role of university-based education in contextualising school-based practice.

The insights gained from this study into teachers and schools are very partial, gleaned from a very particular perspective. However, the conflicts experienced by student-teachers would seem to have broader implications for educational policy. It would seem that their experience suggests contradictions in national policies: their experience suggested that the dominant discourse of standardisation and accountability suppresses rather than encourages use of new technologies in innovative ways, as indeed it may restrict other more flexible and innovative approaches. This would seem to limit opportunities for transformation, even in line with the definition of transformation implicit in government policies outlined in Chapter 1. There would seem to be a need for a more ecological review of educational policies which explores how different

strands, such as those relating to literacy, technology, school accountability and ITE, intersect in practice.

6.5 Implications for ITE

The study also has implications for teacher educators. Writers who have suggested ways of developing technology-use amongst pre-service teachers have often focused upon integrating technology-use more effectively within course design and implementation. A number of studies have identified examples of what is seen as effective practice within ITE institutions (Davis, 2003; Boshuizen and Wopereis, 2003). Some have documented attempts to involve students in innovative technology-use within schools (Bauer and Anderson, 2001; Watts-Taffe, Gwinn, Johnson, and Horn, 2003) whilst others have focused particularly upon use of technology within course delivery (Smith d'Arezzo, 2002; Stokes, Kaufman and Lacey, 2002). This study however draws attention to the need not just to focus upon course design but to consider the varied and complex contexts through which student-teachers use technology in their lives and are expected to use technology in classrooms.

By highlighting the variety of student-teachers' practices, this study supports arguments for avoiding assumptions that all pre-service teachers are digital insiders. Instead it suggests that confidence is contingent on context and associated with different kinds of values and priorities. Consequently, it would seem there is a need to revisit the process of both auditing and developing students' digital experience. Rather than an atomistic approach which focuses specifically on auditing skills, there is a need to support student-teachers in reflecting more qualitatively on their varied digital practices. This might include reflection on their understanding about the possibilities and limitations of technology developed through personal experience. This may also reveal a need to provide opportunities for students to experiment with digital practices with which they are less familiar, perhaps through providing opportunities for the kind of peer mentoring that supported Joanne's Facebook induction. Approaches could build, as Graham (2008) suggests, on the tradition of using reflection upon teachers' own literacy

experiences as the starting point for development in literacy education. Graham (2008) has already begun to explore this potential, through encouraging practising teachers to reflect on their learning about digital technologies and use this to consider the relationship between pedagogy and technology. Such work could be extended to consider the relationship between digital practice, literacy, identity and discourse and the relevance of this to teaching. Exploring practices beyond education then is not just about giving voice to students in order to celebrate diversity, but making explicit the kinds of discourses embedded within these practices.

As explored earlier, however, support may be needed in negotiating these borderlands in ways that are deemed to have relevance to professional practice. Modules such as ‘Changing Views of Literacy’ may well be influential in providing students with access to alternative discourses from which they can critique classroom practice. However, there is a danger that locating such approaches within a single module means they are sited within an academic discourse rather than discourse of classroom practice. As this study suggests, transference of practices between contexts is problematic and student-teachers may differentiate between school and university discourses, seeing such critique as appropriate to university but not school. Such reflection therefore needs to be deeply embedded in school-based practice. As Freire argues: ‘Transformative tensions emerge if the study is situated inside the subjectivity of the students in such a way to detach students from that very subjectivity into more advanced reflections’ (Freire, 1985: 105).

In exploring the relevance of this breadth of experience, Clandinin and Connelly (1998)’s metaphor of a ‘professional knowledge landscape’ is helpful. This metaphor acknowledges the varied influences and experiences which are significant in generating and shaping professional knowledge. Clandinin and Connelly explain how:

It allows us to talk about space, place and time. Furthermore, it has a sense of expansiveness and the possibility of being filled with diverse people, things and events in different relationships. Understanding professional knowledge as

comprising a landscape calls for a notion of professional knowledge as comprised of a wide variety of people, places and things. (Clandinin and Connelly, 1998: 4-5).

The metaphor conceives professional knowledge not just as a route-map of strategies and approaches that can be used to achieve predetermined aims, but as a rich mixture of values, attitudes and orientations that teachers explore as they move through their professional life. The notion of a professional knowledge landscape, in which teachers make different meanings from their experiences and are active in forging these meanings, is helpful in considering how ITE might be constructed differently to recognise varied influences on teacher development. By interrogating this landscape, students might arrive at a greater understanding of their relationship to it. And as their personal and professional circumstances change, they might explore different parts of it.

If student-teachers' experiences are seen as significant in shaping their knowledge, then the curriculum needs to provide opportunities for students to reflect on those experiences. Olson (1995:120) describes this process as one of encouraging 'narrative authority'. The concept of 'narrative authority' recognises that all have important perspectives on reality. Olson therefore argues that it is important to develop teachers' narrative authority through giving them the confidence to discuss their own practice and the influences upon it. Featherstone, Munby, and Russell (1997) see this opportunity for teachers to tell their own stories as the crucial link between reflection and action. If students are encouraged to tell their stories, they may be empowered to reflect on and make meaning from their own experience (Huber and Whelan, 1999; O'Connell Rust, 1999).

As Goodson (1997) notes, however, an emphasis on telling personal stories can locate professional knowledge solely within the personal domain and divorce it from its social and political context. Indeed, Goodson comments on the irony of the expansion in research focusing on studying teachers' voices when teachers' opinions have been

ignored in relation to national policy. He suggests that this emphasis on the personal may detract attention from the political context:

It would be an unfortunate fate for a movement that at times embraces the goal of emancipating the teacher to be implicated in the displacement of theoretical and critical analysis. (Goodson, 1997:111)

The challenge for ITE then is not just to recognise and value student-teachers' perspectives but, as Miller Marsh (2002) argues, to encourage them to explore the discourses which shape them, possibly utilising frameworks such as Gee's situation network to structure such reflection. This in turn may empower students to critique the assumptions implicit in dominant discourses and the ideological underpinnings evident within their own funds of knowledge. This may provide a means for challenging institutionalised discourses and demonstrating the relevance and legitimacy of digital practices developed beyond education.

Summary

By using Gee's situation network, this exploration of student-teachers' digital insidership has drawn attention to the varied nature of these student-teachers' digital practices and the different ways in which their practices merged or contrasted with their professional practice. A focus on borderlands between discourses has highlighted the opportunities for transformation that arose or disappeared as participants' drew in different ways from the social affordances of digital texts and identities shifted, merged, diverged or intersected. This insight into student-teachers' perspectives also provides tertiary insights into classroom practices and in doing so highlights the challenges that student-teachers face as they attempt to integrate technology in classrooms. This slice of student-teachers' experience suggests that hopes of using technology to mediate a more transformative education are still distant, and that expectations that student-teachers could act as agents for change may be unrealistic. However, exploring the borderlands between discourses does help to understand the barriers they face and, in drawing attention to those borderlands, begins to locate sites where critical reflection could offer routes to reconfigured teacher identities.

Afterword

This report opened with reflections on my own orientation towards digital technology within my personal and professional life. Looking back at these introductory comments, they focus on divisions between digital practices enacted in educational institutions and those associated with student-teachers' lives beyond ITE and, implicitly, divisions between the digital experience of those from different generations. They hint at awe, fear and perhaps disdain directed towards a younger generation who uses new technologies with confidence and occasional anarchy. For me, however, this study has highlighted the need to focus not on division but multiplicity of experience.

The study made me re-think my own digital insidership. As I reflected on these student-teachers' digital preferences and the practices they rejected, I saw no great separation between our experiences, just intersections. Sometimes participants' practices and attitudes resonated and at other times contrasted with my own and each others. I realised that I'm not an outsider but like the student-teachers I interviewed, am an insider (and outsider) to certain practices in certain contexts. This seems to be a much better position from which to explore practice with student-teachers. It positions me alongside rather than in opposition and whilst there are still differences, means I feel more prepared to explore commonalities and opportunities rather than focusing upon exoticism, and work with student-teachers to find new ways of using digital technologies within classroom practice.

At the same time, I am even more aware of how my own practices act discursively to uphold dominant discourses. Looking back, for example, at my emails inviting participants to attend interviews, I

was surprised by their abruptness and formality. My lack of familiarity in using digital communication in informal contexts perhaps means I am less skilled than the research participants in communicating online. Or perhaps this indicated an ultimate inability to shrug off my identity as tutor during the research process. In either case, I had perhaps been less successful than I had imagined in performing an identity as researcher which challenged the high status implicit in my tutor role. This made me re-consider how my behaviour as tutor may be active in upholding discourses that ultimately frame a kind of classroom technology-use which rejects informal, participatory and playful uses of technology in the classroom.

This focus on my own insidership has also highlighted my role in reinforcing established learning identities. Viewing myself as digital incompetent, I had seen the digital practices with which I did engage as insignificant or even neutral. I realised, for example, that I almost always use PowerPoint presentations to structure seminars, providing on-screen pointers for discussion points or summarising key ideas. This practice had arisen due to a perceived need to provide consistency with colleagues, reflecting perhaps the same kind of movement towards standardisation evident in documents such as the TDA standards and National Curriculum. Other habitual uses of technology include moderation of Blackboard discussion boards and emails to students in response to queries. In fact, following positive feedback from students, I pride myself in my rapid responses which I attempt to frame in supportive ways. On reflection, however, my own university-based digital practices seem to position me as benign dictator, supporting students through the maze of university-based requirements but in doing so reifying them. I could tell myself that this is appropriate – the technology performs a particular function here- but in doing so designate technology as a tool and may help to construct or maintain digital environments that oppress rather than empower learners.

The study also reminded me of the importance of keeping the humanity of those I work with at the forefront of my professional decisions and actions. I felt humbled by the richness and energy with which these student-teachers engaged in digital environments. I felt moved by the complexity of these student-teachers' lives and privileged in having this opportunity to gain such insights. I was aware that in managing my own complex life, I often ignored this breadth and depth of experience as I structured courses and taught modules. The cost of this was illustrated in participants' stories of engagement with Blackboard. This research, therefore, prompted a renewed determination to keep student-teachers' own experience at the forefront of my professional practice. Such reflections of course could be prompted by any study of student-teachers' experience. However, there is a particular relevance to considering the implications for technology. Focusing on digital practices highlighted the embeddedness of technology-use and the feelings, values and assumptions associated with it. For me, the study emphasised the need to consider these affective, contextual elements in considering the role of technology in education, both within primary schools and ITE.

On a personal level, then, this study has highlighted several priorities I need to address if I am to attempt to successfully support student-teachers in exploring innovative ways of using new technologies in the classroom. Firstly, I need to explore with student-teachers new ways of integrating more participatory technologies both within ITE and the classroom and consider how my own use of technology acts discursively. Secondly, I need to keep listening to student-teachers and create spaces through which they feel it is legitimate to discuss their lives beyond the course. Finally, I need to re-prioritise an approach which promotes critical reflection rather than standardisation and builds on analysis of discourses as a means of

making explicit competing pressures and ideologies. Rather than encouraging student-teachers to transfer prior knowledge to their professional role, therefore, I'm keen to find ways of encouraging them to use prior experience to critique classroom practice in an attempt to explore and possibly challenge dominant discourses: spending time at the borderlands in order to unpick new possibilities. Of course all of this has implications beyond those associated with digital technology. It has significance for how I construct my identity as tutor and the ways in which I negotiate borderlands between discourses. This I hope to unravel through the next phase of my research.

References

- Abbis, J. (2008) 'Rethinking the 'problem' of gender and IT schooling: discourses in literature', *Gender and Education*. 20 (2). Pp. 153-165.
- Acker, S. (1997) 'Primary Teachers' Work: The response to educational reform'. In: Helsby, G. & McCulloch, G. (Eds.). *Teachers and the National Curriculum*. London: Cassell. Pp. 34-51.
- Alsup, J. (2006) *Teacher Identity Discourses: Negotiating Personal and Professional Spaces*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Altheide, D.L. & Johnson, J. M. (1994) 'Criteria for Assessing Interpretive Validity in Qualitative Research'. In: Denzin, N.K. & Lincoln, Y.S. (Eds.). *Handbook of Qualitative Research*. London: Sage. Pp.485-499.
- Altrichter, H. & Holly, M. L. (2005) 'Research Diaries'. In: Somekh, B. & Lewin, C. (Eds.). *Research Methods in the Social Sciences*. London: Sage. Pp.24-32.
- Andrews, R. (2002) *A systematic review and meta-analysis of the effectiveness of ICT on literacy learning in English 5-16*. [Online]. Last accessed on 25th August 2005 at URL: <http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/reviews.htm> .
- Andrews, R. (Ed.). (2004) *The Impact of ICT on Literacy Education*. London: Routledge Falmer.
- Antaki, C. & Widdicombe, S. (Eds.). (1998) *Identities in Talk*. London: Sage.
- Apple, M. (1995) *Education and Power*. London: Routledge.
- Ashworth, P. (1993) 'Participant Agreement in the Justification for Qualitative Findings', *Journal of Phenomenological Psychology*. 24 (1). Pp.3-16.
- Ashworth, P. (1999) "'Bracketing' in phenomenology: renouncing assumptions in hearing about student cheating", *Qualitative Studies in Education*. 12 (6). Pp. 707-721.

- Baker, C. (2004) 'Membership Categorization and Interview Accounts'. In: Silverman, D. (Eds.). *Qualitative Research: Theory, Method and Practice*. London: Sage. Pp. 162-176.
- Bakhtin, M. (1981) *Dialogic Imagination: Four Essays*. Texas: University of Texas Press.
- Ball, S.J. & Goodson, I.F. (1985) 'Understanding Teachers' Concepts and Contexts'. In: Ball, S.J. & Goodson, I. (Eds.). *Teachers' Lives and Careers*. Lewes: Falmer Press. Pp. 1-26.
- Banister, S. & Vannetta, R. (2005) 'Beginning with a baseline: insuring productive technology integration in teacher education', *Journal of Technology and Teacher Education*. 14 (1). Pp.209-235.
- Barton, D. (2000) 'Researching Literacy Practices; learning from activities with teachers and students'. In: Barton, D., Hamilton, M. & Ivanic, R.. (Eds.). *Situated Literacies: reading and writing in context*. London: Routledge. Pp.167-179.
- Barton, D. & Hamilton, M. (1998) *Local Literacies*. London: Routledge.
- Barton, D., Hamilton, M. & Ivanic, R. (Eds.). (2000) *Situated Literacies: reading and writing in context*. London: Routledge.
- Barton, R. & Haydn, T. (2006) 'Trainee teachers' views on what helps them to use information and communication technology effectively in their subject teaching', *Journal of Computer Assisted Learning*. 22. 257-272.
- Bassey, M. (1995) *Creating Education Through Research: a global perspective of educational research for the 21st century*. Newark: Kirklington Moor Press.
- Bauer, J.F. & Anderson, R.S. (2001) 'A constructivist stretch: Preservice teachers meet preteens in a technology-based literacy project', *Reading Online*, 5(5). [Online]. Last accessed 28th April 2006 at URL:
http://www.readingonline.org/articles/art_index.asp?HREF=bauer/index.html .
- Baynham, M. (1995) *Literacy Practices: investigating literacy in social contexts*. London: Longman.

- Benkler, Y. (2006) *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. Yale: Yale University Press.
- Benwell, B. & Stokoe, E. (2006) *Discourse and Identity*. Edinburgh, Edinburgh University Press.
- Berger, P.L. & Luckman, T. (1967) *The Social Construction of Reality: a treatise in the sociology of knowledge*. London: Penguin.
- Bigum, Chris (2002). 'The knowledge producing school: beyond IT for IT's sake in schools', *Professional Voice*. 2 (2). [Online]. Last accessed on 10th July 2005 at URL: http://www.aeuvic.asn.au/professional_voice.htm.
- Bloor, M. (1997) 'Techniques of Validation in Qualitative Research: a critical community'. In: Miller, G. & Dingwall, R. (Eds.). *Context and Method in Qualitative Research*. London: Sage. Pp. 37-50.
- Boshuizen, H.P.A. & Wopereis, I.G.J.H. (2003) 'Pedagogy of Training in Information and Communications Technology for Teachers and Beyond', *Technology, Pedagogy and Education*. 12 (1). Pp.149-159.
- Bowe, R., Ball, S.J. & Gold, A. (1992) *Reforming Education and Changing Schools: Case Studies in Policy Sociology*. London: Routledge.
- British Educational Communications and Technology Agency (BECTa) (2003) *ICT and Pedagogy*. London: HMSO.
- British Educational Communications and Technology Agency (BECTa) (2006a) *Emerging Technologies for Learning: volume 1*. [Online]. Last accessed on April 11th 2007 at URL: http://partners.becta.org.uk/index.php?section=rh&catcode=_re_rp_ap_03&rid=11380.
- British Educational Communications and Technology Agency (BECTa) (2006b) *How to use ICT in the Literacy Hour*. [Online]. Last accessed on July 31st 2006 at URL: http://schools.becta.org.uk/index.php?section=tl&catcode=as_cu_pr_sub_04&rid=468.
- British Educational Communications and Technology Agency (BECTb) (2007a) *Harnessing Technology Review 2007: progress and impact of technology in education*. [Online]. Last accessed on June 30th 2008 at URL: <http://publications.becta.org.uk/>.

British Educational Communications and Technology Agency (BECTa) (2007b)

Emerging Technologies for Learning: volume 2. [Online]. Last accessed on April 11th 2007 at URL:

http://partners.becta.org.uk/index.php?section=rh&catcode=_re_rp_ap_03&rid=11380.

British Educational Communications and Technology Agency (Becta) (2008a)

Harnessing Technology: Next Generation Learning 2008-2014. [Online]. Last accessed on July 29th 2008 at URL: <http://publications.becta.org.uk/display.cfm?resID=37348>.

British Educational Communications and Technology Agency (Becta) (2008b)

Emerging Technologies for Learning: volume 3 [Online]. Last accessed on May 9th 2008 at URL: <http://publications.becta.org.uk/>.

British Educational Communications and Technology Agency (Becta) (2008c) *How to*

Search Safely for information Online. [Online]. Last accessed on July 29th 2008 at URL: http://schools.becta.org.uk/index.php?section=tl&catcode=ss_tl_dig_02&rid=12498.

British Educational Communications and Technology Agency (Becta) (2008d)

Personalising Learning in a Connected World: a guide for school leaders. Coventry: Becta.

Britsch, S. (2005) 'But what did they learn: clearing third spaces in virtual dialogues with children', *Journal of Early Childhood Literacy*. 5 (2). Pp. 99-130.

Britzman, D. P. (2003) *Practice makes Practice: A critical study of learning to teach*. New York: State University of New York Press.

Burbules, N.C. (2002) 'The Web as a Rhetorical Place'. In: Snyder, I. (Ed.). *Silicon Literacies: Communication, Innovation and Education in the Electronic Age*. London: Routledge Falmer. Pp. 75-84.

Burbules, N. & Callister, T. (2000) *Watch IT: The Risks and Promises of Information Technology for Education*. Boulder, CO: Westview Press.

Burn, A. & Leach, J. (2004) *A systematic review of the impact of ICT on the learning of literacies associated with moving image texts in English 5-16*. [Online]. Last accessed on 25th August 2005 at URL:

<http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/reviews.htm>.

Burnett, C. (forthcoming) *Research into literacy and technology in primary classrooms: an exploration of the kinds of understandings generated by recent studies.*

Burnett, C., Dickinson, P., Merchant, G., and Myers, J. (2005) 'Digital Connections: transforming literacy in the primary school', *Cambridge Review of Education*. 36 (1). Pp.11-29.

Buzan, T. & Buzan, B. (1993) *The Mind Map Book*. London: BBC Books.

Charmaz, K. (2002) 'Qualitative Interviewing and Grounded Theory Analysis'. In: Gubrium, J.F. & Holstein, J.A. (Eds.). *Handbook of Interview Research: context and method*. London: Sage. Pp. 675-694.

Christie, F. (2002) *Classroom Discourse Analysis*. London: Continuum.

Clandinin, D.J. & Connelly, F.M. (1998) 'Stories to Live By: Narrative understandings of school reform', *Curriculum Inquiry*. 28 (2). Pp.149-162.

Clwyn, N. (2006) 'Exploring the 'digital disconnect' between net-savvy students and their schools', *Learning, Media and Technology*. 31 (1). Pp.5-17.

Coffey, A. & Atkinson, P. (1996) *Making Sense of Qualitative Data: complementary research strategies*. London: Sage.

Cohen, L., Manion, L. & Morrison, K. (2000) *Research Methods in Education*. 5th ed., London: Routledge Falmer.

Comber, B. & Nixon, H. (2005). 'Children re-read and re-write their neighbourhoods: critical literacies and identity work'. In: Evans, J. (Ed.). *Literacy moves on: Using popular culture, new technologies and critical literacy in the primary classroom*. London: David Fulton Publishers. Pp. 115-133.

Conlon, T. (2004) 'A Failure of Delivery: the United Kingdom's New Opportunities Fund', *Journal of In-Service Education*. 30 (1). Pp.115-140.

Cooper, J. (2006) 'The digital divide: the special case of gender', *Journal of Computer Assisted Learning*. 22. Pp. 320-334.

- Cope, B. & Kalantzis, M. (Eds.). (2000) *Multiliteracies: literacy learning and the design of social futures*. London: Routledge.
- Cornu, B. (2004) 'Networking and collective intelligence for teachers and learners'. In: Brown, A. & Davis, N. (Eds.). *Digital Technology, Communities and Education*. London: Routledge Falmer. Pp. 40-45.
- Creswell, J. W. (1998) *Qualitative Inquiry and Research Design: Choosing among five traditions*. London: Sage.
- Cunningham, M. & Harris, S. (2003) *The Ever-Open Classroom: using ICT to enhance communication and learning*. Slough: National Federation for Educational Research.
- Curtis, B. & May, W. (Eds.). (1978) *Phenomenology and Education: self-consciousness and its development*. London: Methuen.
- Davies, J. (2006) 'Escaping to the Borderlands: An exploration of the Internet as a cultural space for teenaged Wiccan girls'. In: Pahl, K. and Rowsell, J. (Eds.). *Travel Notes from the New Literacy Studies: Instances of Practice*. Clevedon: Multilingual Matters. Pp. 57 – 71.
- Davis, N. (2003) 'Technology in Teacher Education in the USA: what makes for sustainable good practice', *Technology, Pedagogy and Education*. 12 (1). Pp.59-84.
- deBlock, L. & Sefton-Green, J. (2004) 'Refugee Children in a Virtual World: Intercultural Online Communication'. In: Brown, A. & Davis, N. (Eds.). *World Yearbook of Education 2004: Digital Technology, Communication and Education*. London: Routledge Falmer. Pp. 196-210.
- Denzin, N.K. (2003) 'The Cinematic Society and the Reflexive Interview'. In: Gubrium, J. F. & Holstein, J.A. (Eds.). *Postmodern Interviewing*. London: Sage. Pp. 141-155
- Department for Children, Schools and Families (DCSF) (2008) *Personalised Learning*. [Online]. Last Accessed on 22nd June, 2008 at URL: <http://www.standards.dfes.gov.uk/personalisedlearning/>.
- Department for Education and Employment (DfEE) (1998) *The National Literacy Strategy Framework for Teaching*. London: HMSO.

Department for Education and Employment (DfEE) (2000) *The National Curriculum: ICT*. London: HMSO.

Department for Education and Skills (DfES) (2002) *ICT and the Literacy Hour: Whole Class Teaching*. London: DfES Publications.

Department for Education and Skills (DfES) (2003) *ICT and the Literacy Hour: Guided and Independent Reading*. London: DfES Publications.

Department for Education and Skills (DfES) (2004) *Learning and Teaching Using ICT: example materials from Foundation Stage to Year 6*. London: DfES Publications.

Department for Education and Skills (DfES) (2005) *e-Strategy - Harnessing Technology: Transforming Learning and Children's Services*. London: HMSO.

Department for Education and Skills (DfES) (2006) *Primary Framework for Literacy*. [Online]. Last accessed on April 28th 2008 at URL:
<http://www.standards.dfes.gov.uk/primaryframework/literacy/>.

Dowdall, C. (2006) 'Dissonance between the digitally created words of school and home', *Literacy*. 45 (3). Pp. 153-163.

Exworthy, M., Halford, S. (Eds.). (1999) *Professionals and the New Managerialism in the Public Sector*. Buckingham: Open University Press.

Facer, K., Furlong, J., Furlong, R. & Sutherland, S. (2001) 'Constructing the Child Computer User: from public policy to private practices', *British Journal of Sociology of Education*. 22 (1). Pp. 91-108.

Fairclough, N & Wodak, R. (2004) 'Critical Discourse analysis'. In: Seale, C. (Ed). *Social Research Methods: A Reader*. London: Routledge. Pp 357-365.

Featherstone, D. , Munby, H. & Russell, T. (1997) *Finding a Voice While Learning to Teach*. London: Falmer Press.

Fielding, M. (2004) 'Transformative Approaches to Student Voice: theoretical underpinnings, recalcitrant realities', *British Journal of Educational Research*. 30 (2). Pp.295-311.

- Fine, M. (1994) 'Working the Hyphens: reinventing self and other in qualitative research'. In: Denzin, N.K. & Lincoln, Y.S. (Eds.). *Handbook of Qualitative Research*. London: Sage. Pp.70-82.
- Fisher, T. (2006) 'Educational Transformation: Is it, like 'beauty', in the eye of the beholder, or will we know it when we see it?', *Education and Information Technology*. 11. Pp. 293-303.
- Fontana, A. & Frey, J.H. (2000) 'The Interview: from structured questions to negotiated text'. In: Denzin, N.K. & Lincoln, Y.S. (Eds.). *Handbook of Qualitative Research*. 2nd Edition. Thousand Oaks, CA: Sage. Pp.645-672.
- Foucault, M. (1972) *The Archaeology of Knowledge*. Trans.: Sheridan Smith, A. M. London: Tavistock publications.
- Freire, P. (1985) *The Politics of Education: Culture, Power and Liberation*. Trans.: Macedo, D. New York: Bergin and Garvey.
- Furlong, J.F.R., Facer, K. & Sutherland, R. (2000) 'The National grid for Learning – a Curriculum without walls', *Cambridge Journal of Education*. 30 (1). Pp.91-110.
- Garrick, J. & Solomon, N. (1997) 'Technologies of Compliance in Training'. Paper delivered at the 27th Annual SCUTREA Conference "Crossing Borders, Breaking Boundaries: Research in the Education of Adults", 1st to 3rd July 1997, University of London. [Online]. Last accessed on 14th July 2008 at URL: <http://www.leeds.ac.uk/educol/documents/000000233.htm> .
- Gee, J. P. (1996) *Social Linguistics and Literacies: Ideology in Discourses*. 2nd ed., London: Falmer Press.
- Gee, J. P. (1999) *An introduction to discourse analysis theory and method*. London: Routledge.
- Gee, J. P. (2003) *What Video Games Have to Teach Us About Learning and Literacy*. New York: Palgrave Macmillan.
- Gee, J. P. (2005) *An Introduction to Discourse Analysis*. 2nd ed. London: Routledge.

- Gergen, M.M. & Gergen, K.J. (2003) 'Qualitative Inquiry: tensions and transformations'. In: Denzin, N.K. & Lincoln, Y.S. (Eds.). (2003). *The Landscape of Qualitative Research: theories and issues*. 2nd ed., London: Sage. Pp. 575-610.
- Giddens, A. (1991) *Modernity and Self; Identity, Self and Society in the Late Modern Age*. Cambridge: Polity Press.
- Giorgi, A. (2005) 'The Phenomenological Movement and Research in the Human Sciences', *Nursing Science Quarterly*. 18 (1). Pp. 75-82.
- Glaser, B.G. & Strauss, A.L. (1967) *The Discovery of Grounded Theory: strategies for qualitative research*. London: Wiedenfield and Nicolson.
- Goffman, E. (1969) *The Presentation of Self in Everyday Life*. London: Penguin.
- Goodson, I. (1992) 'Sponsoring the Teacher's Voice: teachers' lives and teacher development'. In: Hargreaves, A. & Fullan, M.G. (Eds.). *Understanding Teacher Development*. London: Cassell. Pp. 110-121.
- Goodson, I. (1997) 'Representing Teachers', *Teaching and Teacher Education*. 13 (1). Pp. 111-117.
- Goodson, I. & Hargreaves, A. (2003) *Professional Knowledge, Professional Lives: Studies in Education and Change*. Maidenhead: Oxford University Press.
- Graham, L. (2008) 'Teachers are digikids too: the digital histories and digital lives of young teachers in English primary schools', *Literacy*. 42(1). Pp. 10-18.
- Graue, E. & Walsh, D.J. (1998) *Studying Children in Context: theories, methods and ethics*. London: Sage.
- Gregory, E. (2005) 'Guiding Lights: Siblings as Literacy Teachers in a Multilingual Community'. In: Anderson, J., Kendrick, M., Rogers, T. & Smythe, S. (Eds.) *Portraits of Literacy Across Families, Communities and Schools*. London: Lawrence Erlbaum Associates. Pp. 21-39.
- Green, B. & Bigum, C. (2003) 'Aliens in the Classroom', *Australian Journal of Education*. 37 (2). Pp.119-141.

- Gubrium, J.F. & Holstein, J.A. (2003) 'Analysing Interpretive Practice'. In: Denzin, N.K. & Lincoln. (Eds.). *Strategies of Qualitative Inquiry*. 2nd ed., London: Sage. Pp. 214-248.
- Habermas, J. (1987) *The Theory of Communicative Action: lifeworld and system: A critique of functional reason*. Trans.: McCarthy, T. Boston, Massachusetts: Beacon Press.
- Hargreaves, A. (1992) 'Cultures of Teaching: A Focus for Change'. In: Hargreaves, A. & Fullan, M.G. (Eds.). *Understanding Teacher Development*. London: Cassell. Pp. 216-240.
- Hargreaves, A. (2007) 'Sustainable professional learning communities'. In: Stoll, L. & Louis, K.S. (Eds.). *Professional Learning Communities*. Maidenhead: Oxford University Press. Pp.181-195.
- Hargreaves, D. H. (2003) *Education Epidemic: transforming secondary schools through innovation networks*. London: DEMOS.
- Harris, S. & Kington, A. (2002) *Innovative Classroom Practices Using ICT in England*. Slough: National Foundation for Educational Research (NFER).
- Hassett, D. (2006) 'Technological difficulties: a theoretical frame for understanding the non-relativistic permanence of traditional print literacy in elementary education', *Journal of Curriculum Studies*. 38 (2). Pp. 135-159.
- Haworth, A. (2006) 'The Literacy Maze: Walking Through or Stepping Round', *Language Education*. 20 (2). Pp. 95-109.
- Helsby, G. & McCulloch, G. (1997) *Teachers and the National Curriculum*. London: Cassell.
- Hertz, R. (Ed.). (1997) *Reflexivity and Voice*. London: Sage.
- Holland, D., Lachicotte Jr, W., Skinner, D., & Cain, C. (1998). *Identity and Agency in Cultural Worlds*. Cambridge, Massacheussets: Harvard University Press.
- Holloway, S. & Valentine, G. (2002) *Cyberkids: Youth Identities and Communities in an On-line World*. London: Routledge Falmer.

- Holstein, J. A. & Gubrium, J.F. (1995) *The Active Interview*. London: Sage.
- Honan, E. (2004) 'Teachers as bricoleurs: producing plausible readings of curriculum documents', *English Teaching: Practice and Critique*. 3 (2). Pp. 99-112.
- Honan, E. (2008) 'Barriers to teachers using digital texts in literacy classrooms', *Literacy*. 42 (1). Pp.36-43.
- Hope, A. (2006) 'School internet Use, Youth and Risk: a socio-cultural study of the relation between staff views of online dangers and students' ages in UK schools', *British Educational Research Journal*. 32 (2). Pp. 307-329.
- Huber, J. & Whelan, K. (1999) 'A marginal story as a place of possibility: negotiating self on the professional knowledge landscape', *Teaching and Teacher Education*. 15. Pp. 381-396.
- Husserl, E. (1931) *Ideas*. London: Humanities Press.
- Hymes, D. (1974) *Foundations of Sociolinguistics*. Pennsylvania: University of Philadelphia Press.
- Iser (1978) *The Act of Reading*. Baltimore: John Hopkins University Press.
- Ito, M., Lyman, P., Carter, M. (2005) *Kids Informal Learning with Digital Media: an ethnographic investigation of innovative knowledge cultures*. [Online]. Last accessed on 20th August 2005 at URL: <http://groups.sims.berkeley.edu/digitalyouth/>.
- Jaffee, D. (2003) 'Virtual Transformation: Web-Based Technology and Pedagogical Change', *Teaching Sociology*. 31(2). Pp. 227-36.
- Jefferson, G. (2004) 'Glossary of transcript symbols with an introduction'. In: Lerner, G. (Ed.). *Conversation Analysis: studies from the first generation*. Amsterdam: John Benjamins. Pp.13-31.
- Johnson, J.C. & Weller, S.C. (2002) 'Elicitation Techniques for Interviewing'. In: Gubrium, J.F. & Holstein, J.A. (Eds.). *Handbook of Interview Research: context and method*. London: Sage. Pp. 491-514.

- Kay, R.H. (2006) 'Evaluating strategies used to incorporate technology into preservice education: a review of the literature', *Journal of Research on Technology in Education*. 38(4). Pp 383-408.
- Kellner, D. (2004) 'Technological Transformation, Multiple Literacies and the Re-visioning of Education', *E-Learning*. 1 (1). 9-37.
- Knobel, M. & Lankshear, C. (2002) 'Wham Am I bid? Read, writing and ratings at e-Bay.com'. In: Snyder, I. (Ed.). *Silicon Literacies: Communication, Innovation and Education in the Electronic Age*. London: Routledge Falmer. Pp. 15-30.
- Knobel, M. & Lankshear, C. (2006) 'Weblog Worlds and Constructions of Effective and Powerful Writing: Cross with Care, and only where signs permit'. In: Pahl, K. & Rowsell, J. (Eds.). (2006) *Travel Notes from the New Literacy Studies: instances of practice*. Clevedon: Multilingual Matters. Pp. 72-92.
- Knowles, J.G. (1992) 'Models for Teachers' Biographies'. In: Goodson, I. (Ed.). *Studying Teachers' Lives*. London: Routledge. Pp. 99-152.
- Kress, G. (1998) 'Visual and verbal modes of representation in electronically mediated communication: the potentials of new forms of text'. In: Snyder, I. (Ed.). *Page to Screen*. London: Routledge. Pp.53-79.
- Kress, G. (2003) *Literacy in the New Media Age*. London: Routledge.
- Kress, G. (2004) 'Learning, a semiotic view in the context of new technologies', In: Brown, A. & Davis, N. (Eds.). *Digital Technology, Communities and Education*. London: Routledge Falmer. Pp. 15-39.
- Kvale, S. (1996) *InterViews: an introduction to qualitative research interviewing*. London: Sage.
- Labbo, L.D. & Reinking, D. (2003) 'Computers and early childhood education'. In: Hall, N., Larson, J. & Marsh, J. (Eds.). *Handbook of Early Childhood Literacy*. London: Sage. Pp. 338-354.
- Lankshear, C. & Bigum, C. (1999). 'Literacies and New Technologies in School Settings', *Curriculum Studies*. 7 (3). Pp. 445-465.

- Lankshear, C. & Knobel, M. (2002) 'Children, literacy and the UK National Grid for Learning', *Journal of Early Childhood Literacy*. 2 (2). Pp. 167-194.
- Lankshear, C. & Knobel, M. (2003) 'New Technologies in Early Childhood: a review of research', *Journal of Early Childhood Literacy*. 3 (1). Pp. 59-82.
- Lankshear, C. & Knobel, M. (2006) *New Literacies: Everyday Practices and Classroom Learning*. 2nd ed., Maidenhead: Open University Press.
- Larson, J & Marsh, J. (2005) *Making Literacy Real*. London: Sage.
- Leander, K. (2003) 'Writing travellers tales on new literacy scapes', *Reading Research Quarterly*. 38 (3). Pp.392-397.
- Lee, C. (2007) *Culture, Literacy and Learning: Taking Bloom in the Midst of the Whirlwind*. New York, USA: Teachers College Press.
- Leu, Jr., D.J., Kinzer, C.K., Coiro, J., & Cammack, D.W. (2004). 'Toward a Theory of New Literacies Emerging From the Internet and Other Information and Communication Technologies'. In: Ruddell, R.B. & Unrau, N.J. (Eds.). *Theoretical Models and Processes of Reading*. Newark, USA: International Reading Association. Pp. 1570-1613.
- Leung, L. (2003) 'Impacts of Net-generation attributes, seductive properties of the Internet, and gratifications-obtained on Internet use', *Telematics and Informatics*. 20 (2). Pp. 107-129.
- Lincoln, Y.S. & Guba, E.G. (2003). 'Paradigmatic Controversies, Contradictions and Emerging Confluences'. In: Denzin, N.K., Lincoln, Y.S. (Eds.). *The Landscape of Qualitative Research: theories and issues*. 2nd ed., London: Sage. Pp. 253-291.
- Locke, T. & Andrews, R. (2004) *A Systematic review of the impact of ICT on literature-related literacies in English, 5-16*. [Online]. Last accessed on 25th August 2005 at URL: <http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/reviews.htm>.
- Marcus, G.E. (1986) 'Afterward: ethnographic writing and anthropological careers'. In: Clifford, J. & Marcus, G.E. *Writing Culture*. Berkeley, USA: University of California Press. Pp. 262-266.

Markham, A. N. (2003) 'Metaphors Reflecting and Shaping the Reality of the Internet: Tool, Place and Way of Being'. [Online]. Last accessed on May 12th 2008 at URL: <http://markham.internetinquiry.org/writing/MarkhamTPW.pdf>.

Marsh, J. (2006) 'Global, local/public, private: young children's engagement in digital literacy practices in the home'. In: Pahl, K. & Rowsell, J. (Eds.). (2006) *Travel Notes from the New Literacy Studies: instances of practice*. Clevedon: Multilingual Matters. Pp. 19-38.

Marsh, J. (2007) 'Mind the Gap: continuities and discontinuities between young children's textual experiences at home and school'. In: Soler, J. & Openshaw, R. (Eds.) *Reading Across International Boundaries: history, policy and politics*. Charlotte, NC: Information Age Publishing. Pp.171-185.

Marshall, J. (2000) 'Electronic Writing and the Wrapping of Language', *Journal of Philosophy of Education*. 34 (1). Pp. 135-149.

Mason, J. (1996). *Qualitative Researching*. London: Sage.

Mayo, N.B., Kajs, L.T., Tanguma, J. (2005) 'Longitudinal Study of Technology Training to Prepare Future Teachers', *Education Research Quarterly*. 29 (1). Pp. 3-16.

McCulloch, G. (1997) 'Teachers and the National Curriculum in England and Wales: socio-historical frameworks'. In: Helsby, G. & McCulloch, G. (Eds.). *Teachers and the National Curriculum*. London: Cassell. Pp. 19-33.

McHoul, A. & Grace, W. (1995) *A Foucault Primer: discourse, power and the subject*. London: University College London University Press.

Menter, I. & Muschamp, Y. (1999) 'Markets and Management: The case of primary schools'. In: Exworthy, M., Halford, S. (Eds.). *Professionals and the New Managerialism in the Public Sector*. Buckingham: Open University Press. Pp. 65-82.

Merchant, G. (2001) 'Teenagers in Cyberspace: an investigation of language use and language change in Internet chatrooms', *Journal of Research in Reading*. 24 (3). Pp. 293-306.

- Merchant, G. (2003) 'E-mail me your thoughts: digital communication and narrative writing', *Reading: literacy and language*. 37 (3). Pp. 104-110.
- Merchant, G. (2007b) 'Writing the future in the digital age', *Literacy* .41 (3). Pp. 118-128.
- Merchant, G. (2007) 'Daleks and Other Avatars: virtual lives in real classrooms'. [Online] Last accessed June 6th 2008 at extra.shu.ac.uk/bvw/virtual%20world%20paper.doc .
- Miles, M.B. & Huberman, A.M. (1994) *Qualitative Data Analysis: an expanded sourcebook*. London: Sage.
- Miller, G (1997) 'Towards Ethnographies of institutional discourse'. In: Miller, G. & Dingwall, R. (Eds.). *Context and Method in Qualitative Research*. London: Sage. Pp. 155-171.
- Miller, J. & Glassner, B. (2004) 'The "insider" and the "outsider": finding realities in interviews'. In: Silverman, D. (Ed.). *Qualitative Research: theory, method and practice*. Pp. 125-139.
- Miller Marsh, M. (2002) 'Examining the Discourses That Shape Our Teacher Identities', *Curriculum Inquiry*. 32 (4). Pp.453-469.
- Moje, E.B., McIntosh Ciechanowski, K., Kramer, K., Ellis, L., Carrillo, R. & Collazo, T. (2004) 'Working toward third space in content area literacy: an examination of everyday funds of knowledge and Discourse', *Reading Research Quarterly*. 39 (1). Pp. 38-70.
- Moll, L.C., Amanti, C., Neff, D. & Gonzalez, N. (1992) 'Funds of knowledge in teaching using a qualitative approach to connect homes to classrooms', *Theory into Practice*. 31 (2). Pp. 132-141.
- Moran, D. & Mooney, T. (2002) *The Phenomenology Reader*. London: Routledge.
- Moss, G. (2007) *The Interactive Whiteboards, Pedagogy, and Pupil Performance Evaluation: An Evaluation of the Schools Whiteboard Expansion (SWE) Project : London Challenge*. [Online]. Last accessed on June 6th 2008 at URL: <http://www.dfes.gov.uk/research/programmeofresearch/projectinformation.cfm> .

Nichols, S. (2006) 'From Boardroom to Classroom: Tracing a Globalised Discourse on Thinking Through Internet Texts and Teaching Practice'. In: Pahl, K. & Rowsell, J. (Eds.). *Travel Notes from the New Literacy Studies: instances of practice*. Clevedon: Multilingual Matters. Pp. 173- 194.

Nixon, H. & Comber, B. (2004) 'Behind the Scenes: making movies in early years classrooms'. In: Marsh, J. (Ed.). *Popular Culture, New Media and digital Literacy in Early Childhood*. Abingdon: Routledge Falmer. Pp. 219-236.

Nixon, J., Martin, J. & McKeown, P. & Ranson, S. (1997) 'Towards a Learning Profession: changing codes of occupational practice within the new management of education', *British Journal of Sociology of Education*. 18 (1). Pp. 5-28.

Ochs, E. (1996) 'Linguistic resources for socializing humanity'. In : Gumperz, J.J. & Levinson, S.C. (Eds.). *Rethinking Linguistic Relativity*. Cambridge: Cambridge University Press. Pp.407-37.

O'Connell Rust, F. (1999) 'Professional Conversations: new teachers explore teaching through conversation, story and narrative', *Teaching and Teacher Education*. 15. 367-380.

Office for Standards in Education (OFSTED) (2002) *ICT in Schools: Effect of Government Initiatives- Implementation in Primary Schools and Effect on Literacy*. [Online]. Last accessed on July 31st 2006 at URL:
<http://www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.summary&id=2615>

Office for Standards in Education (OFSTED) (2004) *ICT in Schools: the impact of government initiatives*. London: OFSTED.

Office for Standards in Education (OFSTED) (2005) *Embedding ICT in Schools: a dual evaluation exercise*. London: OFSTED.

Office for Standards in Education (OFSTED) (2008) *ICT in primary and secondary schools: OFSTED's findings 2005-2007*. London: OFSTED.

Olesen, V.L. (2003) 'Feminism and Qualitative Research'. In: Denzin, N.K., Lincoln, Y.S. (Eds.). *The Landscape of Qualitative Research: theories and issues*. 2nd ed., London: Sage. Pp. 332-397.

- Olson, M. (1995) 'Conceptualising Narrative Authority: implications for teacher education', *Teaching and Teacher Education*. 11 (2). Pp. 119-135.
- O'Reilly, T. (2005) *What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software*. [Online]. Last accessed on July 14th 2008 at URL: <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html> .
- Orona, C.J. (1997) 'Temporality and Identity Loss due to Alzheimer's Disease'. In: Strauss, A. & Corbin, J. (Eds.). *Grounded Theory in Practice*. London: Sage. Pp. 171-196.
- Ottesen, E. (2006) 'Learning to teach with Technology: authoring practised identities', *Technology, Pedagogy and Education*. 15 (3). Pp.275-290.
- Payne, S.L. (1951) *The Art of Asking Questions*. Princeton, New Jersey, USA: Princeton University Press.
- Pearson, M. & Somekh, B. (2006) 'Learning transformation with technology: a question of sociocultural contexts'. *International Journal of Qualitative Studies in Education*. 19 (4). Pp. 519-539.
- Piantanida, M. Tananis, C.A. & Grubs, R.E. (2004) 'Generating grounded theory of/for educational practice: the journey of three epistemorphs', *International Journal of Qualitative Studies in Education*. 17 (3). Pp. 325-246.
- Poland, B. (2002) 'Transcription quality.' In: Gubrium, J. & Holstein, J. (Eds.). *Handbook of Interview Research*. London: Sage. Pp. 629–650.
- Pope, M., Hare, D. & Howard, E. (2005) 'Enhancing Technology Use in Student Teaching: a case study', *Journal of Technology and Teacher Education*. 13 (4) Pp. 573-621.
- Potter, J. (1996) *Representing Reality: Discourses, Rhetoric and Social Construction*. London: Sage.
- Prensky, M. (2001) *Digital Natives, Digital Immigrants*. [Online]. Last accessed on December 15th 2005 at URL: <http://www.marcprensky.com/writing/Prensky>.

Prensky, M. (2007) 'How to teach with technology: keeping both teachers and students comfortable in an era of exponential change'. [Online] In: BECTA *Emerging Technologies for Learning: volume 2*. Last accessed April 11th 2007 at: http://partners.becta.org.uk/index.php?section=rh&catcode=_re_rp_ap_03&rid=11380.

Pritchard, A. & Cartwright, V. (2004) 'Transforming what they read: helping eleven year olds engage with the Internet', *Literacy*. 38 (1). Pp. 26-31.

Qualifications and Curriculum Authority (QCA) (2004) *More Than Words: multimodal texts in the classroom*. London: Qualifications and Curriculum Authority.

Rheingold, H. (2003) *Smart Mob: the Next Social Revolution: transforming cultures and communities in the age of instant access*. New York, USA: Perseus Press.

Richardson, L. (1997) *Fields of Play: constructing an academic life*. New Brunswick, New Jersey: Rutgers University Press.

Richardson, S.A., Dohrenwend, B.S., Klein, D. (1965) *Interviewing: its forms and functions*. New York: Basic Books.

Robinson, M & Mackey, M. (2006) 'Assets in the Classroom: Comfort and competence with media among teachers present and future'. In: Marsh, J. & Millard, E. (Eds.). *Popular Literacies, Childhood and Schooling*. London: Routledge. Pp.200-220.

Robinson, M. & Turnbull, B. (2004) 'Veronica: an asset model of becoming literate'. In: Marsh, J. (Ed.). *Popular Culture, New Media and Digital Literacy in Early Childhood*. Abingdon: Routledge Falmer. Pp. 51-72.

Rossmann, C.B. & Rallis, S.F. (2003) *Learning in the Field: An introduction to qualitative research*. 2nd ed., London: Sage.

Sachs, J. (2001) 'Teacher professional identity: competing discourses, competing outcomes', *Journal of Education Policy*. 16 (2). Pp.149-161.

Sacks, H. (1996) *Lectures on Conversation*. Oxford; Blackwell.

Schutz, A. & Luckman, T. (1973) *The Structures of the Life-World*. Trans. Zaner, R.M. & Engelhardt, T. H.. London: Heinemann.

Schutz, A. (1967) *The Phenomenology of the Life-World*. Trans. Walsh, G. and Lehnert, F. London: Heinemann.

Sefton-Green, J. (Ed.). (1999) *Young People, Creativity and New technologies: the challenge of digital arts*. London: Routledge.

Selwyn, N. (2004) 'Reconsidering Political and Popular Understandings of the Digital Divide', *New Media Society*. 6 (3). 341-362.

Shah, S. (2004) 'The researcher/interviewer in intercultural context: a social intruder', *British Educational Research Journal*. 30 (4). Pp. 549-575.

Sheffield Hallam University (SHU) (2008) *Research ethics: research involving human participants*. [Online]. Last accessed on June 6th, 2008 at URL: <http://students.shu.ac.uk/rightsrules/resethics1.html> .

Silverman, D. (2001) *Interpreting Qualitative Data: methods for analysing talk, text and interaction*. 2nd ed., London: Sage.

Silverman, D. (2005) *Doing Qualitative Research*. 2nd ed., London: Sage.

Silverman, D. (2004) *Harvey Sachs: Social Science and Conversation Analysis*. In Seale, C. (Ed.). *Social Research Methods: A Reader*. London: Routledge. Pp. 318 324.

Smith, F., Hardman, F. & Higgins, S. (2006) 'The impact of interactive whiteboards on teacher-pupil interaction in the National Literacy and Numeracy Strategies', *British Educational Research Journal*. 32 (3). Pp. 443-457.

Smith-D'Arezzo, W. (2002) 'Integrating literacy methods with technology assignments in a preservice teacher education course', *Reading Online*. 6 (2). [Online]. Last accessed 27th April 2006 at URL: http://www.readingonline.org/articles/art_index.asp?HREF=smith/index.html .

Snyder, I. (2001). 'A New Communication Order: Researching Literacy Practices in the Network Society', *Language and Education*. 15 (2). 117-131.

Somekh, B. (2005) 'Information and communication technologies and the culture of schooling: understanding innovation and building scenarios for radical reform'. Paper

presented at the British Educational Research Association Annual Conference, University of Glamorgan, 14-17 September 2005.

Stokes, S.M., Kaufman, T.U., Lacey, A. (2002) 'Preparing teachers of the 21st century: creating technological literacy in a teacher education program', *Reading Online*. 6 (5). [Online]. Last accessed 27th April 2006 at URL:

http://www.readingonline.org/articles/art_index.asp?HREF=stokes/index.html

Strauss, A. & Corbin, J. (1990) *Basics of Qualitative Research: grounded theory procedures and techniques*. London: Sage.

Strauss, A. & Corbin, J. (Ed.). (1997) *Grounded Theory in Practice*. London: Sage.

Stroobants, V. (2005) 'Stories about learning in narrative biographical research', *International Journal of Qualitative Studies in Education*. 18(1). Pp. 47-61.

Street, B. (1995) *Social Literacies: critical approaches to literacy in development, ethnography and education*. Harlow: Pearson Education.

Street, B. (1997) 'Cross-Cultural perspectives on literacy'. In: Maybin, J. (Ed.) *Language and Literacy in Social Practice*. Buckingham: Open University Press. Pp. 168-191.

Tapscott, (1998) *Growing Up Digital: rise of the net generation*. New York: McGraw-Hill.

Teo, T., Chai, C.S., Hung, D. & Lee, C.B. (2008) 'Beliefs about teaching and uses of technology among pre-service teachers', *Asia-Pacific Journal of Teacher Education*. 36 (2). Pp 163-174.

Thurston, A. (2005) 'Building Online Learning Communities', *Technology, Pedagogy and Education*. 14 (3). Pp. 353-369.

Topper, A. (2004) 'How are we doing? Using self-assessment to measure changing teacher technology literacy within a graduate educational technology program', *Journal of Technology and Teacher Education*, 12 (3). Pp. 303-318.

Training and Development Agency for Schools (TDA) (2007a) *QTS Standards*.

[Online]. Last accessed on April 28th 2008 at URL:

<http://www.tda.gov.uk/partners.aspx> .

Training and Development Agency for Schools (TDA) (2007b) *Requirements for initial Teacher Training*. [Online]. Last accessed on June 21st at URL:

<http://www.tda.gov.uk/partners/ittstandards.aspx> .

Turkle, S. (1995) *Life on the Screen: Identity in the Age of the Internet*. London:

Phoenix.

Usher, R. & Scott, D. (1996) 'The politics of educational research'. In: Scott, D. & Usher, R (Eds.). *Understanding Educational Research*. London: Routledge. Pp. 175-180.

Wallace, R.A. & Wolf, A. (1999) *Contemporary Sociological Theory: expanding the classical tradition*. 5th ed., Upper Saddle River, New Jersey; Prentice Hall.

Warren, C.A.B. (2002) 'Qualitative interviewing'. In: Gubrium, J.F. & Holstein, J.A. (Eds.). *Handbook of Interview Research: Context and Method*. London: Sage. Pp. 83-101.

Watts-Taffe, S., Gwinn, C., Johnson, J.R. & Horn, M. L. (2003) 'Preparing preservice teachers to integrate technology with the elementary literacy program', *The Reading Teacher*. 57 (2). Pp. 130-139.

Wilson, A. (2000) 'There's no escape from Third-Space Theory - Borderland Discourse and the In-Between Literacies of Prison'. In: Barton D., Hamilton M., Ivanic R. (Eds.). *Situated Literacies*. London: Routledge. Pp.54-69.

Wellman, B. (2001) 'Physical Space and Cyberplace: The Rise of Personalised Networking', *International Journal of Urban and Regional Research*. 25 (2). Pp. 227-252.

Wellman, B. (2002) 'Little Boxes, Glocalisation and Networked Individualism'. In: Goos, G., Hartmanis, J. & van Leeuwen, J. (Eds.). *Digital Cities II; computational and sociological approaches*. Berlin: Springer. Pp. 337-343.

Wellman, B. & Hampton, K. (1999) 'Living Networked on and Offline', *Contemporary Sociology*. 28 (6). 648-654.

Whitworth, A. (2005) 'The Politics of Virtual Learning Environments: environmental change, conflicts and e-learning', *British Journal of Educational Technology*. 36 (4). Pp.685-691.

Woods, P. (1984) 'Teacher, Self and Curriculum'. In: Goodson, I. & Ball, S. (Eds.). *Defining the Curriculum: Histories and Ethnographies*. London: The Falmer Press. Pp.239-261.

Appendix 1: Impact of admitting ignorance or inexperience

In using this data to generate understandings about how understandings about digital literacy are mediated, it was important to consider my own role in the process of meaning-making. This did not only help in considering the reasons for students' responses but in raising questions about the kinds of meanings that may be generated through student-tutor discussion. Significant was the way I presented myself. At the time of my pilot study, I considered myself as very much as a 'digital outsider', lacking in competence and familiarity within a range of digital environments. I was aware that my questions and prompts may be limited by this and, indeed, analysis of the transcripts suggested that my contributions ran along an insider/outsider continuum (sometimes suggesting confidence in digital environments and at others a lack of familiarity). The following example illustrates this and the impact it seemed to have on the students' responses:

1. **Cathy** How do you feel about writing on screen? Are you somebody that drafts on screen?
2. **Sophie** Yeah. Actually, saying that, I do have a little notebook where I've got what I need to write about... but it's just... I will write about that... there's nothing else. It's just what it will be about. It's almost like a little mini plan. But I just write everything up on the computer and then re-do it.
3. **Cathy** And do you find that you redraft a lot?
4. **Sophie** Well, I usually write it down and then read the few pages that I've written and then spell-check it all (laughs) and then the next time, I read a few pages back from what I've written... so I just keep re-reading it and then I think 'oh- that's spelled wrong' and then when it's printed off I think actually I don't like that and I cross out a few words and add a different one...so I'm never happy with it no matter how many times I re-do it. (laughs)
5. **Cathy** Yes- I know that feeling..that's fascinating.. In terms of computer games, I know nothing about computer games...
6. **Sophie** Well, the one I've got, it's like Cluedo... it's based on the Terry Pratchett books, or one of them...I've forgotten what it's called now. But it's like a fictional place called 'Ankamokapoke' ...and you play like a detective and somebody's gone missing and you've got to go round like the dirty shipyards and like the...and it's kind of like, I think it's based on like America really, but like in the 30s, when it's Mafia kind of thing... and it's a completely made up place and there's like little alien things running around and you ask them for help... and you say I heard about this, and what do you say to that...and none of them want to help so you've got to bribe them. I haven't been on it for a while

but sometimes just to de-stress myself. I actually like the music. It's got kind of bluesy music when you go to different places. I quite like that. (Laughter)

At the beginning, my questions are those of an insider who understands the process of writing on screen. This prompts a narration of what Sophie presents as typical behaviour. I then punctuate the interview at contribution 5 and move on to the next item she has pointed out on her mind map: 'I know nothing about computer games'. Here I shift my position to one of outsider and immediately, Sophie switches genres from narration to explanation. This is significant as the narrative yields different kinds of information. Contributions 7-10 show how Sophie personally engages with the writing process. Contribution 12, however, is a generic explanation of how the game works. It is only at the end that she gives personal perspective and interestingly distances herself from it. She underplays her enthusiasm for the game, accounting for it in terms of the music, perhaps what she sees as a more acceptable pleasure. My shift to outsider status may have influenced the kind of insights she offered and the values she ascribed to them.

Appendix 2: The course context

The BA (Hons) in Primary Education and BA (Hons) in Early Years Education are both intensive courses. Students complete three block placements and are required to submit assignments demonstrating engagement with subjects across the curriculum and with generic issues associated with teaching, learning and their professional role. At the time of the study, each student developed a subject specialism and students participating in this study all had specialisms in English. Other students developed specialisms in Mathematics, Science, Geography, Design Technology and Information and Communications Technology. The subject specialist strand of their course aimed to both strengthen subject knowledge and provide them with broader theoretical perspectives relating to their chosen subject. This involved completing a module in each of the first and second years of their course. In the third year, they focused on subject leadership within primary schools and conducted a classroom-based inquiry linked to their specialist subject.

In the first year of their course, the English specialist module, Children's Literature, explored a range of novels published for children and engaged students in textual analysis and consideration of reader response theory. The second year English specialist module, Changing Views of Literacy, was designed to develop students' understanding of different discourses surrounding literacy, the relationship between literacy and social and cultural identity, and the varied and changing nature of literacy practices. Students produced and analysed a range of digital texts, including synchronous and asynchronous computer-mediated-communication and video, and considered the implications of this work for educating young children.

The university prides itself in providing high quality IT facilities and has developed a range of initiatives designed to use technology to facilitate learner autonomy. All students are expected to use email and a virtual learning environment (Blackboard) for administrative purposes and to support engagement with the course. The campus is Wi-Fi enabled and most teaching rooms have interactive whiteboards. Students can use standalone PCs in the university learning centre and all students in halls of residence have free Internet access. Whilst on school placement, students are encouraged to draw from the IT resources available in their host school. These vary considerably: classrooms are increasingly fitted with interactive whiteboards, some have laptops and most have an IT suite with one or more PCs available in each classroom.

ICT and Literacy

Survey

Year 2

To all BA Y2 students:

As part of my doctoral research, I am conducting a study of students' perceptions of ICT and literacy. I am interested in students' experiences of using/seeing ICT within literacy whilst on placement and in their own lives.

This survey is designed to collect information about the kinds of technology that students use in their lives, how often they use them and how confident they feel in using them. The results of this survey may be presented as part of my doctoral research but may also be used within a paper submitted for publication in an educational journal.

If you are willing to participate in this research, I would be very grateful if you would complete Part 1 of this questionnaire and hand it back to me.

To English specialists:

I am also looking for a small number of English specialists to volunteer to interview about their own experiences. These interviews will be confidential and, if quoted within the research report, contributions will be anonymised.

This will involve attendance at a short initial briefing meeting and then 4 meetings of a maximum of 1 hour each during 2006/7. At one of the meetings, interviewees will also have an opportunity to review and comment on the findings. Meetings will be arranged at times to suit the interviewees.

If you are an English specialist and think you might be willing to be interviewed, please complete Parts 1 and 2 of this questionnaire. I shall then contact you with more information.

If you have any questions about this, please email me at c.burnett@shu.ac.uk or ring me on 0114-225 5682.

Cathy Burnett.

PART 1

Please complete the following information about yourself.

1. Which course are you on? (Please tick.)

BA Early Years Education(QTS) ☐

BA Primary Education (QTS) ☐

2. Are you female/male? (Please tick.)

Female ☐

Male ☐

3. How old are you? (Please tick.)

19-20yrs ☐

21-25yrs ☐

25- 30yrs ☐

31-35yrs ☐

36-40yrs ☐

41-45yrs ☐

46-50yrs ☐

51-55yrs ☐

56-60yrs ☐

4. What is your specialist subject? (Please tick)

English ☐

Geography ☐

Mathematics ☐

Science ☐

Design Technology ☐

ICT ☐

5. Which group are you in (A, B, C, D, E or F)? (Please specify.)

6. Please comment on the technology you own and/or use.

Technology	I own this	I sometimes use someone else's	I sometimes borrow this from university/use this whilst at university	I never use
Laptop/PC				
Internet /email access				
Mobile phone				
Digital camera				
Digital video camera				
i-Pod/MP3player				
PDA (personal digital assistant)				
Portable games console				
Other digital technology (please name)				
Other digital technology (please name)				
Other digital technology (please name)				

7. Tick the statement which best describes how frequently you engage in each of the following activities.

	At least once a day	A least once a week	At least once a month	Less frequently than once a month	Never
Sending/receiving emails					
Wordprocessing					
Playing computer games, e.g. using games console, played on mobile phone or accessed via PC					
Speaking on a mobile phone					
Sending/receiving text messages					
Taking and sending images via mobile phone					
Sending video via mobile phone					
Adding to my blog					
Reading and contributing to others' blogs					
Searching the Internet					
Using Litsearch (university library catalogue)					
Accessing information via Blackboard					

	At least once a day	A least once a week	At least once a month	Less frequently than once a month	Never
Reading discussion boards on Blackboard					
Contributing to discussion boards via Blackboard					
Editing videos					
Chatting to others online (e.g. using MSN Messenger)					
Taking digital photographs					
Other (please specify.....)					
Other (Please specify.....)					
Other (Please specify.....)					

8. Tick the statement which best describes how confident you feel in engaging in the following activities.

	Very confident	Quite confident	Neither confident or not confident	Not very confident	Not at all confident
Sending/receiving emails					
Wordprocessing					

	Very confident	Quite confident	Neither confident or not confident	Not very confident	Not at all confident
Playing computer games, e.g. using games console, played on mobile phone or accessed via PC					
Speaking on a mobile phone					
Sending/receiving text messages					
Taking and sending images via mobile phone					
Sending video via mobile phone					
Adding to my blog					
Reading and contributing to others' blogs					
Searching the Internet					
Using Litsearch (university library catalogue)					
Accessing information via Blackboard					
Reading discussion boards on Blackboard					
Contributing to discussion boards via Blackboard					

	Very confident	Quite confident	Neither confident or not confident	Not very confident	Not at all confident
Editing videos					
Chatting to others online (e.g. using MSN Messenger)					
Taking digital photographs					
Other (please specify.....)					
Other (Please specify.....)					
Other (Please specify.....)					

PART 2

Please complete this section if you are an English specialist and are willing to be interviewed as part of this study.

Name:

Email address:

Phone number:

Thank you for completing this questionnaire.

Appendix 4: Survey Results

The tables below enable comparisons to be made between relative trends of ownership, frequency of use and confidence in using a variety of technologies. Tables 1, 3 and 5 show results for all students who returned surveys. Tables 2, 4 and 6 show results for just participants. Within each category, trends for participants are broadly similar to those for the whole group.

As tables 1 and 2 illustrate, all student-teachers owned mobile phones and all but 5 had access to a networked PC/laptop. Smaller numbers owned games consoles (15/80 of all students and 4/7 participants) or video cameras (22/80 of all students and 4/7 participants).

Table 1: All students (inc. participants) Equipment owned

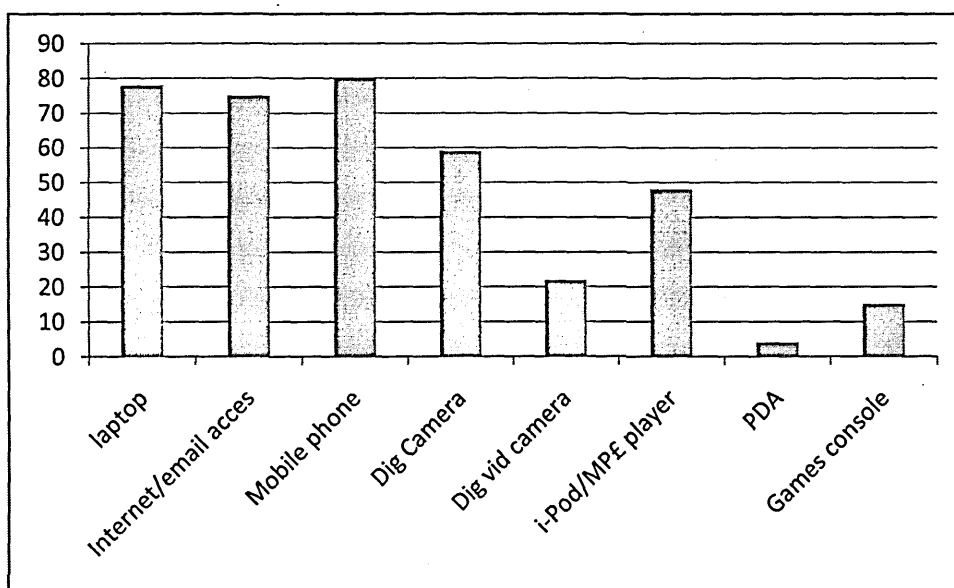
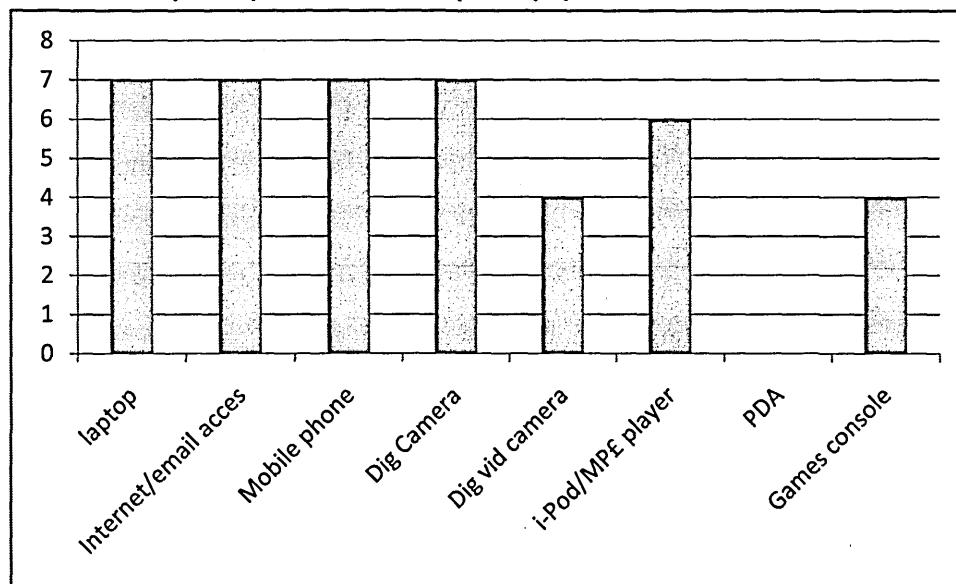


Table 2 : Just participants : Ownership of Equipment



As tables 3 and 4 illustrate, texting, word-processing, emailing, searching the Internet, speaking on mobile phones and use of Blackboard were the most frequent practices. A minority of students (4/80 all students and 1/7 participants) claimed to be involved in blogging. None of either group were involved in video editing on a regular basis, although 34/80 all students and 5/7 participants) regularly sent picture text messages.

Table 3: All students: Frequency of use (more than once a week)

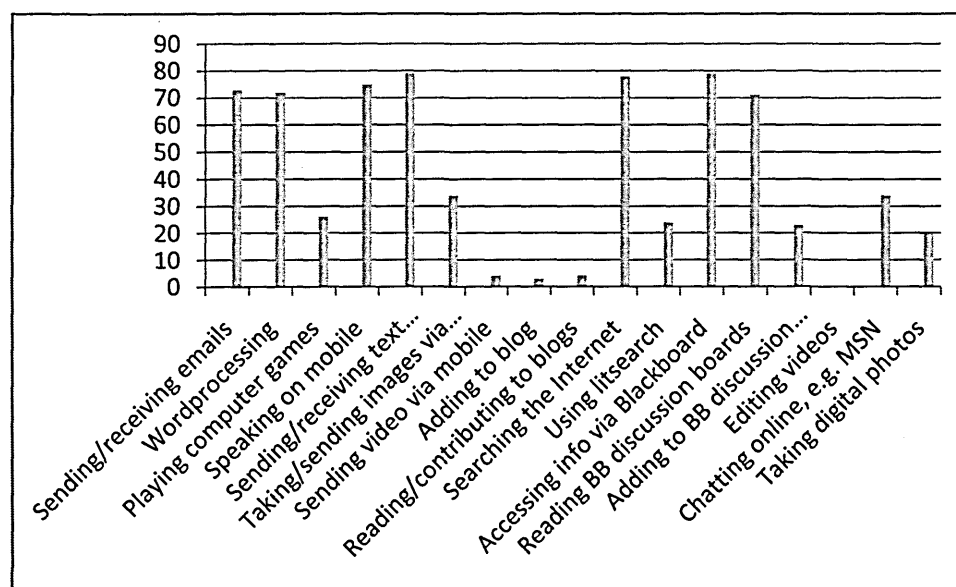
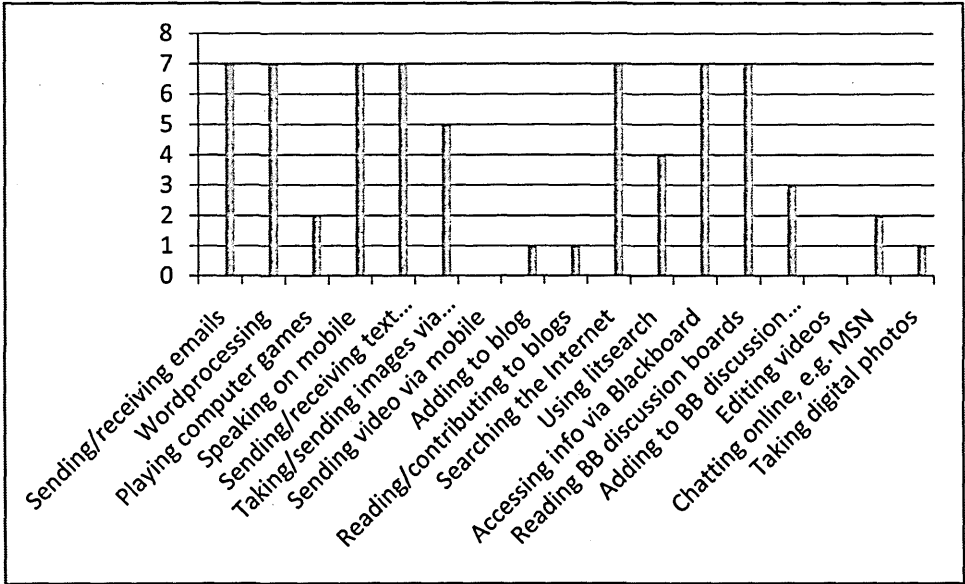


Table 4: Just participants: Frequency of use (more than once a week)



As tables 5 and 6 illustrate, the confidence profile also exhibits similar trends, although the graph showing participants' levels of confidence is flatter than that for all students: all 8 participants claimed levels of confidence for 8 of the categories whilst non-participants showed greater variation. Whilst a greater proportion of participants owned games consoles and digital video cameras than that of the whole group, fewer expressed confidence in using them.

Table 5: All students: Confidence (very or quite confident)

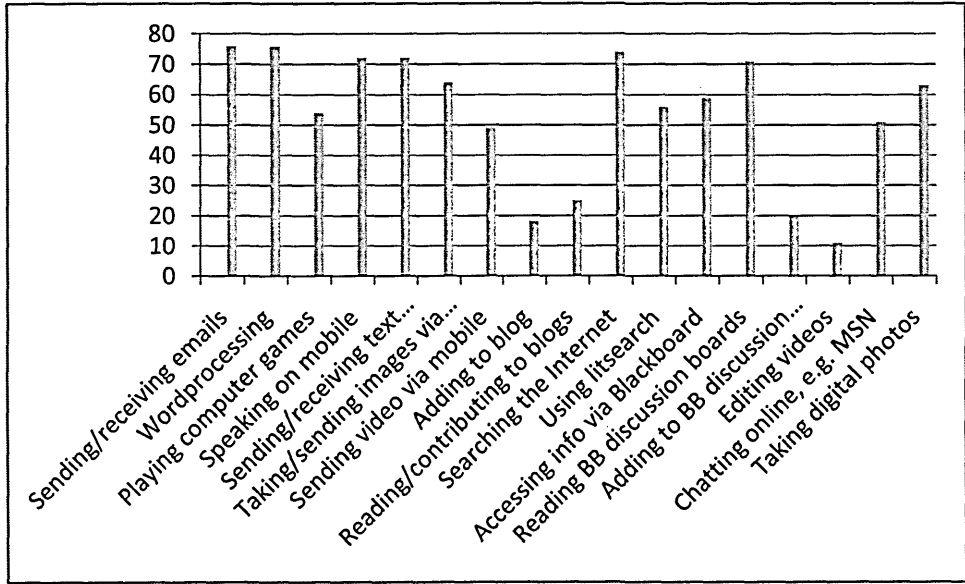
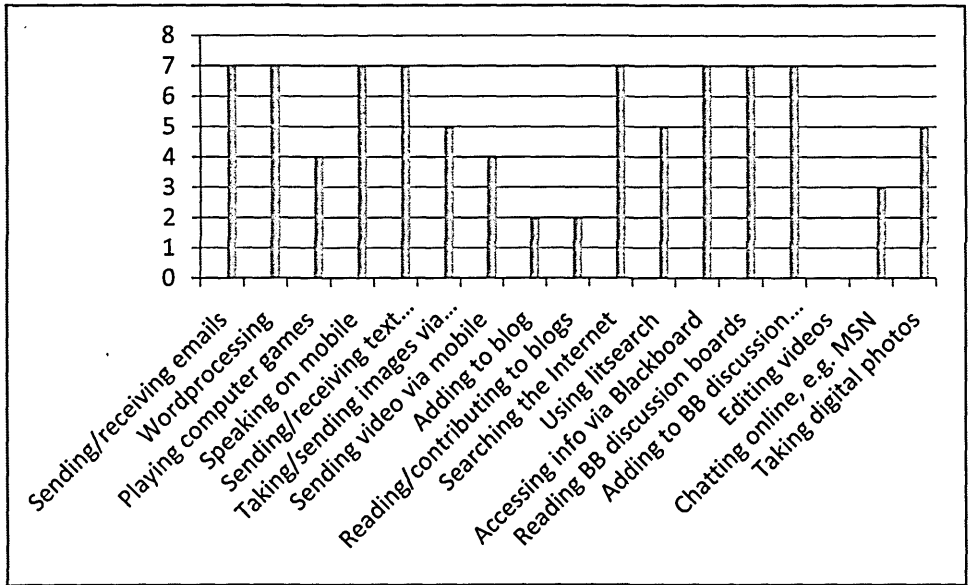


Table 6: Just participants: Confidence (very or quite confident)



Appendix 5: Examples of approach to interviewing

As interviewer, I attempted to avoid evaluative comments and assumptions about what participants meant (although recognise that my use of paralinguistic features may well have implied these). I focused instead upon inviting participants to extend their comments, for example, by probing implied definitions and at times presenting my interpretations of their comments. The following examples illustrate this approach.

Probing implied definitions:

Joanne My dad does have an email thing but he's not too, not too great. He's getting used to computers but he's not, well, I'm not computer literate, but he's' definitely not....

[.....]

Cathy And you said about yourself, 'no- I'm not computer literate'. Why did you say that?

Joanne I go to a certain level but I don't think I've got the skills to real... I think even with the Internet, with the search engines, I don't think I've got the skills to really get in there properly and not bring up all these pages that I don't want. I just type in what I need and hopefully something will come out of it that looks sort of semi-sensible. I'm hoping that through uni that will actually develop.

Cathy You say, you're OK to a certain level...

Joanne I think I'm confident in emailing, switching it on and being able to type things and I like to play about with it. I think mum thinks that if she hits something, it will break, she won't be able to get anything back. I don't mind going on and seeing, what does that button actually do, control/alt/delete and just close everything down that way. I suppose when I think of 'computer literate' I think of people who can almost programme the computer and I don't know, they know how to press the buttons that begin with 'F' at the top and they'll know it'll bring something up.

Commentary

In this passage, I aimed to probe Joanne's implied definitions in order to try to explore her experience from her own perspective. Her definition of 'not computer literate' refers to particular skills and competences. From my perspective, this contrasted with the immense skill she seemed to demonstrate in her awareness of the need to be sensitive to the needs of others in her digital communication with friends, family and colleagues. Whilst my probing here seemed to provide useful insights into her experience, it was necessarily selective: there were other concepts that I left

unchallenged. For example, I could have gone further in probing her understanding of 'skills' or of how such skills would develop through university.

Presenting my interpretations

1. **Cathy** But there seems to be with you a real sensitivity about that and thoughtfulness about how people might be responding...and maybe coming from that there's something about the way that you're aware that written communication can be interpreted in the wrong way.
2. **Kate** I don't know if this relates to this but....You know this children's reading group, I had to email S_____ to say that I wanted to go and I thought with so many emails I send, I suppose now kids at school got told how to email, but when I was at school, you didn't get told because it was only just starting so with these, I can say, HI everyone, how are you... and with my dad I can say what I like and my friends at work, we've got our own greetings for each other
3. (Laughter)
4. But with Julia because it was a formal email, I didn't know how to start it... Because with a letter you'd put 'Dear S_____' or a card, you'd put 'To S_____'. But I sat there for ages thinking, 'I don't know what's the correct protocol to email a tutor, I really didn't know what to say'. In the end I just put 'S_____' cos I couldn't think of the word to put before and I was quite formal and probably sounded quite short and blunt and it wasn't meant to be but I thought I don't know what to do. What are you meant to do? I need an answer for future reference... so that was a new domain that I'd not really had to think of before.
5. **Cathy** That was interesting because one of the things that came through was that because your life's so complicated, what this is doing is enabling you to keep all this in boxes but one of the things that came across was being one person here and that person there
6. **Kate** I think they sort of cross over quite a bit. The friends at work become close friends and the way I communicate at work comes into my friendships with people at the Post Office and I think that happens to an extent at university cos you think you should behave in a certain way and I was speaking to T_____ the other day and we weren't in the same group last year but this year we are and he was saying, 'I didn't know you were like this'. He's only ever seen me in a certain situation, but now in between things, we'll go down to Starbucks or something and behave differently. It does depend what domain you're in as to how you feel you behave and which sides to you come through.

Commentary

In this excerpt I presented Kate with (perhaps unnecessarily lengthy) interpretations of what she seemed to be saying about her experience. In comments 2-4, Kate seemed to respond by adding a further example that illustrated (and so perhaps confirmed) my summary. It is interesting here that she did not overtly agree with my summary but instead provided an example which seemed to indicate that she did. Interestingly, however, this was a negative example, showing how the 'sensitivity' I referred to (in comment 1) prompted her feelings of uncertainty as she wondered how to address a tutor through email. In comment 6 however she seemed to challenge my suggestion (in comment 5) that her digital practices enabled her to compartmentalise her life. Instead she suggested a greater flexibility to these relationships and suggested that her digital practices evolved alongside these. She highlighted the ways in which the practices recounted were captured in time and whilst distinct practices may have been associated with different domains, they shift as different relationships evolve or cross sites. This process of presenting participants with my interpretations then proved valuable in promoting participants to analyse their own experience.

Appendix 6: Approach to Transcription

Interviews were tape-recorded and transcribed verbatim. It is recognised that in transcribing interviews, much of the nature of the actual exchange is lost (Cohen et al, 2000; Poland, 2002). The transcription of spoken conversation may signal a very different social encounter to the reader to the one that actually took place. Researchers within some traditions (such as conversation or discourse analysis) typically make use of conventions for noting non-verbal and paralinguistic features of discussion, such as tone, inflection, emphases, pauses, mood and even facial expression and body language, in order to present a more accurate representation of the dialogue (Jefferson, 2004). Others resist the marking of sentence boundaries as this imposes a particular organisation and emphasis to what is said. Within this study, however, the transcripts were analysed both by myself and colleagues and checked by participants. Detailed coding or lack of punctuation may have made the transcripts less accessible to these varied audiences. Apart from the evaluation and focus group interviews, I transcribed all interviews myself so I could listen to the emphasis made by students and hear the tone of voice used. Whilst interviews were recorded verbatim, I punctuated the transcripts, marking what, according to my interpretation when listening to the recordings, seemed to mark units of meaning. Pauses of up to 3 seconds were marked '...', up to 6 seconds '.....' and more than 6 seconds, '.....'. The evaluation and focus group interviews were transcribed by a third party in order to preserve the anonymity of participants. I also made brief notes following each interview in order to capture impressions about aspects of interviews which may not be evident in transcripts.

1. Review of my approach to interviews

As part of my work, I want to review how effective my interviews were in helping English specialists to talk about their experiences. I was not a 'neutral' interviewer here but knew them as a tutor and had recently worked with you on the second year English specialist module, called 'Changing Views of Literacy'. 'Changing Views of Literacy' dealt with a similar content to these interviews. I'm interested, therefore, in what the impact of this was, i.e. how what interviewees said was affected by what they knew about me and what I believe and their relationship with me as a tutor.

Obviously it would be inappropriate for me to ask them about this. I have therefore asked you to interview them about this. I shall not transcribe this tape myself and all participants will be anonymised. I will, therefore, not be aware of who said what in the interview.

Please use the following questions.

Both of your interviewees may spontaneously offer their responses. If only one person speaks, invite the other for their comment in relation to the question.

Interview questions

1. In helping you talk about your experiences, did you find creating the following useful:

- creating the mindmap before interview one (in helping you think about your own use of digital texts in different areas of your life and the significance of this to your life).

- creating a list of teachers before interview two (in helping you think about your experience of digital texts being used in classrooms).

- creating a concept map about different kinds of texts (in thinking about the significance of these to your life).

How did these strategies affect the kinds of things you spoke about?

2. Did you feel you could say what you thought during the interviews or did you feel there were things you couldn't say? Why? Why not? (e.g. did you feel comfortable? Relaxed? Confident about confidentiality/anonymity)

3. How far were the kinds of things you talked about in the interviews affected by the fact that you were talking to Cathy rather than someone else?

4. Do you feel your contributions were affected by the fact that Cathy was your tutor for Changing Views of Literacy? If so, how?

5. Do you think your experiences in this module affected the way in which you spoke about your experiences in your life beyond the course? If so, why?

6. Did the module, 'Changing Views of Literacy' influence your thinking about what digital literacy in classrooms could be? If so, how?

7. What do you think Cathy's views are on the role of digital literacy in classrooms?

8. How do you think your own digital practices in your lives are likely to be similar to or different from Cathy's digital practices?

9. Is there anything else you want to say about Cathy's role as interviewer?

Appendix 8: Interview Schedule for Phase 1 interviews

Themes

- attitudes
- confidence
- history- changes in use
- perceptions of what use involves
- significance
- value placed by self/others

Process

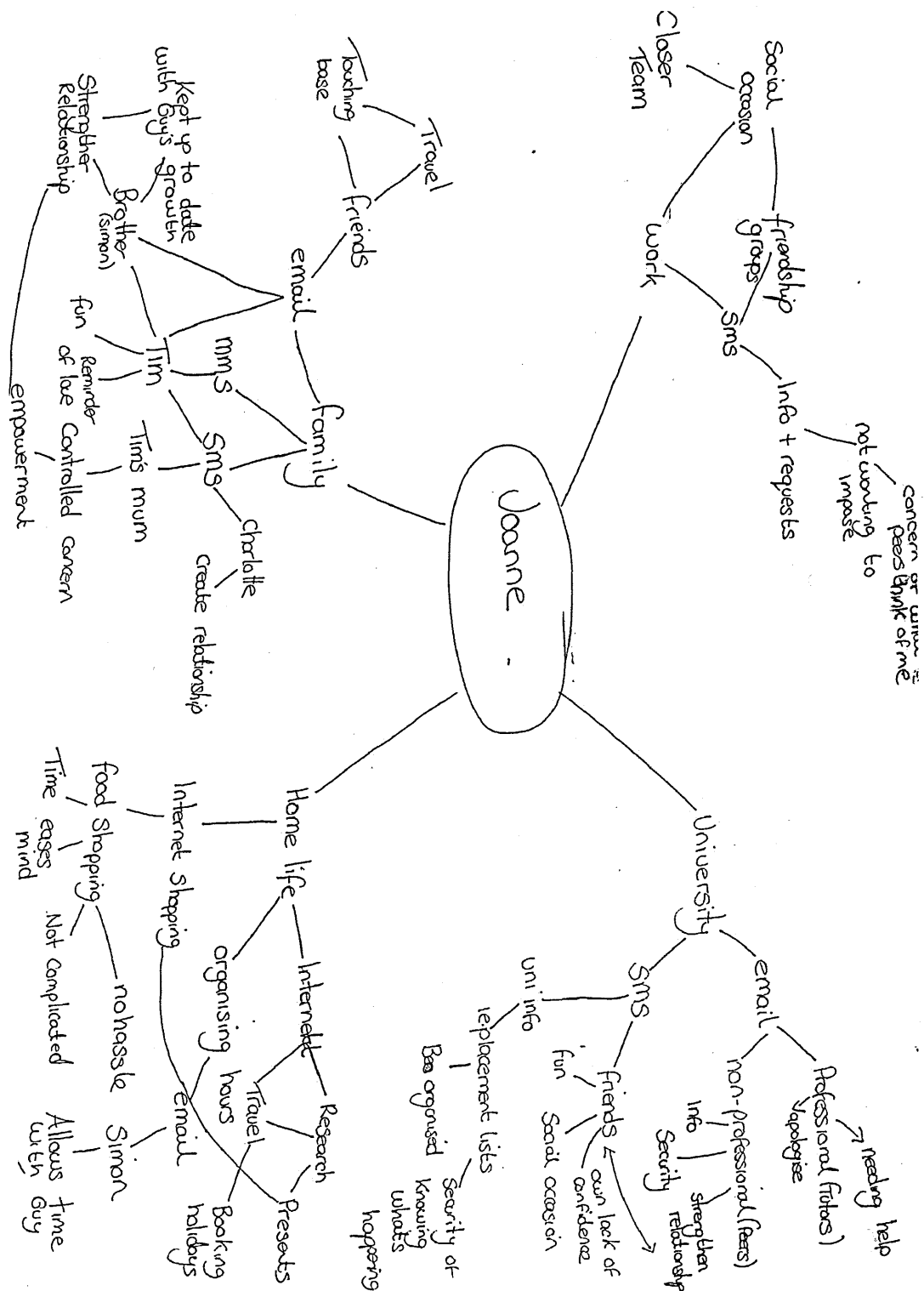
1. Prior to interview, students asked to create a mindmap showing how they use digital texts in their lives, including:
 - texts used
 - reasons for using texts
 - reasons why this is important
 - any links between uses of different texts
2. Students will be invited to talk through their mindmap, describing the ways in which they use digital texts and significance of this for their lives.

Possible prompts:

- Talk me through...
- How do you...?
- Have you ever lost it? Has it ever gone wrong? What happened? How did it feel? Did this affect anyone else?
- How is this important to you...
- Who else would see this as important?

- What does think of this?
- Who do you communicate with?
- When did you start using...? Why? Have you changed the way you use it? What do you do now that you didn't do before?
- When did you learn to...? How did you learn?
- Are you good at...? What makes you good/bad at...?
- How confident do you feel?
- What do you like about it? What don't you like?
- Do you prefer...?
- Have you ever had a problem in using this? What happens when there is a problem?
How do you feel?

Appendix 9: Sample Mindmap Produced by Joanne for Phase 1 Interviews



Interviews: Phase 2

Thank you for agreeing to participate in the second phase of my research.

This time I'm interested in way you have seen digital texts used in by teachers.

This could involve digital literacy being used for any part of the teacher's role, e.g. teaching, planning, assessment, preparation, networking....

In preparation for the second interview, please could you:

1. Make a list of teachers you have seen over the last couple of years. This will probably include you worked with during your block placement last summer but also other teachers you've met during shorter placements, voluntary work...or friends/relatives who are teachers.

2. For each teacher, try to remember all the ways in which they used/use digital literacy. This could include the use of any digital text in relation to any aspect of the job, e.g. teaching, planning, assessment, preparation, networking.... For each teacher, make a list of texts you know they used and list the reasons for using these.

NB

- If the text was used in the classroom, it may have been the children, not the teacher who actually used the text.
- Digital texts could include, e.g. email, Internet, PowerPoint, wordprocessing, electronic whiteboard, video, MSN, text message, computer games....

3. Finally, do this for yourself. Jot down a list of digital texts you have used yourself within your role as a teacher.

Interviews: Phase 3

Thank you for agreeing to participate in the third phase of my research.

This time I'm interested in way you have seen digital texts used as part of the university-based part of the course.

I'm also interested in knowing more about how you feel about the different digital texts you use in your life. This will help me interpret the data from the two previous interviews.

In preparation for the second interview, please could you:

1. Make a list of incidents when digital texts that have been used as part of your university-based course.

These could be typical of what happens at university or unusual times when something happened which was unusual.

Digital texts could include, e.g. email, Internet, PowerPoint, wordprocessing, texts displayed on electronic whiteboard, video, MSN, text message, computer games....

2. The first set of interviews suggested that the same use of technology could be experienced very differently in different contexts. I'm interested to know more about how you see your relationship with different technologies in different domains of your life. I'd like to know more about our feelings towards its use and how this technology fits (or doesn't fit) into your life.

Please could you draw a diagram to represent your relationship with each of the following:

- mobile phone
- Internet
- Electronic whiteboard
- Social networking sites, such as Facebook, Myspace
- Instant messaging
- Email

This could mean using shapes, colour, lines, arrows, pictures to show how you feel about each use of technology. If you feel differently about this technology within different domains, then please find a way of showing this. During the interview, I'll ask you to talk through your diagrams.

Interview Schedule Phase 3

PART ONE

Approach

i) Invite students to consider incidents in which digital texts have been used as part of their university course. These could be incidents that they view as typical or atypical.

These should include:

- texts used within examples of classroom practice (e.g. showing how teachers or children might be using digital texts as part of classroom activity)
- texts used in ways intended to support their own learning at university (e.g. uses instigated by tutors, which could be about face to face learning or distance learning, or used by the wider university)
-

ii) List these incidents and consider:

- What happened? (Why was it memorable- typical or atypical?)
- What do you think was the intention?
- How did it make you feel?

Key question:

How do these students experience digital texts whilst at university?

Sub-questions:

What kind of practices surround them?

Which values do the students perceive underpin the use of these texts?

How does the use of these texts position them as learners?

How do they feel about these uses?

Possible themes to explore:

- Who is the University?
- What has been presented as important about technology use of university?
 Whilst at university?

Whilst in school?

- What do the Standards expect?
- How does this compare with what the university expects?
- How to university and ITE expectations compare?
- Do you serve it or does it serve you?
- How is this relevant to you as a professional?

Interview 3: PART 2

Approach:

Participants bring diagrams (using colour/arrows/shapes/pictures)

to represent their relationship with the following:

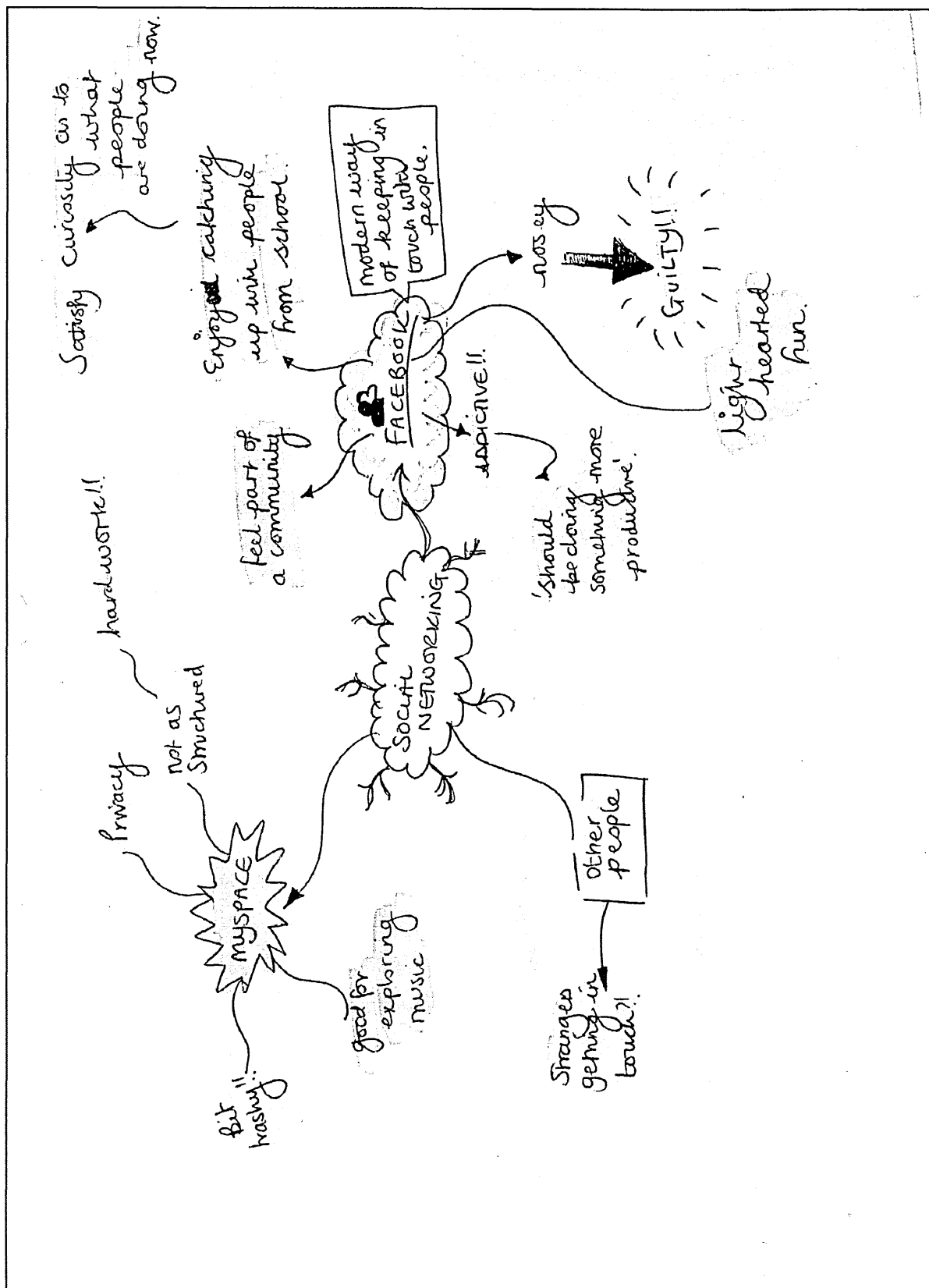
- mobile phone
- Blackboard
- Social networking sites, e.g. Facebook, Myspace
- Instant messaging
- Virtual world

As in first phase, participants use these as the starting point for talking about their relationship with each of these and possible ways in which this relationship changes in different domains.

Key questions

How does their experience of different digital technologies compare in different domains?

How do they feel about those kinds of texts which they don't use?



Digital literacy research project

Information for Participants

Thank you for agreeing to be interviewed as part of this study of students' digital literacy. Please read the following details and then complete the form below if you agree to give your permission for use of the interview data as part of the study.

What is the project about?

I am interested in finding out about your experiences of digital literacy in your life in and out of the classroom. I want to find out how you feel different kinds of digital literacy are valued by yourself and others. I hope that this will help teacher-educators understand any opportunities and barriers there may be for student-teachers' in drawing from their experience of digital literacy in the classroom.

What's involved?

This will involve attendance at a short initial briefing meeting and then 4 meetings of a maximum of 1 hour each during 2006/7. All meetings will be held at times to suit you.

I would like to interview you three times for this project. The first interview will focus on your own experiences of digital literacy in your life. The second will focus on your classroom experiences of digital literacy. The third interview will be used to return to issues raised during the first two interviews.

If you decide to participate, interviews will be recorded using audio tape. I will complete transcripts myself and anonymise participants using pseudonyms. Tapes will be destroyed following transcription.

You will be sent interview transcripts for checking. If you are unwilling for statements made during interviews to be shared, these will be removed from the transcripts and not used in the research.

You will also be invited to a meeting during which I will present my analysis and you will have a further opportunity to contribute to and comment on this analysis. If there is disagreement in relation to this analysis, both your own and my own interpretations will be represented in any final report.

Some of the transcripts will be looked at by two other tutors and 5 Year 3 non-English-specialist students. The tutors will be focusing on my analysis of the transcripts. The year 3 students will be asked to comment on how the experiences described by the year 2 students are similar to and different from their own. They will also be asked to comment on my analysis

Participation will not affect adversely your progress on the course. However, I will be marking your 5122 assignment (Changing Views of Literacy). I shall ensure that your work is moderated by another tutor to ensure that I do not allow insights gained through interviews to influence the mark you are given for that assignment. For the same reasons, I shall also ensure that I am not involved in moderating your assignment for 5105 (English and Drama).

What will happen to the interview transcripts?

The interview transcripts will be used as evidence within my dissertation for my Doctorate in Education (EdD). This data may also be used within an article submitted for publication in an academic journal and/or within a presentation made at an academic conference.

Can I withdraw from the study?

You can withdraw from the study at any time without giving a reason.

If you have any further questions; please do not hesitate to contact me.

Cathy Burnett

Tel: 0114 225 5682

Email: c.burnett@shu.ac.uk

Rm 310, 38 Collegiate Crescent

Sheffield

S10 2B

Consent Form

Please answer the following questions by circling your responses:

Have you read and understood the information about this study? Yes No

Have you been able to ask questions about this study? Yes No

Have you received enough information about this study? Yes No

Do you understand that you are free to withdraw from this study?

- At any time? Yes No
- Without giving a reason for your withdrawal? Yes No

Your responses will be anonymised before they are analysed.

Do you give permission for the following people to have access to your responses?

- Cathy Burnett Yes No
- The group of selected Y3 students Yes No
- The two tutors involved in reviewing Cathy's analysis Yes No

Do you agree to take part in the study? Yes No

Your signature will certify that you have voluntarily decided to take part in this research study having read and understood the information sheet for participants. It will also certify that you have had adequate opportunity to discuss the study with a researcher and that all questions have been answered to your satisfaction.

Signature of participant.....

Date.....

Name (block letters)

Signature of investigator..... Date.....

Please keep your copy of the consent form and the information sheet together.

Appendix 15: Briefing Notes for Review of Initial Analysis

Briefing Notes for Analysis Meeting

Having begun to analyse the data from the first three sets of interviews, I have identified some patterns in the kinds of things that all seven interviewees talked about.

I'd very much welcome your thoughts on whether or not you feel these reflect your own experience.

In the next stage of this research, therefore, involves:

- checking and commenting on the initial analysis
- a group discussion of experience

Checking and commenting

Overleaf, I've listed some key statements below which summarise these patterns. Please could you read the statements and comment on these in the right hand column. Once you have done so, please return your comments to me. (You can email/post them to me or send them in the stamped addressed envelope provided.)

If you agree, please simply write 'agree'.

If you are not clear what the statement means, please write 'unclear'.

If you disagree (or think you might disagree), please note down why in the right hand column.

If you want to add any other notes, please do so in the right hand column.

1. The way in which you use digital texts **reflects** the relationships you have with people: (as a student, as a teacher, in your life beyond the course)
2. The way in which you communicate through digital texts **reinforces** the kind of relationships you have with people (at school, at university, in other contexts).
3. In some aspects of your life, you find digital practices empowering (they allow you to do things you wouldn't be able to do otherwise).
4. In other aspects of your life, you find digital practices oppressive (they limit or dictate what you are able to do).
5. The way in which digital texts are used in learning situations can empower or disempower learners. (Consider in relation to informal learning, learning in school, learning at university).
4. You feel proud of the way in which you use digital texts in some situations.
5. You are embarrassed or guilty about the way in which you use digital texts in other situations.
6. There are times when you feel awkward or anxious about participating in digital environments.
7. There are times when you have felt irritated by others behaviour in digital environments.
8. You have sometimes felt excluded from digital environments.
9. You would be wary of a new digital environment unless you know someone that uses it and they show you how it works.

10. There are certain expectations about how you behave in digital environments. You learn about these from observing how others behave within them. (Consider in relation to school, university, other contexts)

11. On placement, you are restricted in what you can do with digital texts.

12. On placement, you gain credit if you explore new possibilities which seem to fit with the school's existing priorities.

13. The way in which you use digital texts in your life beyond the course has little relevance to you as a student-teacher.

14. The ways in which digital texts are used to support university based teaching influences the way you use (or want to use) digital texts in the classroom.

Appendix 16: Commentary on sample comments during non English specialist review of initial analysis

A group of nine non-English specialist student-teachers were invited to attend one of two focus group meetings to discuss statements representing themes emerging from my initial analysis. Only one student attended this meeting.

This technique generated a series of comments which seemed to accord with key aspects of participants' experiences, relating to: the need to fit in with technology use in school and the way in which different school contexts vary in their ability to be supportive; and the varied ways in which digital texts are used within different contexts. However, as the following comments illustrate, the context for this interview seemed to limit the kinds of reflections on experience prompted.

Comments in italics are statements with which this non English specialist was invited to agree or disagree. Each is followed by the comments she made. These represent her responses to 4 of the 14 statements. Comments were recorded without me present.

1. *In some aspects of your life, you find digital practices empowering (they allow you to do things you wouldn't be able to do otherwise).*

I agree with that too. I think with the technology, there's always advances that are being made and new things that can be used to benefit people's learning or to help your communication. It does empower you I think.

2. *In other aspects of your life, you find digital practices oppressive (they limit or dictate what you are able to do).*

I disagree with that statement I think and it's because I can't think of any way in which digital practices limit what I do. The only way I can think of is when the technology doesn't work. Other than that, I think it helps you to do things rather than being oppressive

3. *The way in which digital texts are used in learning situations can empower or disempower learners. (Consider in relation to informal learning, learning in school, learning at university).*

I do agree with this statement in that I can see how some people can be disempowered. If you know how to use them and you're willing to learn and confident to learn, then you can access the texts, like some people can use

computers and use email and Internet and everything but those that can't, say the older teachers that are close to retiring and behind with technology, I think it can be quite disempowering and make them feel quite excluded from new technology.

4. *You feel proud of the way in which you use digital texts in some situations.*

I agree with that. I think it's satisfying to learn something new in digital texts and I think the end result usually looks quite good and it's something you can use in school and I think the children can be quite proud of it, like using some form of digital text.

Commentary

The analysis of these responses suggested a number of reservations about my use of this tool as data generated seemed far less rich than that generated through the interviews:

- As I was not present, I was unable to ask for clarification or exemplification. I was unsure therefore about her understanding of certain terminology, such as 'advances' (see response to 1) or 'end result' (see response to 4). I was also unable to probe her reasons for actions described, such as her use of Facebook as an alternative to other forms of communication (see response to 5).
- I was unable to clarify terminology within the statements, such as 'digital text', 'empower', 'oppressive' or 'disempower'.

This student seems to consider her use of digital texts from a primarily operational perspective: for example, when she speaks of empowerment, she seems to be referring to her confidence in her skills. She talks generally about technology being empowering (1) and seems to associate disempowerment with lack of skills in using technology (2 & 3). When she talks of feeling 'proud' (4), she seems to focus on presentational features rather than the use of digital technology to achieve different purposes. Her comments do not reveal the subtle variations in feelings of empowerment and disempowerment that seemed evident in English specialists' narratives, which focused on what participants achieved through their digital practices. It is unsurprising that the perspective here seems to shift. The interview task is less rooted in a discussion of personal experience, starting from abstracted ideas rather than a discussion of experience. Moreover this student-teacher, as a non English specialist, had not attended Changing Views of Literacy, and therefore may have been less used to reflecting on the significance of her own literacy practices or indeed in seeing such reflection as appropriate in a university-based context.

Appendix 17: Commentary on sample comments during non English specialists' discussion of data

Two student-teachers attended a focus group meeting during which they discussed selected extracts from the interviews. They were asked to comment on what they thought interviewees felt was significant and on how this related to their own experience. At times, comments echoed those of participants and my analysis of these. At others, however, their interpretations offered different emphases which provided new perspectives for my analysis. This was exemplified in their discussion of a narrative in which Charlotte told of her irritation at receiving an informal business email from a holiday representative.

P1: I think that over-familiarity is a sales pitch or these types of emails, for me, fall into the same category as door to door salesmen....I reflect on the door to door salesman I had the other day who was working for a charity and a very worthy charity and I ended up giving them some money setting up a direct debit, but they invariably try and be your mate to get you on their side and it was "Oh, you've got some lovely dogs, haven't you?" You know, "How old are your dogs?" and I think "What does it....?" You know, "I'm going to give you some money. What matters two tosses how old my dog is!" [*cross talking*]. And then he said "Did you use to be a rugby player? You're very broad, aren't you?" I thought "Hang on! Whoa! Step back!" I think that is why it's the same for me – because this is over-familiarity.

Cathy: Is that something to do with the fact that it's electronic communication or is it...?

P1 Do you know, I don't think it's electronic at all. I think it's the person's style on the other end of the keyboard

In my analysis of this narrative, I had concluded that the most salient feature of this extract was its emphasis on clashes in email style as. I was interested in the way that Charlotte was affronted by the informality assumed by the holiday company representative and saw this as a clash of email styles brought about by lack of face-to-face contact. During the discussion with non-English specialists, however, this extract prompted stories of what was seen as inappropriate informality in a variety of contexts: for example exhibited by door-to-door sales people or within circulars from insurance companies. Whilst, therefore, Charlotte's story was told in the context of interviews relating to digital technology use, technology may not have been the most salient factor. The informality may not have been prompted by the media through which the contact was made, but rather within what the non-English specialists saw as a corporate environment which attempted to cultivate close personal relationships with clients. They saw email as constructed within this discourse, rather than representing a shift in discourse generated by the fact that the communication occurred online.

This difference in emphasis suggested that, by focusing on digital practices, I was in danger of seeing digital technology in a causal relationship with the practices to which it contributed rather than remaining open to different kinds of relationships between

technology and social practice or considering the broader social and cultural factors which may influence its use. In the light of this, I re-visited my analysis, bracketing this causal relationship and attempting to explore alternative explanations for the experiences on which I focused.

Appendix 18: Commentary on sample comments during participants' coding of data extracts

As outlined above, participants were required to sort selected extracts using the matrix described in Chapter 4. In response to extract D, participants had different interpretations: one felt, as in my initial analysis, that this was empowering, enabling the student-teacher to feel confident, supported and prepared within her teaching role. However, the other felt this could be disempowering as the student might become over-reliant on this kind of peer support and not learn to work independently:

You know, everyone's working together and maybe it's a bit disempowering because they're not learning to like work by themselves. If someone's trying to tell all the time "Have you done that? Have you done that?" it's kind of like when they're by themselves will they be able to cope if they're not going to be there to say "Have you seen this?"

This extract helped me to interrogate my own understanding of empowerment and disempowerment. It highlighted a difference between empowerment which enabled participants to feel confidence in the short term and empowerment associated with recognised success. As this participant commented, reliance on networks of peer support could ultimately conflict with success on a course which is judged by individual achievement. Whilst it seemed that this student-teacher had gained considerable individual credibility during her placement, for me, this emphasised the ways in which empowerment/disempowerment was distorted by different discourses, as what was empowering in one context may be disempowering within another.

Appendix 19: Commentary on sample comments during colleagues' coding of data extracts

During peer coding, I invited two colleagues (A and B) to code the data using the matrix described in Chapter 3. One worked with the transcripts of two interviews whilst the other, for reasons of time, worked with extracts from another two interview transcripts. This process provided further perspectives on the data and prompted me to re-visit my analysis.

Colleague A, for example, focused on the following extract. In it, Charlotte discusses the establishment of a new Blackboard discussion board, run by final year BA QTS student-teachers to provide support for student-teachers in other years.

Charlotte I tell you what I did like and I keep meaning to do it but I haven't yet: the year 3 discussion, have you see that. I've not been on there yet and half of me thinks that could be really useful because that's quite nice to talk to somebody in year 3 and ask a couple of key questions. I like that idea a lot and obviously they're not going to be around a lot or gone, are they still around? I really like the idea.

Cathy Why do you like that?

Charlotte Because there's a point to it?...sometimes I feel like sometimes discussion on BB is the blind leading the blind.... [laughter] and it's entertaining but it's not really educational, is it? Whereas I think if I could talk to some Year 3s, if they volunteered the time they feel they've got something to say anyway and they've been there, they've done it and got the T-shirt and I'm not looking for advice on how to write something, I just want some information. You know, what's going to happen and how it's organised and what should I be doing over the summer and at what point should I be thinking about my dissertation.

In my initial coding, I coded this as empowering/reconfigured. I was interested in the alternative networks that were developing in unofficial spaces (through texting, social networking) and it seemed that this university-sponsored discussion board began to bridge a gap between these, succeeding where others had not in providing a safe, useful space for students to share understanding. Through this, it was perhaps possible to forge new kinds of student identities which through participation in such networks led to a more distributed form of knowledge. However, whilst Colleague A agreed that this was empowering, she saw the network as supporting established identities: it reinforced a passive approach to learning, through which Charlotte relied on gaining information from a known other. This led me to consider different layers of 'reconfiguration': whilst digital practices may mediate a warping of power relations in educational contexts, they may do so in ways that reinforce existing structures.

Appendix 20: Samples of interview data divided into narratives, philosophy statements and significance statements

Sample 1

Kathryn	<p>Online journals are ...only towards the end of last year I started to get to grips with...and then I was away and I was like, 'wow, isn't this brilliant', just being able to search and I was trying to get other people to use them cos it's such a resource to have and if you don't realise that they're there, I think you're really missing out. ...it's obviously that convenience of not being able to go into the library. Cos even then you can have a job trying to find what you're looking for. Sometimes with essays I kind of got carried away and spent too long looking. You know, I found a couple of good ones and I thought, 'wow if I can get more of these it's going to be great and I seemed to spend too much time looking.</p>	<p>Narrative (of habitual event)</p> <p>}</p> <p>Narrative (of habitual event)</p> <p>}</p> <p>Narrative (of habitual event)</p> <p>}</p> <p>Philosophy statement</p> <p>}</p> <p>Significance statement</p> <p>}</p> <p>Narrative (of habitual event)</p> <p>}</p> <p>Narrative (of habitual event)</p>
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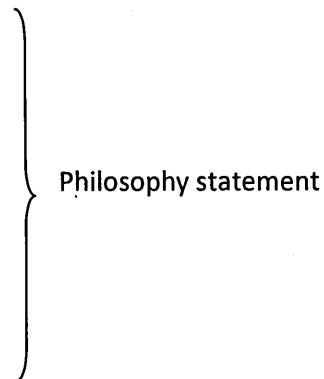
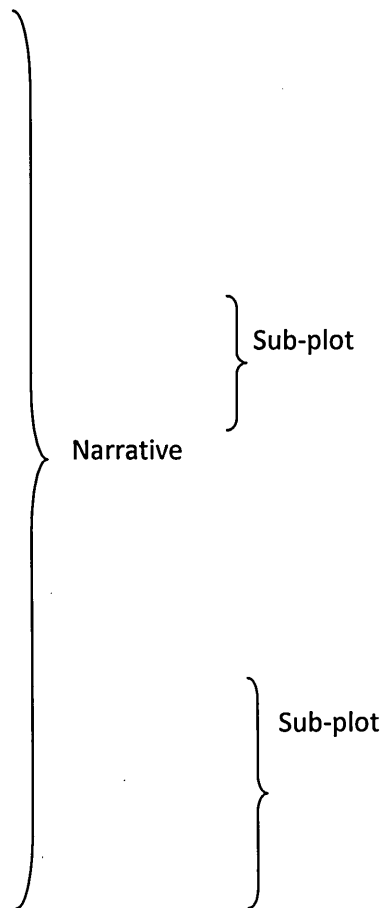
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Sample 2
Charlotte

He was doing a comparison between Danny Champion of the Word, an extract and the film and he was doing the BFG – they were obviously doing Roald Dahl-BFG, book again, and the film . And they were only sort of Y3/Y4, they weren't very old. And they were talking about the camera angles, and editing and all that sort of thing. And again, he'd had to ship them into the library to show them these extracts and ship them back into their classroom.

[...]

... I think that's an absolutely classic example to me of, this is obvious really, that the teacher is the be all and end all of the class. What you do and how you are totally dictate how that class goes.



Phenomenon: Control

Many of the metaphors associated with these student-teachers' use of technology seemed linked to feelings of control (or lack of it). At times, they seemed to feel at home in digital environments whilst, at other times, there was a sense of uncertainty. 'Control' seemed to be relevant at points where participants moved to new domains, switched roles or as expectations within a domain changed. This fluctuating sense of control seemed to have particular pertinence within school environments, where they described varied feelings of control over the ways in which they were able to use new technologies within their teaching. This intersected also with a professional need to be 'in control' of children.

Conditions

In online environments, the lack of face-to-face contact meant that it was easy to be misinterpreted. Moreover, infinite online spaces placed no boundaries on online activity.

These student-teachers were managing a complex course, their personal relationships, other interests and often a part-time job. In doing so they moved rapidly between different roles: as mother, sister, employee, student, etc. This seemed to increase the risks associated with inappropriate behaviour within the digital environments associated with these different roles.

Student-teachers' narratives suggested a sense of control within contexts where they used digital technology within existing relationships or relationships where they seemed to be afforded status. In contrast, they often expressed lack of control as they moved into new contexts, where they may be unfamiliar with the conventions of digital environments associated with these new contexts.

Intervening conditions

Feelings of control or lack of control seemed to be intensified by others' reactions to their use of technology. So, if they felt they successfully managed a relationship within a digital environment, this enhanced their feeling of being in control whereas negative or unexpected reactions intensified their feelings of lack of control.

At times, this lack of control was intensified further when they were operating within an environment where they felt subject to contrasting expectations, e.g. when in school, expectations for technology use could variously relate to expectations within the QTS standards, the school, the teacher's classrooms, or university seminars.

Availability or suitability of equipment was also a factor. Where technology was portable, accessible and operational, they were often able to use it in ways that enabled them to feel in control.

Their feelings of control in managing the impression they created in online environments could be threatened by security concerns surrounding online activity and ways in which others' actions (posting comments on Facebook walls or invitations to join groups or add friends) could shift or mould this 'managed identity'.

Strategies

In describing their digital practices in personal lives, student-teachers frequently referred to the care they took with digital communication in order to tailor this to particular contexts. This often built upon a history of prior communication, relating both to the choice of medium (email, text-message, social networking site, MSN, etc) and to register. When entering new environments, however, students looked for clues as to how technology was used, for example, responding to others in ways that others had communicated with them or using technology in ways that seemed to be acceptable within an environment.

If others did not affirm their uses of technology, they sometimes avoided these practices. Alternatively, they sought other ways of justifying them.

One way of re-gaining control within digital environments seemed to be to delegate digital practices to others. So, Charlotte and Joanne relied on a friend to glean useful information from Blackboard discussion boards. They were able therefore to sideline this practice and remain in control of what they needed to do as student-teachers.

Consequences

These student-teachers seemed to have highly honed awarenesses of how to manage others' perceptions of their behaviour in online environments.

Where they had delegated digital practices to others, control was maintained through a kind of distributed knowledge, e.g. with regard to consumer decisions (which partly depended on consumer reviews) or with regard to successful participation within the courses (which partly depended on support from peers). This however increased vulnerability. Where digital networks broke down, however (for example, when a peer refused or forgot to participate), there was a sense of lack of control.

Questions arising

How significant is this management of others' perceptions? How is this relevant to their professional role?

Is this about control/lack of control or about certainty/uncertainty? And what is the relationship between the two?

Appendix 22: Sample of Analytic Bracketing

In this extract, Kathryn and I discuss a classroom in which she had been placed during her block placement. Prior to this extract, she had been discussing the lack of opportunities to use computers she had in this class and stated that ‘the class I was in had no contact with computers the whole time I was there’ and had regretted the lack of a computer suite.

Content	Excerpt	Process
Saliency of material dimension	Cathy: So, in that classroom, were there computers?	Focus on significance of material dimension (This echoes the focus of her previous comments but prompts not only further exemplification but further judgment)
Models of use are significant as well as material	Kathryn: There was three but only one of them was working and even then it was very rarely used, very rarely at all, which made it very difficult for me on placement as you can imagine because you think you’re going to have access to a computer in a classroom, you expect it so to go in...it was a very old one, everything was so old about it and I thought, ‘it takes you back’, you had to find where everything was, it didn’t have Word on it, it was a really old computer. It was like going back in time to work out where everything was.	‘as you can imagine’ positions me as seeing centrality of technology use to teaching placement
Disadvantaged		Uses lack of Word and other programs as signal for ‘out-of-date’ computer. (In signalling anachronistic tools, refers only to ‘work-like’ applications; does not explicitly refer to websites or other applications
Temporally located Anachronistic	Cathy: So what was it like?	-social networking/instant messaging - which she associates with contemporary technology use out of school)
Digital practices embedded in professional role	Kathryn: ...I mean it literally had no programs on it, it had the Internet on it but then there was hardly anything on it and often that computer wasn’t working plus it wasn’t connected to a printer so even if I wanted to quickly, you know if I wanted to quickly, you know if you want to load something up on your memory stick in the morning, print it out, you just couldn’t do it. It was crazy. And the teacher didn’t know their own password for the computer. So obviously that caused problems. I had to actually guess it.	Use of ‘you know’, ‘if you want’ includes me in group of teachers for whom digital practices embedded in professional role
Anachronistic		‘Crazy’ suggests unnaturalness of lack of reliance on IT
Incompetence of teacher compared to confidence that enables Kathryn to guess	Cathy: You had to guess it?	‘obviously’ again assumes my empathy with her evaluation of the situation My repetition expresses incredulity which colludes with her interpretation, a collusion emphasised further by the shared laughter which follows
	Kathryn: Yeah- I had to guess it for them to get on the computer. It so happened it was their name [Laughter.] So it was good guess, it was logical. So it was an experience.	

Analysis of the process here highlights how Kathryn and I position ourselves, each other and classroom technology-use within the interview. Her interactions with me suggest that she considers that her critique of this classroom will be very much in line with my own perspective, seeming to categorise me as a confident user of digital technology. I perhaps entrench this positioning with my question, 'You had to guess it'. Echoing her comment, I express my incredulity at the teacher's lack of knowledge and my collusion with her point of view is further affirmed by the laughter which follows. Together we construct an image of a modern teacher who is a confident user of technology in contrast to the teacher she observed. Technology use, however, in this context is of a very particular kind: Kathryn describes the deficit in equipment in terms of work-based applications – difficulties with loading up files from her memory stick, printing out resources and lack of applications associated with a work environment. There is no reference to more social, playful uses of technology here. Is this because she does not see this as appropriate within classrooms or because she does not see this as appropriate for discussion with me?