Giving Pupils Licence to Lead: Supporting Teachers' Continuing Professional Development in the use of ICT

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Word Count – 57, 345 **(Excluding references and appendices)**

Submitted in fulfilment of the requirements for the degree of Doctor of Education (Ed D)
The University of East London, Cass School of Education and Communities

March 2017

The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Dedication

This thesis is dedicated to those who departed between 2009 and 2014. In memory of my brother, Phil, my mother, Ros, my father, John, my beloved mother-in-law, Shigeko and my best friend Nick Thornton, who was proud, while he was here, to wear the *Teach a Teacher* badge.

Gratitude

I would like to thank my wife Teruyo and my sons Vincent and Arthur for their patience and understanding in allowing me the time and space for my study. I am also indebted to my trustworthy Director of Studies, Professor Gerry Czerniawski who has seen this through from start to finish, through thick and thin, and without whom the completion of this expedition would not have been possible.

I would also like to thank my supervisors, Dr Ayo Mansaray and Dr John Trushell, without whom I would never have seen the light.

ABSTRACT

This study investigates the effects of reconceptualising approaches towards teachers' Continuing Professional Development [CPD] through an action research project which enabled a situation to develop where the pupils became the educators and teachers the learners. The study, which became known by the pupils and staff involved as the *Teach a Teacher* project, took place in one secondary school in England over an eighteen-month period between 2013 and 2015. The cohort of participants was self-selecting and involved sixteen Year 8 pupils (aged 12–13) and eight teachers. Working in pairs, pupils then negotiated and delivered an individual programme of Information and Communication Technology [ICT] CPD for their chosen member of staff.

During the period of this study, I undertook observations of pupils training their teachers, carried out interviews with the teachers and conducted focus groups with the pupils. Through gathering this data, I was able to evaluate how the exchange of technological expertise not only brought about a step-change in teaching and learning, but also brought about a change in the relationships between teachers and pupils. To articulate these converging themes, this research draws upon the theoretical bodies of work on student voice, and teachers' CPD. In the interest of developing a deeper understanding of the social dynamics that underpin these educational landscapes, the literature on school leadership, as well as the debates concerning digital 'natives' and digital 'immigrants', and therefore perceived generational divisions, are also briefly explored.

The most compelling and substantive outcome of the research was not just the extent to which the process of role reversal was openly embraced, but how this led a mutual empathy to develop between pupils and their teachers. Research on pupils providing ICT CPD for their teachers in English secondary schools is essentially non-existent. This thesis is the only study which presents both pupils' and teachers' perspectives on their involvement in providing a highly effective and supportive, yet underestimated model of teachers' CPD.

CHAPTER 1 – INTRODUCTION

Situating Myself as the Researcher

This thesis reflects the culmination of over twenty years' experience in education as an educator and evolves from my role as a teacher of both children and trainee teachers in the use of technology. According to Prensky (2001) my year of birth [1961] would place me firmly as a digital immigrant – in other words someone who has had to acquire knowledge about technologies that did not exist when they were young – as opposed to digital natives who were born after 1981 and who grew up with technology. At the age of 27, I trained full-time in industry-based computing and was working as a computer specialist when Microsoft Office was first launched in 1989. In 1994 I gained my post graduate certificate in education [PGCE] as a primary school teacher at the Institute of Education [IoE] and spent ten years teaching in inner-city and London-fringe schools. During that time, I was responsible for teaching digital natives ICT and computing in a range of contexts and resource settings during a pronounced period of technological change in education. As a specialist teacher of ICT, I taught computing to every consecutive year group of pupils from Nursery right through to Applied ICT General Certificate in Education [GCSE] in Year 11. This has afforded me with a privileged and unique perspective as to how pupils and teachers learn and teach with technology.

I have worked in Initial Teacher Education [ITE] for the last twelve years and my subject specialism is ICT and computing. In addition to research work for the British Educational Technology Agency [Becta], I have also been involved in consultancy and income generation at the University of East London. This has included government-funded case study research for the then Teacher Development Agency [TDA] and the Teacher Education Advancement Network [TEAN] during the period 2011 – 2012. I am also a published author and have presented my research on ICT and technology in education in international peer-reviewed journals as well as at national and International conferences at The British Educational Research Association [BERA] and the European Conference on Educational Research [ECER]. In 2009 I completed my MA in Education and Development and embarked on my Professional Doctorate in the same year. I consider myself to be a lifelong learner.

An Orientation to This Study

This small-scale professional doctorate research study explores the processes and experiences of pupils taking on the role of educators for Information and Communication Technology [ICT] and teachers receiving ICT Continuing Professional Development [CPD[1]] from their pupils in an English secondary school. The body of research which exists in this area is extremely limited, and where comparative studies or literature can be drawn upon, they are either sketchy or pertain to socio-cultural conditions which are both distinct and removed from the English educational system reported here. Although parallels are made with an Arab-Israeli study (Gamliel and Hazan, 2014) – as will become evident in Chapter 3 – what does emerge is the unique contribution that this thesis makes to the existing body of literature on teachers' CPD, particularly in terms of exemplifying the ways in which pupils can become empowered to initiate and support their teachers' professional development with ICT.

My interest in this area of research, which draws upon the concepts associated with student voice and ICT CPD, stemmed from a secondment to the now defunct, but internationally respected, British Educational Technology Agency [Becta] during 2008 – 2009. My remit for this secondment was to produce a report for Becta of the ICT competencies and skills of the UK teaching workforce. Some of the findings from my research work with Becta relate to discussions elsewhere in this thesis, although for now, what follows is a summary of how that research sparked my interest for this thesis.

There were two research findings uncovered by Becta – which for me – stood out as being significant. The first was that at the time I began my secondment for Becta in 2008, nearly 40% of secondary school teachers and 20% of primary teachers had sought advice from pupils about the use of ICT (Kitchen *et al.*, 2007). The second was the extent to which newer technologies were reportedly underemployed in lessons with the use of instant messaging, wikis, blogs, and other Web 2.0 tools being very rare at the time with many teachers being mostly unfamiliar with these types of application (Becta, 2008). Given that most pupils are engaged with social media on a daily basis, my premise was

[1] Although the term Professional Development is favoured by the current government, and other variations in the literature exist, for example Professional Learning, this thesis will use the term CPD.

that if teachers could be taught how to use these applications by pupils, then teachers could use their pedagogical knowledge to incorporate these technologies into their subject teaching. The idea therefore, was that allowing pupils to access and use these tools in lessons would bring about greater engagement with their learning. Although ambitious in principle, and given the unpredictable nature of empirical school-based inquiry, events did not transpire or develop as anticipated. In fact, rather than addressing a lack of teachers' knowledge or familiarity in using new and emerging technologies, the pupils in the study reported here were engaged in providing their teachers with basic ICT training in the use of Microsoft Office software such as PowerPoint and multi-media programs, for example, Movie Maker.

In an educational landscape where ICT as a curriculum subject has been 'disapplied' (DfE, 2013a: 12) and where, since September 2012, those entering the profession no longer need to pass the government ICT skills test, there is the assumption, at least in the public eye, that teachers are technologically competent to perform their professional role. This, however, is not necessarily the case and there is evidence to suggest that there are teachers in the teaching workforce today who still lack basic ICT skills and knowledge (Coleman *et al*., 2015; Gil-Flores *et al.,* 2017; Morris, 2010a; 2010b; Prestridge, 2012). Teachers with traditionally held beliefs, for example those favouring children climbing trees rather than using computers (Cordes and Miller, 2000), are less likely to use technology in their teaching (Hermans *et al.*, 2008) and may therefore be resistant to engaging in any form of ICT CPD themselves (Pachler *et al.*, 2010). In the context of this research, teachers who still need support with the routine use of ICT may also fail to benefit, not just from what students have to offer, but also miss out on the opportunity to improve their relationships with their pupils.

The motivating concerns that led to this thesis stem from my own experiences and beliefs as a teacher, not only in recognising the wealth of pupils' technological knowledge – regardless of year group – and their enthusiasm and willingness to share this expertise with their teachers – but also how empowering this exchange can be for both pupils and teachers. In my role as a teacher and teacher educator I have seen pupils as young as five assist trainee teachers with their use of ICT, for example performing particular operations on an Interactive Whiteboard [IWB] which help move the lesson

forward. Pupils clearly enjoy helping in this way and teachers are often thankful for their input and to me this seemed to be a suitable medium – in terms of student voice – with which to explore how traditional power relations can be reversed and therefore transposed and reconfigured. Although this process of role reversal whereby the pupil becomes the "teacher", and the teacher becomes the learner may be threatening for some teachers, I have seen first-hand in the classroom how it builds positive relationships between teachers and pupils. This research study was therefore perceived to present an opportunity to extend and formalise these teaching and learning experiences and partnerships.

Taking such an approach was based on the premise that pupils' digital literacy skills can often be in advance of those of their teachers (Ng, 2012) and evidence that within the teaching workforce there remains a strong and continuing demand for professional development with ICT (Micklewright *et al.*, 2014; Twining and Henry, 2014). Given the existing body of student voice literature which reports on the benefits of pupils and teachers working collaboratively (Fielding, 2011; Mitra and Gross, 2009; Rudduck, 2005), another motivational factor behind this study was to establish a self-sustaining system of ongoing ICT CPD at The Appledawn School (pseudonym) in Essex. In doing so, it was considered that this partnership would improve relationships between teachers and pupils at the same time as shifting cultures within the school with the hope of embedding the *Teach a Teacher* project into school policy. When I began this action research study the project did not have a name at first, but over time it soon became referred to by the pupils and teachers themselves as the *Teach a Teacher* Project.

In 2013 I began the fieldwork for this thesis at Appledawn, which is a co-educational specialist academy in Maths and Computing for 11 to 18-year-olds with approximately 1200 pupils on role. Along with a member of the Senior Management Team [SMT] who acted as gatekeeper for the research, it was agreed to carry out the project with Year 8 pupils (12 to 13-year-olds). This year group was chosen because they were neither new to the school nor did they have the pressure of studying for examinations. Sixteen pupils and eight teachers were involved in the research and both groups of participants were self-selecting with pupils volunteering and then nominating and approaching the teachers they wanted to work with. Overall, I spent eighteen months in the school and

although I parted ways having completed my fieldwork, the project (under internal leadership) has since continued to develop and is still active at the time of writing.

Research Aims and Research Questions

The overarching aim of the research project was to bring about a step change in the way pupils and teachers engage with ICT for teaching and learning thereby influencing the approaches to, and delivery of, teachers' ICT CPD within a secondary school. The intention was to identify any potential benefits in terms of the shift in relationships between teachers and their pupils within the school with a view to establishing a 'bottom-up', readily available model of professional development for teachers.

The research questions for this thesis are:

1. How might pupils leading ICT CPD for teachers influence the ways in which teachers and pupils engage with technology?

2. In what ways might pupil-led CPD for teachers affect the relationships between pupils and teachers, and between the pupils themselves?

3. How is pupil-led ICT CPD for teachers different to peer-peer or professionally led CPD, in terms of both experiences and skills development for teachers and pupils?

The Conceptual Framework for This Thesis

This study positions its research focus in relation to the bodies of literature on student voice, and teachers' continuing professional development. The function of these two facets – voice and CPD – is crucial to this thesis because they provide conceptual coherence in offering explanations as well as justifying conclusions which are important in terms of establishing the unique contribution to knowledge that this doctoral research study has to make (Lesham and Trafford, 2007). Although considered in more detail in Chapters 2 and 3, the fundamental gap in knowledge highlighted here concerns a conspicuous lack of literature pertaining to any student-led initiatives in the UK which involve pupils taking responsibility for orchestrating their teachers' professional development.

Over the last two decades seeking the views of students has gained prominence as an accepted forum in schools, not just as a way of valuing pupils' unique perspectives on often neglected issues (Fielding, 2010), but also as a vehicle for steering school reform (Mitra, 2004). The success of student voice initiatives and the extent to which they are democratic processes is largely dependent upon strategic leadership and the school environment this generates (Barber *et al*., 2010; Smyth, 2006a). However, school leadership and the debates concerning democracy when implementing student voice initiatives are not the primary focus of this thesis.

From a wide – and ever growing – body of literature on student voice it becomes clear that there is a diverse landscape and disparity in terms of policy, practice and the perceived benefits and shortcomings that pupil-led initiatives have in relationship to the role that these may or may not play in schools (cf. Batchelor, 2006; Bragg, 2007; Demetriou and Wilson, 2010; Fielding, 2011; Gunter and Thomson, 2007; Mitra *et al*., 2012; Rudduck, 2004; 2005). Although there are studies which investigate pupils' involvement in school-wide reforms or where students take on leadership roles (e.g. Goodman and Eren, 2013; Lavery and Hine, 2013; Taines, 2014) research in this area is still thin on the ground. Research on pupils providing training or initiating CPD for teachers is virtually non-existent and the only cases to be found (EdFutures, 2017; Gamliel and Hazan, 2014; Pachler *et al*., 2010) are reported in this thesis although other studies do exist where teenagers have given ICT training to senior citizens (Kolodinsky *et al*., 2002; Lundt and Vanderpan, 2000).

In addition to student voice – and essential to interpreting and understanding the situation under investigation here – is the need for this thesis to explore the literature on teachers' CPD. This presents its own challenges because there is a plethora of labels which surround this term – In Service Educational Training [INSET]; Staff Training; Professional Learning; Staff Development; Professional Development; Personal Development (Earley and Bubb, 2004) – all of which cloud any attempt to define CPD (see for example: Bolam *et al*., 2005; Craft, 2000; Hustler *et al*., 2003) or clearly separate it from Professional Learning Communities [PLCs] (Hord, 1997). Although focussing on the broader issues concerning CPD, and in particular ICT CPD, this thesis does not

attempt to explore the literature on PLCs *per se* but does briefly consider the relevance of Lave and Wenger's (1991) notion of communities of practice.

Whilst any clear definition of CPD may be lacking from the literature, there is the widely held view that effective CPD can be measured in terms of its impact on the quality of teaching and learning (Cordingley *et al*., 2003; DfE, 2016c; Goodall *et al*., 2005). By implication, the success of CPD initiatives can therefore be seen as being synonymous with improved outcomes for pupils (McCormick *et al*., 2008; Timperley, 2008). With this equation between effective CPD and pupil outcomes in mind, of particular interest to this thesis is the ubiquitous assumption in the literature – whether tacitly or implied – that CPD for teachers will be delivered by other adults in school or by outside educational experts, but *not* by pupils. This omission of pupils being seen to lead on teachers' professional development in ICT is filled to some extent by the contribution this study, and the *Teach a Teacher* project, makes to the literature on pupils as "educators" of teachers.

It follows – given the participants of this study are children and adults – that there needs to be some acknowledgement of the debates which concern the generational division (Hollingworth *et al.,* 2011), the digital gap (Gu *et al*., 2013) and the digital natives debate (cf. Bennett and Maton, 2010; Johnson, 2009; Prensky, 2001; Teo *et al.*, 2016). There are contentions and contradictions within these debates on the extent to which age and experience determine practices with ICT. From the position of this thesis, however, it is important to entertain the associations and perceptions that people have about ICT as much as it is to consider the reality of the ways in which the use of ICT manifests itself in schools (Beadle, 2016).

Given that the focus of this thesis is on the delivery of ICT CPD by pupils for their teachers in an English school, it is appropriate to acknowledge the conceptual framework of student voice and CPD from an international perspective. This is because student voice operates in different ways in different countries and where it may be valued and recognised in England, educational policy in the United States, for example, differs insofar as it tends to inhibit rather than promote student participation (Mitra *et al*., 2014). Similarly, the provision of CPD in Europe also varies where in half of EU countries, teachers' CPD is optional rather than statutory as it is the UK (Caena, 2011). This study

does not have the capacity to fully explore these differences and will employ footnotes to denote where there may be deviations in practice between the UK and other countries in the world.

To conclude this section, what is under investigation here is how student voice can be harnessed to involve pupils in a process of knowledge exchange with their teachers and by doing so, support their teachers' professional development with technology. To help facilitate an understanding of how these two aspects (student voice and CPD) are intertwined and how they provide a conceptual framework for this study, I have deemed it useful to place them alongside a brief exploration of the debates concerning the generational digital divide as well as briefly considering the role that school leadership plays in supporting these initiatives.

Researcher Approach

Identifying any existing ontological assumptions and beliefs that I may have is necessary because these define the way any researcher comes to understand the world they live in. Taken as a continuum, this can be from a realist perspective which contends that reality is *external* and exists 'out there' regardless of the beliefs of an individual, to a nominalist or constructionist viewpoint which is *internal* and contends that the world is constructed and determined by people's perception of what is around them (Cohen *et al*., 2011). I personally take a pluralistic view and consider that there is a case to answer for both external and internal perspectives in the sense that our comprehension of the world – and the conclusions which we come to – are determined by what we believe we cannot change, and recognising what we can. This may result in either a normative statement *because that is how things should be* – or some form of reification – *because that is the way things are* (Tripp, 2012). Dependent upon these ontological positions, are epistemological assumptions – the ways in which the researcher seeks to acquire, understand and interpret their knowledge of the social world. How the researcher positions themselves in such a debate may deeply influence the means with which they seek to uncover knowledge of the social world and may influence what they choose to research and why (Denscombe, 2010).

The methods of data collection I chose included participant observation, semi-structured interviews and focus groups which were supplemented by some quantification using questionnaires during the pilot study. As a researcher, gathering qualitative data has allowed me to engage with what Geertz (1973) refers to as 'thick description' because this involves considering the thoughts, feelings and experiences of the people in their setting and allows them to speak for themselves as opposed to their opinions, beliefs and actions being judged, evaluated or otherwise interpreted by myself, their superiors or their peers.

Given that my research is concerned with what people think, how they interact with each other and how they feel about things, it is not feasible to understand this situation objectively by analysing numerical data because statistical information does not present itself naturally or automatically. In many cases what becomes numerical data started out as words, yet in the process of separation any connection between the two is lost (Symonds and Gorard, 2008). This study therefore uses action research as a methodology and in doing so adopts an interpretivist epistemology. By using qualitative data analysis, it also draws upon some of the principles and methods of grounded theory, for example by placing an emphasis on the study of action and using the coding of data to assist in crystalizing meaning (Charmaz, 2006). Because this study abandons a preference towards quantitative methods, it accepts that an understanding of the social world cannot be achieved in either a neutral or objective way (Scott, 2005). From an ontological perspective, it can be argued that due to people's conflicting views of the social world, the nature of social reality can never be understood perfectly but should nonetheless be examined rigorously in favour of apprehending reality as best as possible (Guba and Lincoln, 1994). In doing so, comes the acceptance of the fallibility that accompanies any form of social or educational research (Scott, 2007) because reality may not always be observable as it is difficult to measure or accurately determine things such as a person's mental well-being or social class (Denscombe, 2010).

A Note About the Terminology Used in This Study

Information Communication Technology [ICT] in education is complex because technology itself is constantly evolving and changing. The terminology and the associated pedagogy with ICT are also prone to shifting, and this has often been in

response to changes in governmental agendas. This makes it hard to pin down specific vocabulary and terminology. The very term ICT itself is contentious and subject to a wide and on-going educational debate even to the extent where whole research papers have been devoted purely to attempting to define what ICT actually is (see, for example, Zuppo, 2012).

As a banner, acronym or label, or indeed as a political instrument in education, ICT means different things to different people for different reasons. As an area of curriculum study, ICT changed its name from Information Technology [IT] in 2000 to ICT to address the then Labour government's agenda of the National Curriculum 2000 (DfES, 1999). Since then, and since commencing my Doctorate, terminology has changed yet again with the disapplication of ICT and the introduction of Computer Science and the new computing Programmes of Study (DFE, 2013b).

For the purposes of this study, the terms IT, ICT and technology are interchangeable and I use them to describe generic software programs such as Microsoft Office, multimedia software (such as Movie Maker), the internet and therefore the range of applications and services this provides, as well as the use of peripherals and tools such as Interactive Whiteboards [IWBs], keyboards, mice, printers, laptops, digital cameras and mobile technologies such as tablets and iPads. The Royal Society (2012) is helpful here by providing additional definitions and making the distinction between digital literacy and computing relatively clear:

> *Digital literacy* – The general ability to use computers . . . [i.e.] a set of skills rather than a subject in its own right.
>
> *Computing* – The broad subject area; roughly equivalent to what is called ICT in schools and IT in industry, as the term is generally used (Ibid: 5).

Although ICT is no longer recognised as a subject in the English National Curriculum, it was when I began this thesis, and since having begun to use this term, I will continue to do so.

In a similar fashion, the terminology associated with describing teachers' professional development in education has been liable to change. At the time of commencing my doctoral study in 2009, the widely accepted expression Continuing Professional

Development [CPD] was used to encompass the spectrum of activities associated with a teacher's professional learning. More recently, the current government favour using the shortened expression 'professional development' (DfE, 2016c). In this thesis, the term CPD is frequently used especially in line with where it is referenced as such in the literature, however, the interchangeable terms of professional development and professional learning are also used.

Structure of the Remaining Chapters in This Thesis

Chapter 2 – **Student Voice in Schools** – The conceptual framework for this thesis has two central threads – student voice, and Continuing Professional Development [CPD] – both of which have been developed and embedded across a number of different literatures. This chapter outlines the body of literature on student voice and the various dimensions which are relevant to this research. Student voice is discussed within the context of student-teacher relationships as well as school leadership.

Chapter 3 – **Continuing Professional Development in Schools** – In this chapter CPD is considered in its broadest sense before specifically turning to models of ICT CPD. The existing body of research which reports on pupils teaching their teachers, and the generational debates concerning pupils' and teachers' use of ICT are also explored.

Chapter 4 – **Methodology and Methods** – This chapter provides an account of the empirical aspects of the study and how it was conducted. The choice of an action research paradigm is considered as well as the rationale for choosing qualitative research methods. Approaches to analysing the data are documented, and research ethics are outlined with due attention given to research projects which involve children.

Chapter 5 – **Relationships Between Pupils and Teachers and Their Engagement With ICT** – This chapter presents findings from the research beginning with contextualising student voice at the Appledawn School. Findings are then explored thematically and articulated in relation to the research questions, where the themes of trust and empathy, role reversal and status, and pupils' and teachers' ICT skills are considered.

Chapter 6 – **Knowledge Exchange Between Pupils and Teachers** – This chapter follows on from Chapter 5 and continues to present findings from the data in relation to Learning Processes and Pedagogy and how student-teacher collaboration led to the reconceptualising of approaches to CPD.

Chapter 7 – **Discussion** – This chapter provides a location and framework for the discussion which explores the findings outlined in Chapters 5 and 6. This includes focussing on the relevance of the findings in relation to the conceptual framework for this thesis in terms of explaining why this pupil-teacher partnership was particularly effective.

Chapter 8 – **Conclusions** – This chapter revisits and reviews the aims of the research, the research questions and the conceptual framework for this thesis as well as identifying the limitations of this study and its methodology. Implications for further research are considered and recommendations for the development of practice are outlined. Most importantly, this chapter presents the case as to why this study makes a unique contribution to the body of knowledge on teachers' CPD. The chapter concludes with a brief autobiographical reflection.

CHAPTER 2 – STUDENT VOICE IN SCHOOLS

Introduction

The aim of this chapter is to extract what is significant and meaningful for this study from the body of literature on student voice and how it operates in schools. The principal building-block of this chapter will be to look at how the main stakeholders in schools – the pupils themselves – are, and can potentially be, involved in decision making processes, which in turn entertains debates concerning relationships between pupils and teachers themselves. The aspect of student voice considered to be most relevant here, therefore, concerns the notion of trust between pupils and teachers. However, there needs to be acknowledgement of the political dimensions, such as school leadership and school policy, which underpin and determine how student voice activity may manifest itself in schools. The relationship between pupils and teachers is of interest because within the tapestry of this thesis it relates directly to a practitioner-based inquiry which involved pupils taking a lead in their teachers' professional development activity.

Student Voice: An Overview and Historical Context

Student voice is a concept which highlights students' agency and their perspectives within educational processes and the potential impact this can have on teachers' practices and policies in schools. As such, student voice is a relatively recent concept which has evolved as a result of educational change and shifts in political thinking over the last seventy years. The Education Reform Act (1944) did a great deal to shape the model of the education system we have in England today, but perhaps the most recent development of significance in terms of children being heard appears in the form of the United Nations Convention on the Rights of the Child [UNCRC] (1989). Article 12 emphasises the need for adults (in this case teachers) to allow children to have their say when making decisions. However, well over a decade before the UN Convention was launched, Stenhouse claimed that pupils would do better at school if they were respected, had their ideas listened to and were taken seriously (Stenhouse, 1975). Rudduck and Fielding (2006) in their account of the antecedents of the student voice movement refer to the fact that in the 1970s, while researchers were interested in

students' perspectives, there was little commitment on the part of the schools they were working in to promote student voice.

Educational theorists such as Giroux (1986) have championed the notion of student voice where pupils are consulted and encouraged to participate in the shaping of their experiences and engagement in the education system. Central to this belief is that such an approach is not just emancipatory, but it can also challenge and question the oppressiveness of the hierarchies which dominate the policies and practices of educational institutions of which they are a part. Well into the 21st Century, research continues to highlight the merits of consulting pupils about their teaching and learning and current government education policy in England acknowledges the significance of pupil involvement for citizenship education and personalised learning (Demetriou and Wilson, 2010; DfE, 2014).

The body of literature on student voice is vast and ever growing and therefore it remains a contested construct due to the many forms it can take. Two models of student voice will be considered with a view to establishing where the *Teach a Teacher* project – the intervention programme central to the fieldwork of this thesis – fits within its conceptual framework. The notion of trust, which crops up frequently in the literature on voice, and which is central to student-teacher relationships, is inherently complex and will be considered later in this chapter. Before the concept of trust is explored, however, it is useful to first try and define what is meant by student voice.

Defining Student Voice

Student voice can present itself in many forms and therefore any attempt to define the term is problematic as the literature on voice invariably presents conflicting narratives (Czerniawski, 2012). For the purpose of this thesis, student voice can broadly be defined as the process of consulting with students to enter a dialogue which may concern teaching and learning or other matters pertaining to classroom policy and practice. In turn, this may result in 'agency' and a situation whereby pupils are in a position to make a contribution to the corporate well-being of their school (Rudduck, 2005). These overarching principles, however, need to be treated with caution as all too often adults – whether they are teachers, parents or researchers – can be presumptuous and prone

to misrepresenting young people's views when they speak upon their behalf (Fielding, 2001).

To better understand the landscape of student voice it is helpful to refer to paradigms of how voice is perceived to operate at different levels and two representations of this (Fielding, 2011 and Hart, 1992) are given consideration below. In the context of this thesis there is also good reason to think about how and where pupils teaching teachers sits within the taxonomy of student voice and whether this constitutes a debate concerning students as leaders (Mitra and Gross, 2009), being involved in decision making (Harris, 2008), acting as consultants (Morgan, 2011; Samways and Seal, 2011) or, more specifically, pupils organising CPD activity for teachers (Mullis, 2011; Pachler *et al*., 2010).

Fielding's (2011) 'Patterns of Partnership' presents a hierarchical model of six ways in which adults and pupils may interact in schools (see Table 1, p.25). Fielding identifies two dimensions to this process. The instrumental dimension concerns the material gain that schools may achieve through student voice to increase their market position by being seen to be both more accountable and effective as learning organisations. The fellowship dimension, on the other hand, refers to an agenda which relates to how schools can become better places through pupils and teachers taking a dialogic and collective approach towards education. To understand how the different tiers work and may manifest themselves in school, the first level, 'students as data source' can be exemplified as follows: (a) *classroom level* – teachers take into account student data when planning; (b) *departmental level* – students' work is shared across staff teams; (c) *school level* – student opinion may be canvassed through surveys. To take another example, at level 5, 'students as joint authors' may translate as: (a) *classroom level* – pupils plan and construct lessons jointly with teachers; (b) *departmental level* – students devise 'research lessons' to see which approaches work in a particular subject area, and; (c) *school level* – students join teachers on learning walks around school (Fielding, 2014).

Instrumental Dimension	6. **Intergenerational learning as lived democracy** • Shared commitment to/responsibility for the common good	*Fellowship Dimension*
High-performance schooling *through* **market accountability**	5. **Students as joint authors** • Students and staff decide a joint course of action together 4. **Students as knowledge creators** • Students take lead roles with active staff support 3. **Students as co-enquirers** • Staff take a lead role with high-profile, active student support 2. **Students as active respondents** • Staff invite student dialogue and discussion to deepen learning/professional decisions 1. **Students as data source** • Staff utilise information about student progress and well-being	**Person-centred education** *for* **democratic fellowship**

Table 1: Patterns of partnership: How adults listen to and learn with students in school – After Fielding (2011).

Hart (1992) also presents a model of student voice although this offers a wider spectrum of activity than Fielding's paradigm. Unlike Fielding's model, which commences at a relatively advanced level and exemplifies a democratic partnership, Hart's 'Ladder of Participation' (see Figure 1, p.26), includes the lower levels of *Manipulation, Decoration* and *Tokenism*. *Tokenism* – which is the third rung of Hart's ladder – can be considered to be the Achilles heel of student voice and is a term which frequently crops up elsewhere in the literature (Cook-Sather, 2006; Lewars, 2010; Taylor and Robinson, 2009; Wisby, 2011). Tokenism is a word often associated with the lip-service to student voice often paid by government policy (Lodge, 2005) or to the more mundane aspects of school life such as fixing the lunch queue (Deuchar, 2009).

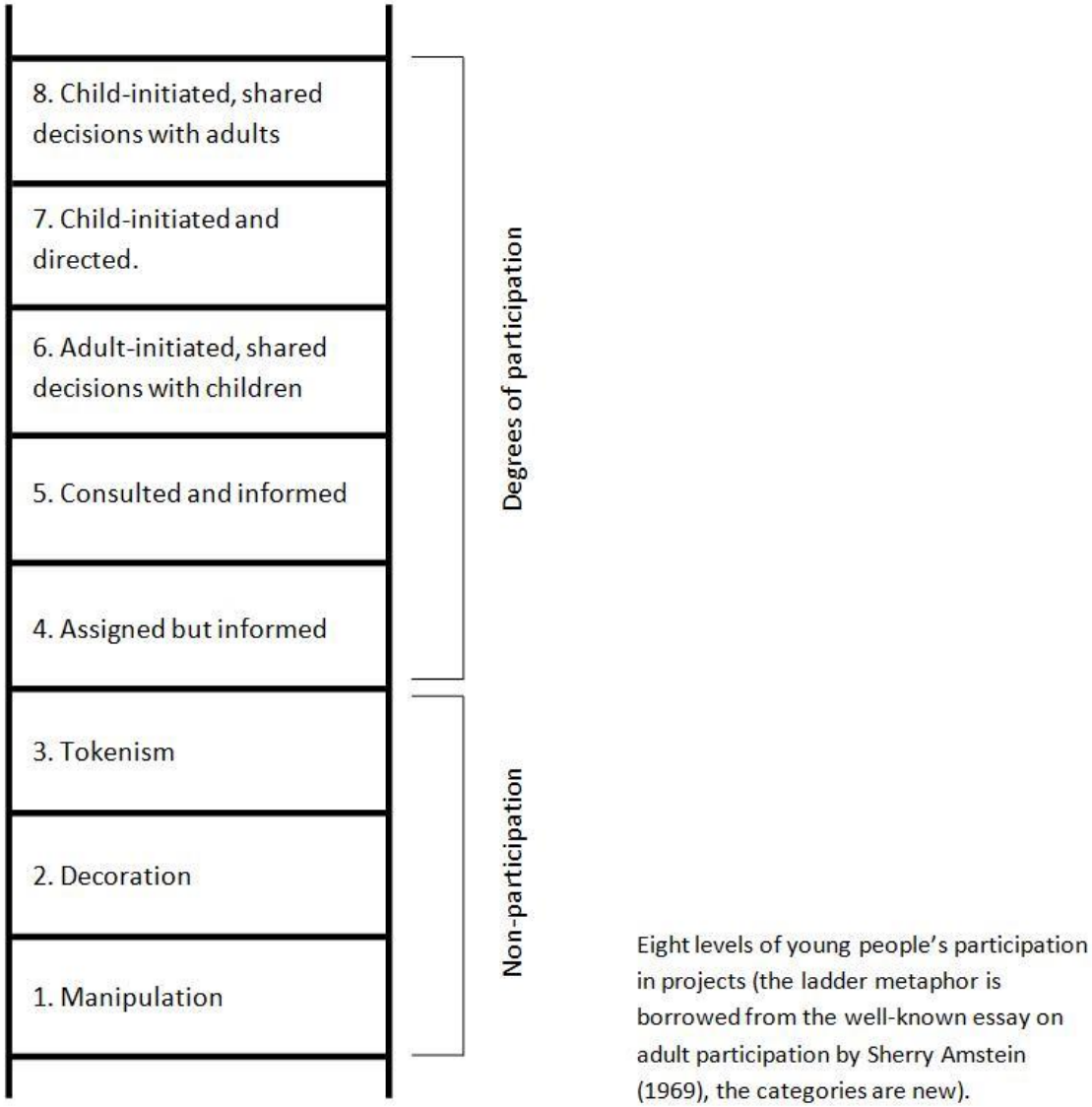

Figure 1: The Ladder of Participation – After Hart (1992).

On the lower rungs of the ladder, Hart suggests that tokenism may manifest itself in situations where pupils appear to promote the views and opinions of their peers – for example, on conference panels – but where there has been no peer consultation or where engagement cannot be deemed to be truly participatory. These three lower rungs on Hart's Ladder distinguish themselves from what Fielding (2001) describes as the true embodiment of 'emancipatory' practice whereby students are involved in radical democratic initiatives and therefore actively directing and being responsible for change. Hart suggests that the top level of his model – *child initiated shared decisions with adults* – is usually the preserve of pupils in their upper teenage years. Hart illustrates this with the example of students petitioning the Board of Education in New York for changes

both in the content and delivery of the curriculum, but suggests that projects like this 'are all too rare' (Hart, 1992: 14). For any form of student-teacher partnership or initiative to work – in relation to Fielding's paradigm or the upper rungs of Hart's ladder – then the quality of student-teacher relationships and the level of trust between pupils and teachers is vital to their success (Czerniawski, 2012) and are explored respectively in the next two sections.

Student–Teacher Relationships

Pupil consultation and engagement where pupils and teachers take joint ownership of teaching and learning – such as the *Teach a Teacher* project – is essentially challenging because it questions the established teacher-pupil balance of power (Rudduck, 2005). At an institutional level this involves, at least culturally, a deeply engrained process of reform and a shift both in the identity of the stakeholders (Morgan, 2011), and in the way the institution operates on a day-to-day basis with a view to pupils becoming involved in bringing about educational change and renewal (Fielding, 2001). This entails a process which is mutually supportive and as well as fostering pupils' emotional and social development (Deuchar, 2009), it also allows students to build empathy with their teachers (D'Andrea, 2013; Gamliel and Hazan, 2014).

To pretend, however, that student voice and the collaboration it involves between teachers and pupils is not political in nature – or indeed, politically driven – would be naïve given that consulting with young people responds to both the needs of pupils and teachers (Demetriou and Wilson, 2010). However, this calls into question the potential role reversal that may follow because not only does it challenge any wider assumptions concerning the purpose of the education system, it also calls into question the nature of teacher and student identity and issues surrounding agency (Gunter and Thomson, 2007). And this, after all, inherently entertains the belief that the 'dialogic' dimension to student voice is fundamental because it encompasses the idea that 'voice' is a social process and one in which those parties involved may come up with, and otherwise negotiate, shared meanings (Lodge, 2005).

Creating such forums for pupil-teacher negotiation widens the debate to question whether the existence of student voice can ever be comprised of an indivisible or

monolithic group within school culture because such an identity or unified movement is not – or rather cannot ever be – truly collective. Student opinion varies considerably from one individual to another and so by outcome may create divisions between what each person may have to say as an individual (Cook-Sather, 2007). Voice not only needs to be heard, but also needs to be situated within the *realpolitik* of institutions where even the errant or misaligned voice – which is deemed unworthy or taken as *persona non-grata* – is at least given an audience and is heard and still listened to (Gunter and Thomson, 2007).

Voice and Trust: Students and Teachers

The concept of trust between teachers and pupils is not only a complex area, but one which is often contested due to the problem of defining trust in this context (Czerniawski and Garlick, 2011). It is also pertinent to note here that trust may operate on two different levels – 'synthetic' trust may exist where student voice initiatives are tokenistic and driven by ulterior motives such as compliance or policy as opposed to 'authentic' trust which is genuine and is derived from establishing professional and democratic partnerships between pupils and teachers (Czerniawski, 2012). The capacity to build and sustain relationships between students and teachers, however, boils down to ensuring that the opinions of students are valued and that they are trusted (Waterhouse, 2011). This in turn equates itself with what can be described as 'interpersonal trust' between teachers and pupils and is fundamental to unleashing the full potential of student voice where pupils are empowered in decision making processes (Lizzio *et al.*, 2011). Along with increased responsibility and leadership roles, students constantly reiterate the importance of trust and the need for mutual respect (Mullis, 2011). Although this idea of the need for trust emerges in the research findings presented later, it is pertinent to recognise that such trust may be perceived to be misplaced by students and that in some situations student voice initiatives may be seen to favour those students who are considered by their teachers to be more academically inclined (Morris, 2012) or where pupils who are not active within student voice initiatives do not trust their peers who are involved (Czerniawski, 2012). What is of significance is the importance of generating an ongoing dialogue between students and teachers as this can be seen to build shared narratives, but in doing so requires both trust and honesty (Lodge, 2005). Being able to trust a teacher opens up channels of communication which may not otherwise exist

(Kjellin *et al.*, 2010) and creates a culture of respect where they are not only listened to (Mullis, 2011) but treated with both transparency and compassion (Czerniawski and Garlick, 2011).

As well as building social cohesion, the implementation of student voice initiatives may also relate to political agendas – both at a micro level in schools and in the wider framework of governmental policy (Ball, 1987). The next section below considers how student voice is challenging in terms of how it may manifest itself and how its implementation in schools is essentially a complex affair because it creates a situation where both students and their teachers are involved in the distribution of leadership.

Student Voice: Politics, Policy and School Leadership

Discussion in the literature on the politics or policies concerning student voice widely acknowledges that the United Nations Convention on the Rights of the Child [UNRC] (1989) provides a far-reaching – and relatively recent – cornerstone which supports and underpins student voice initiatives (Czerniawski and Garlick, 2011; Deuchar, 2009; Fielding, 2011; Hart, 1992; Morris, 2015; Mullis, 2011; Thomson, 2011; Wisby, 2011). In this sense, the convention presents a form of international ratification that children have a right for their opinions to be listened to [Articles 12 and 13] and that when decision-making, adults should act in the best interests of the child [Article 3]. It is relevant to note that in England although the DfE (2014: 1) recognise the importance of the convention in terms of policy on student voice, it remains 'statutory guidance' and not 'legislation' for schools – as the government attempt to claim it to be – because, as the DfE admit, there is 'no statutory duty to comply with it' because UNRC 'has not been incorporated into national law[2].' The DfE (2014) also omit any mention of Article 13 which is referred to in the literature on voice (See, for example: Deuchar, 2009; Hart, 1992; Mullis, 2011) which expresses the perhaps more contentious rights of the child to have freedom of expression including the 'freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in

[2] From an international perspective, the main difference here would seem to be that unlike England other European countries such as Denmark, Ireland, the Netherlands and Germany have legislative frameworks which by law require pupil participation as to how their schools are run (Davies and Kirkpatrick, 2000; Deuchar, 2009).

print [. . .] or through any media of the child's choice' (UNRC, 1989). This omission to refer to Article 13 by the DfE (2014) within their 'Statutory Guidance' is notable and when coupled with the fact that there is no mention anywhere of student voice in the Ofsted 'School Inspection Handbook' (Ofsted, 2015) it becomes significant because it demeans the status of any platform where students may be involved in making decisions about school policy. Having said that, Ofsted (2015) do exemplify and show case models of student voice practice in, for example, a special needs school (Ofsted, 2014) although this is – at its best – no more than a tokenistic gesture (Hart, 1995; Lodge, 2005).

How student voice initiatives are implemented in schools, and the forms they may take invariably stem from those involved in decision making processes. In the literature on school leadership, there is the widely held view that it is becoming less helpful to equate leadership solely with individuals and that increasingly the single "heroic" leader has been replaced by activities and interactions which are perpetuated and distributed by a number of people across a range of situations (Boylan, 2016; Gronn, 2002; NCSL, 2005). The ways in which leadership may be distributed within an organisation, however, is unclear, given that the term 'distributed leadership' means different things to different people (Timperley, 2005) and, as Bass (1990) cautions, there are almost as many different definitions of leadership as there are persons who have attempted to define the concept.

At the heart of effective school leadership, however, is the ability to influence others (Leithwood *et al.*, 2008) rather than to get results by wielding managerial power (Antonakis *et al*., 2004) which is why a hard-edged 'top down' business model of leadership is not suited to education (Gunter and Forrester, 2010). Involving other stakeholders – including students – as part of the decision making process is an instrumental factor in determining a school's success (Harris, 2008) and broadens the scope of distributing leadership (Mitra, 2006a). Successful school leadership openly promotes a systemic, collaborative culture that underpins the collective achievement of transformational goals (Wallace *et al.,* 2011) where all stakeholders can exercise influence in solving complex problems (Brooks and Grint, 2010; Hatcher, 2005). In this respect, it is helpful to see distributed leadership as being grounded in a culture of trust and knowledge rather than being based on hierarchical position (Woods *et al*., 2004)

although for Headteachers, trusting others can present a risk because ultimately they hold responsibility for others' actions (MacBeath, 2005). An understanding of people, their contributions, and their role within organisations and what motivates them, are therefore considered to be attributes of effective strategic leaders (Barber *et al*., 2010).

To conclude this section, it is appropriate to briefly consider the link between school leadership and the rationale behind implementing student voice policies. On the one hand, promoting student voice initiatives provides a positive means of encouraging teachers to work with students as individuals rather than seeing them as a group which needs to be controlled and managed (Mitra, 2006a; Morris, 2014), yet on the other, it may just be a lever to fulfil managerial objects rather than being vested in the interests of the wider school population (Bragg, 2007; Daft, 2008).

Problematising Student Voice

The notion of student voice – at least in relation to Fielding's (2011) 'fellowship' dimension – and how it operates in schools, is seen to be problematic (Lodge, 2005; Thomson, 2011). This stems from a complex range of factors including the balance of power between pupils and teachers which arises as a result of student voice initiatives and is a theme which crops up frequently in the literature (Moran and Murphy, 2012; Rudduck and Fielding, 2006; Taylor and Robinson, 2009). Consultation with pupils can bring with it tensions between teachers, and between pupils and teachers, with both feeling uncomfortable about the reversal of power (Flutter and Rudduck, 2004). Moran and Murphy (2012: 180) go so far as to describe student voice as a 'ridiculous notion' given that schools are involved in controlling and managing children. In this sense, it therefore constitutes an 'omni-dilemma' (Tripp, 2012) because it presents a form of contradiction given that student voice promotes children taking control over a system which ultimately controls them. It would also appear that this balance of power limits the extent to the possibilities of what can be achieved through student voice initiatives given that teachers whose role it is to empower students may themselves have to battle against repressive systems (Taylor and Robinson, 2009). Although the issues of control and power can act as a barrier, student voice can also be seen as an act of resistance against the dominance of the school system (Smyth, 2006b). Any challenge to the balance of power, however, not only needs to be authentic but also needs to be aware

of the problems which may arise concerning inclusion or exclusion (Rudduck and Fielding, 2006).

Student voice can be considered to constitute a 'normative project' (Taylor and Robinson, 2009: 161) in the sense that this may be rooted within the principles and theories of democracy (Moran and Murphy, 2012). Within the body of literature on student voice, the term democracy – or at least the implications of it – crops up with a high degree of frequency (D'Andrea, 2013; Davies and Kirkpatrick, 2000; Deuchar, 2009; Dias and Menezes, 2013; Hart, 1992; Quintelier and Hooghe, 2013; Moran and Murphy, 2012; Mullis, 2011; Taylor and Robinson, 2009) although invariably the various commentators within this field have differing views and opinions. These range from a scathing attack on voice (Moran and Murphy, 2012) to a reserved sense of reverence in the belief of promoting a process of decision making which is consensual and therefore democratic (Gershtenson *et al*., 2010).

For this thesis to navigate a path between these differing perspectives, the extent to which any contract between pupils and teachers contains implicit requirements or underlying conditions needs to be considered. For example, any prevarication to insist that pupils speak favourably or responsibly about their school, or the extent to which such censorship may be transparently or explicitly exercised in educational institutions (Bragg, 2001). If this is the case, there then remains the further dichotomy between the teaching of democracy to equip and inform students about the roles they will play in their future adult lives, and reconciling their place in an institution which defines their experiences for them (Rudduck and Fielding, 2006).

Although not a focus or major concern for this thesis, it is also important to consider the inherent assumption that schools should mirror, and therefore promote, the same kind of democracy that we experience in society[3] (Dias and Menezes, 2013). In this way students are empowered to deal with any classroom issues which may concern them (Deuchar, 2009) although there is a need to be mindful of those students who are over

[3] It is worth considering perspectives from the USA here. Traditionally the United States is perceived to champion the principles of democracy and citizenship although evidence of the opportunity for young people to participate in civic engagement or leadership activities appear to be constricted and limited (Mitra *et al*., 2012).

looked because their views do not align with the views endorsed by the management in their schools (Taylor and Robinson, 2009). Another issue which exacerbates this problem of inclusion is the assumption that those pupils involved share the same skills of elocution to get their point across, when this may not always be the case (Rudduck and Fielding, 2006). This is fuelled by the fact that in most western educational systems which are considered to be democratic, it is expected that pupils will be exposed to, and gain an understanding of, what it means to be democratic citizens and therefore participate in any debates which arise concerning the school policies which govern them (Quintelier and Hooghe, 2013). The problem with this is that not all students will engage in such debates and that rather than being school-wide, pupil consultation may be limited to localised outlets of practice (Moran and Murphy, 2012) or where the involvement of student participants may be considered by other students to be selective or unfair (Morris, 2012).

If the widely held assumption is that all pupils will come to understand the principles of human rights, then the extent to which we expect pupils to practice these within a schooling system that does not provide a working model of what democracy looks like needs to be questioned (Lodge, 2005). The teaching of democracy therefore requires not only patience but also the time and energy that pupils and teachers are prepared to devote to it (Deuchar, 2009) and if this kind of input is lacking, then there is the question of how divisions or inequalities may be overcome which have been perpetuated due to its exclusion (Taylor and Robinson, 2009). Such a division of practice would suggest that schools are not equipped to function as democratic institutions but that rather they perpetuate the very inequalities they aim to prevent (Quintelier and Hooghe, 2013). Although this thesis only has limited scope to explore the political and micro-political dimensions of student voice, democracy is clearly a salient consideration as it underpins the culture and leadership of organisations given that the history of a school determines the views, attitudes and approaches of those working within it (MacBeath, 2005).

To conclude this section, there is, perhaps, still reason to be cautious of the motives behind policies and practices which promote student voice initiatives and there is a need to question where these initiatives have come from, and what purpose they serve. Consideration also needs to be given as to whether they are in the political interests of

those leaders who have chosen to implement them, or if they are genuinely implemented to capitalise on learning from the unique expertise that the student body can provide (Flutter and Rudduck, 2004). Such questions therefore need to be asked concerning this thesis and the action research project it describes, although the answers only become apparent later on once discussion is given over to articulating the ways in which the *Teach a Teacher* project was embedded at the Appledawn School.

Summary

One prominent theme to emerge from this chapter is how the balance of power in pupil-teacher relationships can be seen as being problematic in some schools, whereas in others there is the belief that student-teacher partnerships encourage shared narratives and can establish levels of trust which allow collaborative projects to flourish. This in many ways supports and informs the exploration and debates concerning the nature of, and approaches to, CPD which is the focus of the next chapter.

CHAPTER 3 – CONTINUING PROFESSIONAL DEVELOPMENT [CPD] IN SCHOOLS

Introduction

This chapter aims to explore the literature on the delivery and characteristics of teachers' continuing professional development [CPD] in schools with an emphasis on information and communication technology [ICT]. Understanding the nature and form that CPD takes and, specifically, those factors and approaches which enable its effectiveness in addressing teachers' professional development needs with technology is necessary, particularly in the context of this thesis which concerns the development of teachers' ICT skills and competencies. Leading on from the previous chapter, what is consequential here is the exploration of how student voice initiatives can operate as a catalyst for programmes of CPD. Evidence of such a unique and powerful approach to CPD where students teach teachers is something which is rarely considered in the literature on CPD and subsequently there is an absence of evidence which reports on the benefits for pupils of taking on responsibility for initiatives of this nature. Within this framework there will be a need to explore the perceived generational differences between pupils and teachers and their experiences of using ICT as well as looking at the existing body of research on pupils teaching their teachers.

CPD: An Overview and Historical Context

Continuing Professional Development [CPD] is a contestable term and therefore one which I seek to define (see p.37) although for ease of reference it is used in this thesis to refer to teachers' professional learning and development. This section aims to explore the literature concerning the characteristics and delivery of CPD in schools. The literature on the nature of CPD is considered in relation to this study undertaken at an English secondary school, and is further contextualised by exploring the dimension of teachers' ICT CPD. What transpires from the literature on CPD is that pupils are only referred to in terms of where CPD may have specific outcomes on their attainment, or where they are involved in evaluating or measuring the impact of CPD on their own learning. Other than being on the receiving end, there is an absence of empirical

research where pupils themselves play a part in organising or steering CPD opportunities or initiatives for teachers.

Some of the discussion presented in this chapter will focus specifically on ICT CPD rather than CPD in its broader sense. The reason for choosing this emphasis is that although, as in other curriculum areas, there exists a distinct and separate body of literature pertaining to the nature of ICT, technology as a domain is unique because it is constantly evolving and experiences levels of change and transformation not often associated with other curriculum areas. Given the inimitable resource implications for schools, the relativeness 'newness' of technology in the curriculum and the disparity of the digital literacy of the teaching workforce, ICT CPD exists as a distinctive domain which I have chosen to separate from CPD in its wider context.

First and foremost, however, it is befitting to briefly consider the historical background concerning CPD. Although the body of literature on CPD is extensive, there is a lack of detail and analysis concerning its historical record (Robinson and Bryce, 2013). A key development – in terms of how teachers' CPD is understood in England today – came in 1970 with the publication of The James Report which referred to the 'three Is': initial teacher training, induction, and INSET (Earley and Bubb, 2004). Although the report was responsible for launching the INSET revolution and the elevated status of CPD, it is worth noting that this was preceded by a meteoric rise in the school population which saw the number of trainee teachers double from 60,000 to 120,000 between 1961 and 1971 (Williams, 2014). This came at a time when the milieu of teacher professional development was the select preserve of a cadre of elite teachers whose role was to model and disseminate good practice to the remaining majority (Robinson and Bryce, 2013). In the 1970s teachers had greater autonomy in the classroom and their practice was seldom questioned or challenged (Williams, 2014) until a turning point came in the early 1980s when INSET became an institutional concern, rather than an individual one (Earley and Bubb, 2004). During the 1990s the profile of CPD rose to become part of a more widely perceived need with the launch of the Teacher Training Agency [TTA], and

with the government's introduction of a national strategy for professional development[4], CPD arrived in the 21st Century (DfEE, 2001).

Fifteen years on in 2016, the current government appears to have moved away from the top-down model of providing CPD and instead favours and supports the school-led approach by ensuring that they 'will do more to ensure teachers can draw on the best materials to improve their workload and effectiveness' (DfE, 2016a: 17). Along with this pledge is the promise of 'a gold standard for effective CPD' (DfE, 2016a: 35) which is pivotal because this will see the introduction of a new Standard for Teachers' Professional Development (DfE, 2016c) with a view to helping schools to improve the availability and quality of CPD provision (DfE, 2016b).

Defining CPD

In the literature on teachers' professional development there are fewer definitions of what CPD actually is, than there are definitions of what the effective characterises of CPD should look like (Harland and Kinder, 1997; Hustler *et al.*, 2003; McCormick, 2010). To begin with, the DfEE's (2001) definition of CPD points to activities that increase teachers' skills, knowledge, understanding and their effectiveness in schools as well promoting a cycle of reflection and evaluation of professional learning. As far as the most recent guidance from the government goes, not much has changed by way of definition apart from making a distinction between direct professional development which seeks to improve specific pupil outcomes and indirect professional development which helps to improve the wider running of the school (DfE, 2016c). Building upon these characteristics, CPD can be defined as learning processes which arise from meaningful interactions which lead to teachers bringing about changes in their thinking and their practice (Kelchtermans, 2004). Moving on from the teacher's perspective, the definition of CPD can be further extended to include those learning experiences and activities which benefit the wider school community and which contribute to the improved quality of education in the classroom (Day, 1999b). However, it is advisable to

[4] Within European countries the structure, statutory requirements and delivery of teachers' CPD, however, varies widely. For example, organised and recognised programmes of support for Newly Qualified Teachers [NQTs] can only be seen in a small number of European countries where such provision is mandatory such as the UK, Lithuania and Luxembourg (Caena, 2011).

note that any definition of CPD depends not just upon its purpose, but also that the personal and aspirational nature of CPD may lead to there being more open-ended definitions (Schostak *et al*., 2010).

Any further attempt to define CPD is complicated by the wide variety of related labels, tags and banners that this term seems to attract (DfE, 2016c). For example, the question as to whether the term CPD is the same as *In Service Educational Training* [INSET], or how *personal development* may be distinguished from *staff development.* Similarly, clarity may be lost in trying to establish whether CPD encompass all formal and informal learning opportunities that enable individuals to improve their own practice or whether *Professional Development* can be considered to be an aspect of *Personal Development* and, if so, the extent to which these terms complement or overlap each other (Earley and Bubb, 2004). Another issue which is difficult to reconcile is that the literature on CPD focuses almost exclusively upon the outcomes for teachers and pupil progress and learning, rather than exploring pupils own broader needs as stakeholders within their own institution where they can potentially, through student voice initiatives, build capacity for leadership (Mitra and Gross, 2009). Given this noticeable gap in the literature, there is subsequently a clear lack of any emphasis on pupils' own CPD – or indeed pupils delivering CPD to teachers. Within the literature, effective CPD in schools is seen almost exclusively in terms of pupils' academic achievements and outcomes in terms of standardised testing rather than on the wider development of their skills, attributes and capabilities as people (Earley and Bubb, 2004; Guskey, 2000; 2002; Robinson, 2010), and is a theme that will be returned to later in this thesis.

CPD: Outcomes for Teachers and Pupils

One recurrent theme which emerges from the literature on student voice – and which relates to CPD – concerns the sentiment of 'trust' and empowering pupils to build capacity for leadership (Fielding, 2001; Mitra and Gross, 2009; Morris, 2014; Rudduck 2005). Amidst this equation comes the premise that teachers themselves need to recognise that they need to learn, and that within this scenario there needs to be a dialogue of the ways in which they best learn as well as a learning environment which fosters both trust and openness (Knowles, 1984). This entertains the concepts of lifelong learning, effective learning communities and collaborative cultures to the extent that

there is acceptance that pupils and teachers can learn from each other and in doing so develop mutual respect (Carnell, 2001; Day, 1999a; Earley and Bubb, 2004; King, 2014; Mitra and Gross, 2009; Soo Hoo, 1993). It is also necessary to acknowledge that there is no empty vessel to be filled and that learning for teachers should be an active and engaging process rather than a passive one and should take account of what those involved already know and can do (Dadds, 2014; DfE, 2016c; Earley and Bubb, 2004; Freire, 1968).

In light of the above it is useful to entertain Lave and Wenger's (1991) notion of communities of practice. Such communities are characterised by members who may belong to the same profession, share common interests and who work together to achieve common goals. Communities of practice extend beyond the facsimile of just a network and focus more specifically on common areas of interest and purpose with a view to sharing and supporting the exchange of information within the group. Interaction can take place face-to-face or remotely, but what gives a community of practice its distinction is the embodiment of shared identity, togetherness and sustained collaborative activity over time. Where pupils are involved in teaching their teachers new things, both parties are learning and developing their skills and to this degree creates a community 'that acts as a living curriculum for the apprentice' (Wenger, 2011: 4) which leads on to considering the perceived value of engaging in CPD.

The 'Schools and Continuing Professional Development State of the Nation' study (SoNS) was commissioned by the TTA (then TDA) to investigate both the range and type of CPD activities that teachers in England were engaged in (McCormick *et al.,* 2008; Pedder *et al*., 2010). It is relevant to consider the findings from the SoN review, and that one of the main reasons why teachers engage in CPD activity is to choose the kind of training they would like to take part in (Pedder *et al*., 2010). Although this may align with training which helps them achieve their professional aspirations or performance related goals, teachers would seem to be more inclined to engage with informal CPD opportunities

which meet their immediate needs as opposed to those which may be linked to wider agendas concerning professional development[5] (Pedder and Opfer, 2010).

Alongside these findings, certain values and beliefs exist within the culture of some schools which have allowed a situation to develop whereby pupils are empowered and encouraged to provide training for staff. This would very much suggest an emphasis, as pointed out earlier, on the significance of being able to make transparent connections between both pupils' and teachers' learning and the wider development of the school as an organisation (Pedder and Opfer, 2010). Recognising the role of pupils playing a part in the process of evaluating CPD initiatives in terms of the impact these have had on their learning is important (Goodall *et al.,* 2005) which in turn raises the next issue of how the success of CPD initiatives can be measured.

Evaluating the Impact of CPD Initiatives

Although CPD for teachers has become a well-established practice over the last thirty years (Pedder and Opfer, 2010) a landscape still exists where a 'lack of theorising about CPD is common' (McCormick, 2010: 403). The pieces of the jigsaw puzzle which appear to be missing here – or are problematic for schools – and especially their leadership teams, relate to issues concerning the evaluation of the impact that CPD activity has had on the school, the teachers as well as the pupils (TTA, 2005). Some of the difficulties which schools may face in evaluating or measuring the impact of CPD (CUREE, 2008) can possibly be attributed to, or linked with, the absence of schools being able to identify intended outcomes at the planning stage prior to the implementation of CPD initiatives (Ofsted, 2006).

A possible complication which acerbates this issue is the nature of the way in which CPD initiatives are commonly administered and delivered in schools whereby in many cases the organisers of CPD activities are not leading the CPD activities themselves (Pedder

[5] It is worth noting here that CPD opportunities and provision vary significantly in other countries. For example, teachers in England receive a wider range of CPD provision compared to their European counterparts in Norway and Germany (Czerniawski, 2013) whereas the overall quality of teachers' professional development in the USA is patchy and falls behind OECD expectations (Wei *et al*., 2010). Conversely, investment in effective CPD in England is seen to lag behind many other education systems such as those in the Far East (DfE, 2016b).

and Opfer, 2010). Findings from the State of the Nation [SoN] research study (McCormick *et al.*, 2008) suggest that an absence of strategic planning or co-ordination of CPD opportunities in schools results in unfulfilling CPD experiences whereby the balance between school-wide and individual teacher requirements are not met at either an institutional level (school) or personal level (teacher). Subsequently, one of the main stumbling blocks identified in achieving effective CPD in many schools arises from such initiatives lacking any clarity in planning, vision or consistency which frequently lead to poor outcomes for both the school and the teacher (Pedder and Opfer, 2010). The extent to which these concerns may still be an issue in schools is unclear, although the government's pledge for a gold standard in CPD (DfE, 2016a; 2016b) would suggest that they are.

Returning to the earlier idea of the need to define CPD in terms of its effectiveness, current guidance makes it clear that professional development must be prioritised by school leadership and should include evaluation on the impact of teachers' practice, pupil outcomes and wider school improvement (DfE, 2016c). Given that much of a teacher's professional development is about improving pupils' learning (McCormick, 2008) and although pupils may be involved in the evaluation of CPD initiatives (Pedder and Opfer, 2010), there is an inconspicuous lack of evidence from the literature that pupils are involved in delivering CPD initiatives themselves, and particularly those involving ICT. This moves the debates of this chapter forward and presents the need to look at CPD and ICT in tandem.

CPD and Information and Communication Technology [ICT]

This section explores models of CPD in relation to ICT and the factors which are deemed to contribute towards, and influence, successful ICT CPD initiatives in schools. Methods and approaches to professional development are discussed and in doing so, attention is given to the literature that reports on teachers' preferred methods of ICT CPD. Consideration is given to the problems teachers may face in accessing CPD as well as evaluating why some approaches are more effective than others. To assess and evaluate the effectiveness of CPD initiatives in terms of their outcomes for teachers and pupils, I will draw upon Guskey's (2000) 'Five Levels of Professional Development' (see Table 2, p.42).

Evaluation Level	What Questions are Addressed?	How will Information be Gathered?	What is Measured or Assessed?	How will Information be Used?
1. Participants' Reactions	Did they like it? Was their time well spent? Did the materials make sense? Will it be useful? Was the leader knowledgeable and helpful? Were the refreshments fresh and tasty? Was the room the right temperature? Were the chairs comfortable?	Questionnaires administered at the end of the session	Initial satisfaction with the experience	To improve program design and delivery
2. Participants' Learning	Did participants acquire the intended knowledge and skills?	Pencil-and-paper instruments; simulations; demonstrations; participant reflections (oral and/or written); participant portfolios	New knowledge and skills of participants	To improve programme content, format, and organisation
3. Organisation Support & Change	Was implementation advocated, facilitated, and supported? Was the support public and overt? Were problems addressed quickly and efficiently? Were sufficient resources made available? Were successes recognised and shared? What was the impact on the organisation? Did it affect the organisation's climate and procedures?	District and school records; minutes from follow-up meetings; questionnaires; structured interviews with participants and district or school administrators; participant portfolios	The organisation's advocacy, support, accommodation, facilitation, and recognition	To document and improve organisation support; to inform future change efforts
4. Participants' Use of New Knowledge and Skills	Did participants effectively apply the new knowledge and skills?	Questionnaires; structured interviews with participants and their supervisors; participant portfolios; participant reflections (oral and/or written); participant portfolios; direct observations; video or audio tapes	Degree and quality of implementation	To document and improve the implementation of program content
5. Student Learning Outcomes	What was the impact on students? Did it affect student performance or achievement? Did it influence students' physical or emotional well-being? Are students more confident as learners? Is student attendance improving? Are dropouts decreasing?	Student records; school records; questionnaires; structured interviews with students, parents, teachers, and/or administrators; participant portfolios	Student learning outcomes: Cognitive (performance & achievement) Affective (attitudes & dispositions) Psychomotor (skills & behaviours)	To focus and improve all aspects of program design, implementation and follow-up; to demonstrate the overall impact of professional development

Table 2: Five Levels of Professional Development – After Guskey (2000).

Guskey's model is widely accepted and used in the literature on CPD as providing a benchmark for evaluating professional development programmes and particularly those involving ICT (see for example: Daly *et al*., 2009a; Davis *et al*., 2009a, 2009b; Goodall *et al*., 2005; Preston and Younie, 2017; Twining and Henry, 2014). In the context of this thesis, findings from the literature which report on the barriers and enablers in accessing professional development, and the small body of research which relates to pupils teaching teachers, will be conducive in helping to explain why the *Teach a Teacher* project provided a successful model of CPD.

Models of ICT CPD

Although much of the generic literature on CPD in education is applicable to any age phase and may pertain to any given subject area or situation, much empirical research concerning teachers' professional development frequently defines itself according to its curriculum discipline, for example, science or Physical Education [PE]. Wider CPD literature may well be relevant to the debate, but aside from the usual themes of teacher behaviours or student outcomes, there is often legitimate recourse and reason to access CPD literature which seeks out subject specific issues (Aelterman *et al*., 2013).

It is beneficial to begin by understanding and recognising that the body of literature concerning ICT CPD is limited, and with very few large-scale studies it remains – surprisingly – a very much under researched and unchartered field (Daly *et al.*, 2009a). It is also beneficial to begin by developing an understanding of how teachers integrate ICT and therefore facilitate an appreciation of how – and at what level – teachers may use ICT and therefore engage with ICT CPD or perceive their CPD needs. Lin *et al.* (2012) offer a combined model of pedagogy and technology for ICT and its integration in education (see Figure 2, p.44).

The levels (0 – 7) on the y axis measure the sophistication of a teacher's technical use of ICT and the pedagogical scale to x axis (A – D) measures teachers' beliefs, instructional strategies employed, student-teacher relationships and the types of activities that pupils undertake. This literature review does not have the scope to offer a detailed description of every level, but to provide an example, a teacher who prepares and prints word-processed handouts to support direct teaching tasks would be placed in cell (A, 1). Using

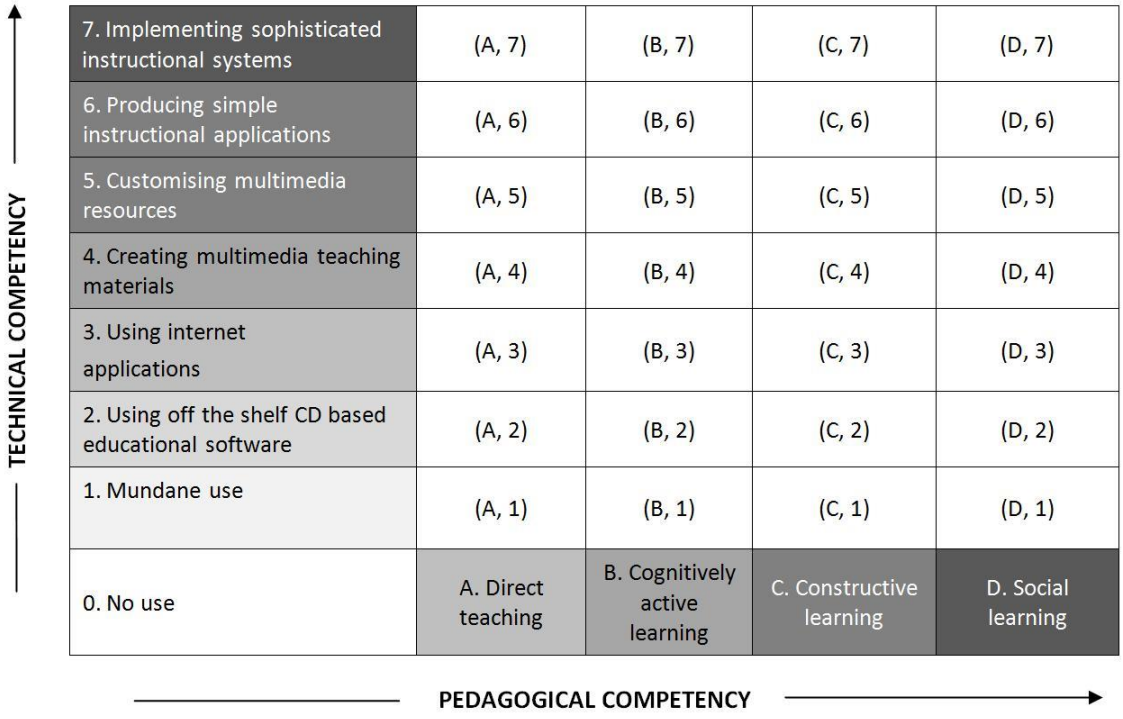

Figure 2: The Pedagogy Technology Model for ICT Integration in Education – After Lin et al. (2012).

the full range of descriptors that Lin *et al*. (2012) provide, a teacher can determine their present level of integrating ICT in their teaching. Within the landscape of this thesis, this model is significant because it represents and demonstrates the wide range of skill sets of teachers including those whose use and knowledge of ICT is either lacking, or at best, rudimentary (Morris, 2010a; 2010b; Prestridge, 2012) and is of use because it allows, to a certain extent, the mapping of both the competencies and progression of ICT skills of those teachers who were involved in the *Teach a Teacher* project, and will be returned to later in Chapter 7.

Those teachers in the classroom who entered the profession before 2000 trained at a time prior to ICT becoming a crucial development and driving force in education (Condie *et al.*, 2007; Conlon, 2004; Kirkwood *et al*., 2000; Morris and Burns, 2013; Preston 2004a; 2004b). Between 2002 and 2012 passing the TDA ICT skills test became a government requirement for all those seeking to gain Qualified Teacher Status [QTS]. The ICT skills test itself assessed competency in the following applications: word processors, spreadsheets, databases, multimedia presentation, email, and internet. As a result, trainee teachers on Initial Teacher Education [ITE] programmes could reasonably be expected to possess the requisite skills and competencies needed to use ICT within their

practice[6]. However, it is wrong to assume that all new entrants to the profession will have the same levels of digital literacy or confidence with ICT and there is a risk that teachers will continue to use 'safe' technologies with which they are familiar with, rather than exploring creative alternatives.

Within the literature on ICT CPD (Daly *et al.*, 2009a; Davis *et al.*, 2009a, 2009b) there is recognition of the importance of the framework of professional development provided by Guskey (2000). Guskey's model for evaluating professional development (see Table 2, p.42), is comprised of five strands: (1) participants' reactions; (2) participants' learning; (3) organisational support and change; (4) participants' use of new knowledge and skills, and; (5) students' learning outcomes. Guskey (2000) emphasised that each level in the model builds upon the previous one, and therefore success in one level is critical to the achievement of the next, culminating with the ultimate goal of improved outcomes for students. Guskey's framework is therefore functional, not only to support evidence of teachers' effective engagement in innovating with ICT (Davis *et al.*, 2009a, 2009b), but also why it is pragmatic to focus on the personal ways and levels with which teachers successfully engage with ICT CPD (Daly *et al.*, 2009a). With this is mind, Guskey's model will also be returned to in Chapter 7 to assist in providing a measure of the success of the *Teacher a Teacher* project as a CPD initiative.

There are two schools of thought which emerge from the literature about effective ICT CPD. One argues for offsite machine-centred course-based ICT training delivered by outside experts, whilst the other favours a school-based people-centred 'bottom-up' approach to building up technological expertise (Boylan, 2016; Bradshaw *et al*., 2012; Davis *et al*., 2009a; 2009b). In their analysis of the evidence from a UK national ICT teacher training initiative, Davis *et al*. (2009b) identify and evaluate these two approaches to CPD which emerged from the programme – a centralised computer based training approach (CBT) and an 'organic' teacher-centred one. Their research findings summarising the two approaches were organised across Guskey's five levels and then analysed and contrasted across the interrelated ecosystems of the classroom, the school, and the organisation of ICT teacher training. Overall, the organic approach was

[6] The new National Curriculum (DfE, 2013) became statutory from September 2014 and the focus is now on Computer Science.

strongly favoured by teachers and provided evidence of meeting all of Guskey's five levels and, unlike the CBT approach, it also provided evidence of impact on student learning. To summarise the findings, the CBT approach (led by an international ICT media company) was largely unsuccessful because it over relied on ICT based materials and distance learning, failed to take account of teachers with low ICT skill levels and was delivered by trainers who had no direct connection with, or understanding of, each individual teacher's classroom or school. Conversely, the organic approach succeeded because unlike the CBT model, it connected with the teacher's pedagogical discipline and beliefs, fostered a community of professional practice, developed coherency in line with policy, and provided support for organisational change (Davis *et al*., 2009b).

At this point is it helpful to draw upon a model which maps out the landscape of ICT CPD[7] and not only identifies the forms ICT CPD may take, but also considers those aspects of ICT CPD which may prevail or be associated with specific types of provision (see Figure 3, p.47). In their overview, Daly *et al*. (2009a) identify four quadrants for CPD with the horizontal axis indicating collaborative features and the vertical axis showing the players involved and therefore yielding the following divisions: High Collaborative School-Based; Low Collaborative School-Based; High Collaborative External Players and Low Collaborative External Players. These categories are not intended to provide a deterministic model of CPD, but rather to reflect the tendencies found in the literature and the types of associated CPD activity that teachers engage in. It is also important to note that with any model which attempts to define either the characteristics or dimensions of CPD delivery, there needs to be consideration of the wider and more volatile tensions or personal or institutional perspectives which may determine the form which such provision takes.

Teachers' beliefs and philosophies concerning teaching and learning as well as their own experiences of using ICT are idiosyncratic and invariably these factors determine, to some extent, their decisions concerning the ways in which they integrate ICT in their teaching as well as the ICT skills sets they wish to develop and the ways in which they seek to acquire them (Davis *et al*., 2009a). For this reason, it is useful to look at how

[7] This model (Daly *et al*., 2009a) will be referred to later in Chapter 7.

methods and approaches towards ICT CPD have developed and changed over recent years.

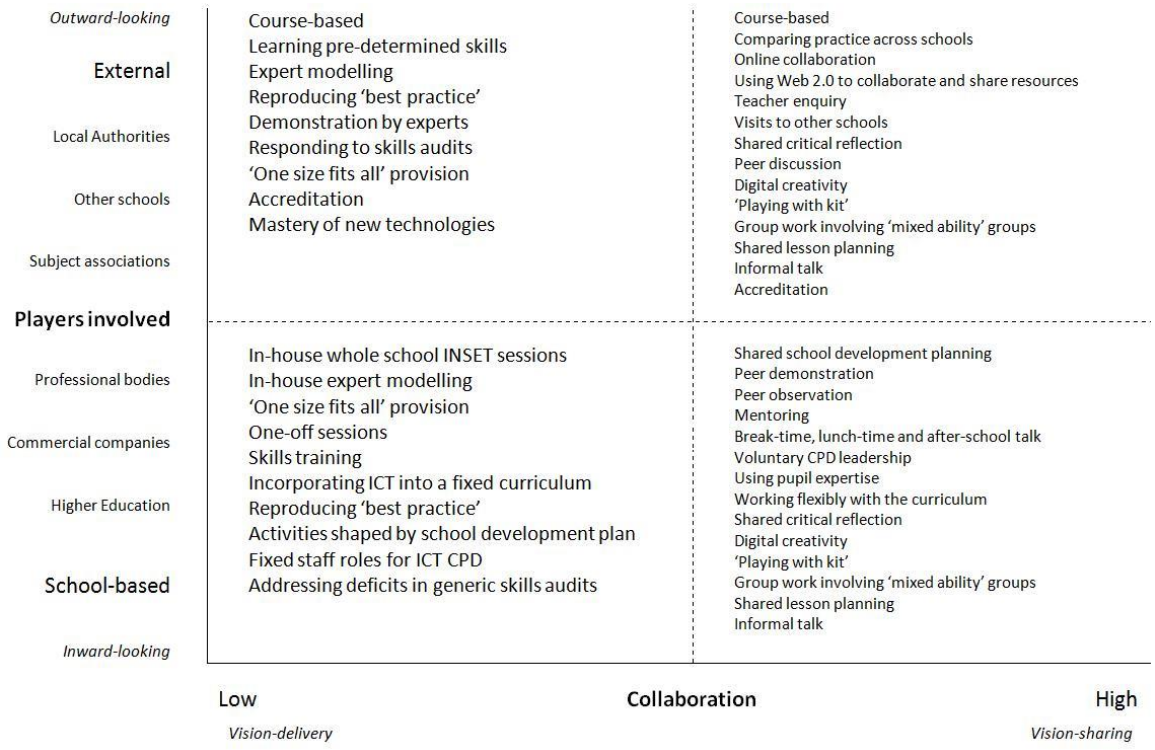

Figure 3: The ICT CPD Landscape – After Daly et al. (2009a).

Methods and Approaches to ICT CPD

There have been three national surveys in England concerning CPD over the last decade (GTC, 2009; NFER, 2007; TDA [Opfer *et al*.], 2008) and the findings from all three concluded that teachers do not feel directly involved in their professional development. The majority of teachers reported that most of their ICT CPD activity involved attending seminars or workshops where the main form of delivery was through presentations or lectures (McCormick *et al*., 2008) and nearly a quarter of the teachers in the GTC survey (2009) reported that they had not received any ICT CPD in the previous year. In light of these findings, there was, therefore, a perceived need to re-evaluate the existing dominant models of ICT CPD (Pachler *et al.*, 2010). Developing any large-scale model of CPD presents a challenge for any government (Bradshaw *et al*., 2012), and particularly so where such initiatives involve ICT (Conlon, 2004; Preston, 2004b). The DfE funded Vital programme was launched in England in 2009 and ran until 2013 and during that time set out to provide professional development for teachers with the aim of helping

them find ways to engage pupils in the use of ICT and, towards the end, with the new computing curriculum (Bradshaw *et al.,* 2012).

Issues previously identified in a review of the literature on ICT CPD included the need for teachers to be at the heart of CPD strategies and take ownership of their professional development in order to facilitate pedagogical improvements concerning ICT (Daly *et al.,* 2009a). Other characteristics of effective CPD emphasised the need to draw upon teachers' own experiences to engage them with their learning, as well as developing their sense of involvement in collaborative practices with a view to bringing about change (Pickering, 2007). Prior to Vital, there was also evidence from the literature of the growth in popularity of the 'self-help' agenda in schools (Pachler *et al*., 2010). This trend towards informal teacher-initiated professional development involved teachers meeting with each other during lunch times or after school and although not always constituting formal CPD, it appeared that many teachers experienced ICT CPD this way (Daly *et al.*, 2009b).

The Vital programme therefore set out to respond to these agendas by harnessing the potential of a number online and Web 2.0 tools. This included online learning using community websites, TeachMeets and TeachShares (where teachers coordinate and drive the training themselves), as well as in-house professional development (Twining and Henry, 2014). Over the course of its duration, the Vital programme proved to be an effective model of ICT CPD because it migrated towards a participant-centred programme (Bradshaw *et al*., 2012) and demonstrated innovation in combining a number of approaches including using Twitter as a key learning tool for sharing teaching ideas (Beadle, 2016; Twining and Henry, 2014).

Building upon the existing 'self-help' agenda, Vital was also successful because it adopted this 'bottom-up' approach to reconfigure CPD beyond an externally delivered model (Bradshaw *et al*., 2012) by using TeachMeets where teachers could take more control of their own development (Twining and Henry, 2014). To this extent, Vital characterises the international tendency to reconceptualise teachers' professional development beyond the traditional boundaries of offsite training led by experts (Boylan, 2016). Alternative methods include models of CPD which are disseminated on line such as the Computing at School [CAS] community or evolved through locally

organised table discussions (EdFutures, 2017) and are therefore often of a bespoke nature (Boylan, 2016).

From the available literature on ICT CPD, and to summarise, preferred approaches to CPD and those perceived to be the most effective by teachers in supporting learning and teaching with ICT would appear to involve:

1. Face-to-face support between peers as opposed to outside agencies or leadership by supervisors (Adam, 2007; Boylan, 2016; Coleman *et al*., 2015; Daly *et al*., 2009a; 2009b; Pachler *et al.*, 2010);
2. Access to internal training being preferable because it is more readily available and differentiated to meet teachers' individual needs (Adam 2007; Daly *et al*., 2009a; 2009b; Dixon *et al.,* 2005; Pachler *et al.*, 2010; Twining *et al*., 2013);
3. Increased motivation to use ICT through ownership by becoming part of a supportive network of users who can learn collaboratively by sharing ideas on a one-to-one basis (Daly *et al*., 2009a; 2009b; Pachler *et al.*, 2010; Sime and Priestley, 2005; Twining and Henry, 2014; Witte and Jansen, 2016)
4. Pro-active advice and support from more skilled colleagues – and weighing up the possibilities facilitates a means of taking on board new strategies. Exploitation of such support, however, depends on a whole school culture which engages and promotes collaboration between colleagues (Bradshaw *et al*., 2012; DfES, 2004; DfE, 2010; Hennessy and Deaney, 2004; Twining and Henry, 2014).

The four approaches above would point towards CPD opportunities which are readily available in school and which draw up collaborating internally with other people in the setting. Although the examples given here suggest adult peer-peer networking as a source of support, they omit any mention of drawing upon the expertise of other stakeholders, in this case tapping into the expertise of their pupils, which will be considered in the next section.

Pupils Teaching Teachers: Exploring the Existing Body of Research

Although pupils maybe involved in co-planning lessons with teachers (Morgan, 2011; Mullis, 2011) or taking on a role in school as researchers (Demetriou and Rudduck, 2004; Thomson and Gunter, 2006) or building capacity for leadership activity (Fielding, 2011;

Mitra and Gross, 2009) there is virtually no empirical research which reports or documents pupils teaching teachers or being involved in delivering teachers' ICT CPD and following an intense search of the literature there are only two sources which report such activity[8].

The first source (Gamliel and Hazan, 2014), stems from Israel's Multigenerational Connection Program [MCP] which involves Jewish and Arab pupils providing their teachers instruction with using computers and the internet. The research involved children aged between 11 and 13 and adults aged 53 to 70 and employed qualitative methods of observing pupils and teachers working together, teacher interviews and pupil focus groups. The research carried out by Gamliel and Hazan (2014) was not so much about pupils developing their teachers' ICT skills or narrowing the intergenerational divide, but rather aimed at comprehending the social dynamics and divergent cultural aspects underpinning these encounters. Essentially their focus on intergenerational relations centres around the cultural differences between the Arab and Jewish contingents and the ways in which they responded to the application of the MCP.

One aspect which needs mentioning here is the difference between the inception of the Arab-Israeli research study and this thesis, even though they both constitute agendas imported into schools from outside by the researcher. The MCP is an established national initiative which was set up in 2000 and runs in approximately 150 Israeli schools, whereas the *Teach a Teacher* project is a localised standalone study in one English school. Although not identical in design, the *Teach a Teacher* project also mirrors the MCP programme to the extent that both initiatives have a focus on ICT which 'accentuates issues of generational status and power relations between young people and adults' (Gamliel and Hazan, 2014: 887). Although generational issues form a predominant part of the Arab-Israeli study, it is more of an incidental concern in the

[8] It needs to be mentioned that there is literature which reports on intergenerational programmes where teenagers teach senior citizens computer skills, principally Kolodinsky *et al*., (2002) and Lundt and Vanderpan (2000). Case studies reported during the Vital programme refer to pupils training their teachers but these present 'sketches' of practice rather than research studies (EdFutures, 2017).

English study presented here which focuses on student-teacher relationships and teaching and learning through a programme of ICT CPD for teachers.

The Arab-Israeli study is not only rare in offering an example of student-teacher role reversal, but as the authors note, it is unique in that it provides an ethno-national dimension on top of a technological one. The cultural milieu in this case differs to the English study reported here insofar as some of the Arab pupils were initially reticent in working alongside their teachers, especially when they were of the opposite sex, and although it considers generational issues the research tends to focus on the outcomes for pupils, rather than teachers. The study also differs to the *Teach a Teacher* project in the sense that pupil-teacher relationships are seen in terms of honour and respect with a dichotomy between Arab values (maintaining an intergenerational hierarchy) and Jewish ones (establishing reciprocal student-teacher relations) which, arguably, align with the potentially transformative nature of student voice (Fielding, 2001; 2011).

The ultimate aims and goals of the two research studies, however, vary in terms of their vision. The purpose of the MCP was for adults to develop ICT skills to improve the quality of their life and familial relations rather than teachers learning ICT skills to improve the quality of teaching and learning. Fundamentally, other points worthy of note are that the cohort of pupils in the Arab-Israeli study were not known to their teachers beforehand and so the alliance was not built upon existing pupil-teacher relationships as they were at Appledawn. The purpose of the training also varied. For the Arab and Israeli children and teachers it centred around the family and community, with the salient intergenerational focus being for the pupils to assist the adults in digitally constructing their personal and historical biographies. The commonality of the *Teach a Teacher* project on the other hand, rested more on the development of teachers' computer skills to assist the creation of digital resources to support their teaching and pupils' learning. However, despite these anomalies, perhaps what defines the two projects is that they both present the reversal of conventional authority relationships, which 'sets up a social laboratory for the testing of children's situational status and the challenge of their empowerment' (Gamliel and Hazan, 2014: 888).

The second source to consider (Pachler *et al*., 2010) evolves from a report commissioned by Becta which presents a landscape of ICT CPD practice in English schools. A very small section of the report provides some empirical data which highlights pupils' competence and ability with digital technologies and where examples of both formal and informal ICT INSET sessions were held by pupils. Although it does not constitute a study itself it is relevant to this thesis in recognising the outcomes for teachers' professional development and the perceived benefits of working with pupils:

> Practitioners said that students showed remarkable sensitivity in teaching these adult learners. ICT leaders who had arranged these sessions felt that the children had more impact on the practitioners' commitment to learning about the value of ICT than they did . . . Practitioners had commented that this ICT experience was amongst the most useful and challenging that these practitioners had attended. Students were praised as being not only knowledgeable but inspirational (Pachler *et al.*, 2010: 73).

Pupils are not only valued as stakeholders in terms of their digital expertise, but also for the unique perspectives and contributions that they can make to teachers' professional development. Similar approaches currently exist in some English schools where pupils are selected and operate under the banner of 'Digital Leaders' (Digital Leader Network [DLN], 2016). The ways in which pupils work with staff or are involved in school initiatives may vary, but typically Digital Leaders might support teachers in the use of and planning with technology, liaise and work with primary feeder schools, create their own blogs or screencasts and speak at TeachMeet sessions (Anderson, 2013).

Apart from an online presence (Anderson, 2013; DLN, 2016), where details of events or digital leader activities are promoted or published on websites, there is no evidence of any empirical research being carried out on these particular forums, and where activity is recorded, threads and blog posts have the tendency to dry up and become dated. Where Digital Leader activity is reported, it is promoted positively and enthusiastically by the school teachers involved. Case studies concerning Digital Leaders, however, can be found on the EdFutures (2017) website. This collaborative online forum for educationalists does make mention of digital technology strategy trends which include taking more account of the technology pupils use at home by operating Bring Your Own Device [BYOD] schemes in schools, as well as pupils teaching their teachers. Case studies are presented from the DfE sponsored Vital Programme (Bradshaw *et al*., 2012) which provided ICT professional development for teachers in England from 2009–2013. Two of these case studies carried out in 2012 report digital leader activity which includes pupils

being involved in helping teachers to fill basic gaps in teachers' ICT skills – Long Lee Primary School – as well as a programme of training teachers in the use of iPads to support their teaching – Parkside Creative Learning Trust – (EdFutures, 2017).

To conclude this section, there are two things that emerge from these pockets of practice which merit a mention. Firstly, where activity involving pupils providing ICT CPD for teachers is reported (Anderson, 2013; EdFutures, 2017; Pachler *et al*., 2010) there is a lot of positive adult praise for both pupils' personal attributes and the digital knowledge they pass on to teachers. Secondly, what is lacking is any perspective on this activity which comes directly from the children themselves, and where pupils' initiatives are reported, adults too often speak readily on their behalf (Fielding, 2001). What pupils have to say about their experiences of teaching their teachers can be both positive as well as negative, although these pupil perspectives would only appear to emerge in the thesis reported here, and in the study by Gamliel and Hazan (2014).

Pupils, Teachers and Technology: Exploring Generational Debates

Leading on from perceptions of pupils' and teachers' collaborative learning with ICT, it is appropriate to acknowledge the digital perspectives of the stakeholders involved in such initiatives, namely the teachers and pupils themselves. The expression 'generational divide' does not just denote a numerical age gap, but is taken as an abbreviation for the 'generational digital divide' with an emphasis on the differing digital literacies of those born in the age of the internet and those born before its advent (Herring, 2008: 71). There is, however, a complex, wide and contentious debate as to whether such a digital gap between generations exists regarding their use, competencies, abilities, tastes and attitudes towards technology and this section briefly seeks to explore these arguments before drawing conclusions.

'Digital natives' are those people born after 1980 and so, in the 21st century, the ways that pupils engage with ICT may well be different to their teachers who are 'digital immigrants' if they are currently aged 36 or older (Prensky, 2001). More recently the 'digital native' label has been applied to encompass those conversant with the language of computers, the internet and mobile technologies and that any differences in relation to digital competency and age are perceived ones (Teo, *et al*., 2016). In light of this

observation about ICT use and age, it is worth noting a three-year study in the United States involving over two thousand student teachers which found that, statistically, there is no pronounced difference in terms of ICT competence across age groups regardless of Prensky's 1980 divide, although it was found that learning behaviours between 'natives' and 'immigrants' were prone to vary (Guo *et al.*, 2008). The SPIRE project (White, 2007) provides a good example of how this difference may manifest itself in the inclinations of people of different ages towards the use of social media and Web 2.0 type services. Data from the SPIRE project reveals age related trends, for example people's use of Facebook falls noticeably after the age of 24, and that the use of Wikipedia shows a resurgence in those over 65. Although the overall trend with the up-take and engagement with Web 2.0 tools and services is with young people under 18, and declines steadily with age, there are discrepancies. For example, the observation that 'the largest proportion of users in both Myspace and You Tube are older than 25 which is contrary to the widely held assumptions about the 'digital native' in these services being relatively young' (White, 2007: 9).

At this point it is useful to take into account how people's experiences, attitudes and backgrounds, as opposed to just their age, may determine how they respond to, or engage with ICT. The framework provided by Johnson (2009), which expands upon Prensky's model, includes digital newcomers (those who take up computing later in life), digital insiders (those who have always had technology around them or are technology experts) and digital outsiders (those who are disinterested or indifferent to technology or who have never been introduced to computers due to economic or geographical circumstances). If this mapping is applied in the context of schools, the belief that age alone presents a barrier to teachers engaging with technology may therefore be unfounded and may not be the only reason why some teachers feel threatened in situations where they perceive pupils to be more knowledgeable with technology than they are (Condie *et al*., 2005; Condie *et al*., 2007; Ofsted, 2009). This situation of teachers being threatened by pupils' knowledge of IT extends beyond the classroom. In a study examining parents' perspectives on technology and children's learning at home, some parents were not only critical of their children's use of technology but 'expressed discomfort, alienation and sometimes shame at their perceived 'lack' of technology knowledge vis-à-vis their children' (Hollingworth *et al.,* 2011: 356).

Teachers' 'computer anxiety' about their own perceived low level of ICT skills, and negative attitudes about using computers in the classroom with children, is still widely reported, even in the most recent literature (Coleman *et al.*, 2015). There is also research evidence which indicates that even where technology is adopted in the classroom, most teachers' use of ICT is limited to only a few types (Becta 2008; Vermeulen *et al*., 2015) and that the full range of some applications, for example IWBs, are underused (Cox and Marshall, 2007). Even though there is a shift towards mobile technologies and online learning in many schools (Burden and Maher, 2015; Seipold *et al*., 2013), patterns of practice remain largely unchanged and even though teachers overall are enthusiastic about using ICT, there are still gaps in teachers' ICT knowledge and skills (Becta, 2010; Lin *et al*., 2012; Morris and Burns, 2013). Not only is there recognition that teachers would benefit from further training and development in the use of ICT (Coleman *et al.*, 2015) but findings from the OECD[9] *Teaching and Learning International Survey* [TALIS] indicate how strong the need for teachers' ICT CPD is given that the findings represent over 5 million teachers across 34 economies (OECD, 2014). Both internationally and in England, the top CPD need for teachers is with new technologies in the work place and in third place is ICT skills for teaching although age in relation to need is seen to be a factor:

> Teachers' beliefs of their need for CPD in these two areas vary with age. Unsurprisingly, need for professional development with new technologies and ICT skills used in teaching is felt less by younger teachers – around 25% or less for those in their 20s rising to 45-50% for those aged 50 or over (Micklewright *et al*., 2014).

There is good reason to question, in England, why this situation should appear to exist given that most teachers continue to develop their IT competencies whilst they are in the profession (Beadle, 2016). Since the mandatory national ICT training programme for all in-service teachers in 2000, ICT has also formed part of Initial Teacher Training [ITT] programmes, and until 2012 all teachers entering the profession had to pass the ICT Skills Test. This would suggest that those most recently entering ITT programmes are deemed to already possess the required competencies in ICT.

Returning to the 'digital natives' debate, the OECD data indicates that the age associations linked to the use of technology still exist (Micklewright *et al.*, 2014) and that

[9] OECD – Organisation for Economic Co-operation and Development.

this legacy may still be present in the teaching profession (Beadle, 2016). However, any conclusions that age is a factor that determines demand for ICT CPD needs to consider the demographics of the workforce. England has one of the highest proportions of teachers under 30, less than half of the workforce have had more than ten years teaching experience and the proportion of teachers aged over 50 has been in rapid decline over the last ten years (Sellen, 2016) which suggests that professional development with technology is still a need for younger teachers and not just confined to older sector of the workforce.

When entertaining the assertion that pupils are more ICT savvy than their teachers, there is research that questions the reality of such a digital divide. Li and Ranieri (2010) contest that pupils may be less digitally skilful when it comes to using ICT in an educational setting, and that pupils' use of digital technologies may vary and may often be relatively unsophisticated (Selwyn, 2009). There are also issues of access to technologies that may be restricted by socio-economic factors such as class, gender and geography (Bennett *et al*., 2008; Johnson, 2009; Selwyn, 2009) and that pupils' skill levels may therefore be prone to vary (Bennett and Maton, 2010). Pupils' aptitudes are therefore unlikely to be uniform (Bennett *et al.,* 2008) and they may, like adults, be consumers of technology rather than creators (Selwyn, 2009). Seeking advice from pupils, however, should be encouraged because it can be beneficial in building relationships and breaking down barriers and can provide a catalyst in terms of encouraging pupils and teachers to work together in new ways (Cardinal Newman Catholic School and Brighton and Hove LA, 2006). In situations where pupils may possess digital literacy skills which are in advance of their teachers' technological knowledge (Ng, 2012), it is possible for teachers to close the digital gap by collaborating with younger people (Helsper and Eynon, 2010; Teo, 2013). However, the way in which teachers acquire IT skills sets is not just down to how they engage with technology, but also their perception of its pedagogical importance and level of willingness to accept it as part of their practice (Ertmer *et al*., 2012; Gobel and Kano, 2013; Gu *et al.,* 2013; Hermans *et al.*, 2008) which may go some way towards explaining why those teachers in the *Teach a Teacher* project chose to entertain the idea of their pupils teaching them ICT skills.

To draw this section to a close, it is difficult to reach any firm conclusions concerning the use of technology and age given the wide complexity of this debate. Much seems to depend upon people's assumptions, perceptions, attitudes and beliefs about technology as it has to do with the reality of using a given technology. On the one hand, there is the opinion that ICT for pupils is 'demotivating and dull' (Gove, 2014) yet on the other, from my experience as a teacher educator, even those teachers newest to the profession welcome professional development in the use of Microsoft Office. Even where there is potential for new pedagogical approaches with technologies such as mobile devices and online learning, there is still the question of how the integration of these technologies has not been fully realised in education (Preston and Younie, 2017).

Summary

What is clearly of importance is not defining CPD, but identifying the characteristics of effective CPD initiatives – not just in terms of how they meet institutional needs, but rather finding those approaches which work best for individual teachers. This then raises the practical problematic of where students fit in with this equation. In the literature effective CPD is frequently measured in terms of outcomes for pupils, but these are often defined by student attainment in standardised tests or progress in specific areas of the curriculum. There is also a lack of any literature which reports on the benefits or outcomes for pupils who are involved in organising and delivering CPD for teachers, and therefore any notion as to how student voice initiatives can not only facilitate teachers' learning, but can bridge the generational distance between themselves and their pupils. An exploration and analysis of the literature which reports on pupils teaching their teachers demonstrates that not only is there a place for these partnerships to develop, but when they do, pupils' contributions are received positively. A consideration of generational divisions relating to the use of technology reveals that it is difficult to reach any firm conclusions. This debate is complex because much depends upon people's assumptions, perceptions, attitudes and beliefs about technology.

The chapter that follows provides contextual information about the research setting, presents a rationale for choosing an action research paradigm and documents the qualitative research methods used in this study.

CHAPTER 4 – METHODOLOGY AND METHODS

Introduction

This thesis is centred around an action research project that facilitated pupils providing ICT CPD for their teachers. The research questions it seeks to explore relate to how this role reversal affects pupil-teacher relationships and influences the way teachers and pupils engage with technology, and how this informs approaches to the process of knowledge exchange between pupils and teachers. I begin by offering an account of why I chose to undertake fieldwork at the Appledawn School – and in particular my own subjectivity and social position in relation to the school as a site of knowledge generation. I then present a rationale as to why using action research is both a suitable and useful paradigm to adopt when seeking to understand a process of intervention which aims to bring about a shift and change in approaches to teaching and learning. Significantly, the focus of this activity constitutes the *Teach a Teacher* project and the nuts and bolts of getting this up and running are documented including the piloting phase and preparation prior to undertaking the fieldwork. Attention is then turned to a justification for the choice of research methods used followed by an account of how the data was analysed before finally moving onto ethical considerations in relation to this thesis.

Characterisation of the Research Setting

The Appledawn School is a co-educational Maths and Computing Academy for 11 to 18-year-olds situated in a semi-rural location on the London fringe with approximately 1200 pupils on role. Nearly all the students are white British and the proportion of pupils who have English as an additional language is 1.2% which is well below the national average (15%). The percentage of pupils with a statement of special educational needs [SEN] or Education, Health and Care [EHC] plan is 1.6% which is broadly in line with the national average of 1.8% (Ofsted, 2013). Data from the Office for National Statistics (ONS, 2011) point towards the area as being nationally above average in terms of economic affluence and social mobility. The school is over-subscribed and academically students achieve well above the national average in GCSEs and A Levels. The school has created an environment which actively promotes student voice initiatives (Appledawn School Brochure, 2013).

There were a number of reasons why I chose to carry out my research at the Appledawn School. Firstly, Appledawn has personal significance because it should have been the school I attended given that I lived in the catchment area, but I did not due to my father's decision to educate me at another school elsewhere. An influential factor in choosing the Appledawn School was because the Deputy Headteacher was well known to me as I had previously worked alongside her in the ICT department of another local secondary school. This relationship was pivotal in terms of feeling comfortable in carrying out the research at the school given the levels of professional respect and trust between us which already existed. As already indicated in Chapters 2 and 3, 'trust' is an instrumental commodity in educational settings and is critical not only in terms of a pre-requisite for endeavours involving risk and change (NCSL, 2010) but also in terms of 'gut feelings' (Leithwood *et al.*, 2007: 41) and ensuring that 'the right people [are] on the bus' (Ritchie and Woods, 2007: 375). I also personally believe that the more we are connected with a place and the people within it, the better we are able, through our own habitus – that is to say our biographical history and socio-cultural dispositions – to understand and comprehend both the complexity of the field and those players who have agency and operate within it (Bourdieu and Wacquant, 1992).

Whilst Appledawn offers some good reasons as to why it is a suitable location for the research, my particular closeness to the situation and the people in it requires consideration of the standards by which this qualitative study is evaluated or judged (Creswell, 2005). Ensuring the academic rigour of the study is not diminished involves understanding the role of myself in the setting and how my identity, values and beliefs influence the research and therefore my positionality as researcher and the ways in which I interpret events or interact with others (Ball, 1990; Lincoln, 1995). Because I have chosen to undertake an inquiry in a natural setting and focus on the collection of situational information which relies on discovery as an element of inquiry (Guba and Lincoln, 1994) this study is therefore rooted within an action research methodology (Creswell, 2005; Elliott, 2009; McNiff *et al.*, 2002; Noffke, 2009).

Choosing Action Research as a Research Paradigm

Action research is, by definition, practitioner-based inquiry used to improve and transform professional practice (McNiff *et al.,* 2002; Elliott, 1991) where a particular

educational issue may need a solution (Creswell, 2005; Freire, 1968). There are two strands of action research identified by Noffke (2009) which are relevant to this study – the 'personal' and the 'political'. The 'personal' aspect of action research not only pertains to the individual growth and emancipation of those participants who engage with action research, but also the subsequent social evolution of the knowledge-generating process. This manifests itself in the learning journeys of the participants in this study in terms of the way they engage with technology and the way in which they see themselves as learners. The 'political' dimensions, in turn, may pertain to wider agendas, for example, the need to create democratic processes in schools to facilitate educational processes that are more socially conscious and which could potentially, through policy reform, re-define practices within the school. The literature on action research often assumes that research being undertaken takes place as a direct response by the practitioner to their environment or setting (Elliott, 2009; Leedy and Ormrod, 2012; McNiff *et al.,* 2002). Although action research is considered a suitable strategy for doctoral students (Noffke, 2009), this action research study does not arise from my own *intrinsic* practice, but rather evolves from findings from the literature as well as *extrinsic* field work that I carried out for Becta in 2009.

The process of stepping into a setting which is not of one's own making with a view to reviewing the practice of others and bringing about institutional change may, on the surface, appear to contradict the spirit of using an action research paradigm as a means of instigating educational change *in situ*. Precipitating change in an institution in this way, although less conventional, is a legitimate way of embracing action research, although sustaining change from the outside is more challenging than from within (McNiff *et al.,* 2002). Regarding the study presented here, this was undertaken by working cooperatively with a school whereby, as an outsider, I had the opportunity to work alongside teachers and students in a considered way over a period of time. Such an approach is recognised and deemed to be justified due to the fact that although action research is usually carried out by an individual teacher or a group of teachers, teaching staff can at the same time work successfully alongside outsiders such as researchers from university departments (Cohen *et al.,* 2011).

To better understand my position as a researcher at Appledawn, it is appropriate to contemplate the three classifications of *technical*, *practical* and *emancipatory* action research presented by Carr and Kemmis (1995). As an outsider, and facilitator of the project, it could be considered to be *technical* action research because it employs the technique of using group dynamics in order to implement and sustain an investigation imported from outside. Although the research was not in response to concerns within the setting and did not constitute a consultancy role as such, it could arguably also be seen as *practical* action research because it encouraged practitioners to try out new ideas. *Emancipatory* action research differs from the previous two models because it directly engages the participants themselves and empowers them to bring about change from within. Putting my role as outsider to one side, the research presented here could still be seen to be *emancipatory* as the *Teach a Teacher* project gave the staff and pupils ownership of a tool with which to bring about – at least in the short term – educational change for themselves. Although I am not a stakeholder at Appledawn, the overarching purpose of action research as a methodological tool – in this instance – arguably reverts to the historical roots of this paradigm insofar as the research was undertaken to fulfil one of its original intentions of facilitating democratic change within a particular educational setting (Lewin, 1946). That change, in the context of this thesis, translates itself into a meaningful, easily accessible programme of ICT CPD for teachers and opportunities for pupils to grow socially and emotionally beyond the confines of the National Curriculum – both of which did not exist prior to the intervention.

Engaging with the Field Prior to Data Generation

This section outlines the initial preparation and approaches I used upon commencing my fieldwork at The Appledawn School. This involved keeping field notes of my visits to the school in a reflective journal and using these to plan the pilot stage of this study which included my sampling strategy. In terms of gaining access to Appledawn I was judicious in my choice of Gatekeeper, and assigned the Deputy Headteacher, Belinda (pseudonym)[10], to coordinate my visits. Because Belinda was known to me, this allowed a relationship of trust to develop between myself and the people where the research was going to take place (Hammersley and Atkinson, 1995).

[10] Pseudonyms for all participants are used throughout this study.

Keeping a Reflective Journal

Reflection is a beneficial process because it involves learning from our experiences (Thompson and Pascal, 2012) and helps researchers gain fresh insights and move practice forward (Ghaye, 2011). This, in turn, invites reflexivity – or to put it simply – the ability to identify and recognise the influence of our own social and cultural positioning in relation to our research (Fook and Askeland, 2006) and therefore, as a player, consideration as to how we configure our position within the field of education (Bourdieu and Wacquant, 1992) which was something I aimed to be aware of during my time at Appledawn. My reflective journal was not employed as a research tool or data source as such, but reflections were used to inform decisions about the choice of research instruments, how to conduct certain interviews and question assumptions I may have had about the participants. In this way, the reflective journal formed a reflexive part of the research process because it provided a means of developing transparency on a number of levels concerning my personal, ethical, methodological and epistemological perspectives on the research (Engward and Davis, 2015). A journal entry provides a brief, additional source of reference later on in Chapter 5.

Sampling

Although the gatekeeper, Belinda, contributed to how the project was launched, I was keen to ensure that I was involved in deciding how pupils were to be selected. It was agreed that rather than pupils being chosen by her, myself or other staff in the school, the pupils would self-select themselves and volunteer to participate in the research. This meant employing a sampling strategy that would be the most effective in responding to the needs of the research and to best answer the research questions (Creswell, 2005) but one where the need to make generalisations about the wider school population was not required (Robson, 2011). For this reason, and given the small-scale nature of this study, a non-probability sampling approach was taken which also lends itself to the nature of a qualitative research design as opposed to a quantitative one which often favours random or probability sampling (Denscombe, 2007). It can be argued that the sampling approach used in this study, however, is unusual as it has elements of opportunistic, purposive and snowball sampling. The selection of pupils can be considered to be opportunistic because potential interest from the student body was canvassed during a year group assembly as well as via a notice circulated in Year 8

registers. The main message at the assembly and in the circular was about how their participation could make a difference to their shaping teaching and learning in school as well as becoming involved in the process of teaching their teachers IT skills.

However, Year 8 pupils as a cohort were targetted because they were neither new to the school nor did they face the pressure of examinations. In this sense, purposive sampling, as the term suggests, involved selecting these students for a specific reason (Cohen *et al*., 2011; Leedy and Ormrod, 2012) and allowed me as a researcher to satisfy my requirements in terms of the sample meeting the needs of the study (Robson, 2011) as well as informing the strategic decision as to who should be included (Pole and Lampard, 2002). This form of sampling, nonetheless, is open to criticism because it lacks scientific rigour (Denscombe, 2007) and is therefore not able to make generalisations about the wider population (Cohen *et al.,* 2011). This thesis is not concerned with – or dependent upon – obtaining a sample representative of the school population because it is small-scale, qualitative in nature, and not intended to be replicated elsewhere.

Those pupils who showed interest were directed to attend a lunchtime meeting in room C-71 (a networked computer suite) to meet me. Twenty-six pupils turned up which represented just over 10% of the whole year group. During the meeting, I was able to have a more detailed dialogue with the students about what the research project would entail and once this was explained to them, they were able to ask questions. All pupils at the meeting – and new arrivals at subsequent meetings – were given an information sheet and consent form to be read and signed by themselves and their parents (see Appendix 1, p.169). The initial meeting allowed pupils to talk about which teachers they thought would benefit and who they wanted to work with and why. Once consent forms were returned, pupils gave Belinda the names of those teachers they wanted to work with. In the interest of building trust, I felt that it would provide an initial positive foundation for the partnership if pupils chose the staff, rather than the other way around.

C-71 became the regular space for lunch time meetings and the cohort of pupils gathered several more times before I established a cut-off point. The reason for this was that pupils who had come to previous meetings did not show up at the next one, and pupils who had not attended previously arrived for the first time. During this period

thirty pupils turned up and expressed interest in taking part in the study. From that point onwards, I based the final cohort on those who had shown engagement and commitment by attending regularly, and then invited only those pupils personally by name. Despite this, it took a period of two to three months before I reached the final cohort which consisted of sixteen pupils. At that point, during field visits my agenda was to:

1. Finalise the names of the teachers the pupils wanted to work with.
2. Decide upon how to approach those teachers with a view to them taking part.
3. Decide on the nature of provision – i.e. what training the pupils can offer or what skills the teachers wanted to develop.
4. Provide the pupils with etiquette training on how to talk to and work with their teachers.

The action points above were responded to and addressed as follows:

1. Once the pupil-teacher grid (see Table 3, p.65) had been finalised, it needed approval from Belinda (the Deputy Head) to check the suitability of both the pupil pairings as well as the teacher they had nominated to approach.
2. Consideration was given to ways in which to seek the participation of the teachers (covered later in this section).
3. This was achieved during sessions where pupils worked in their pairs to come up with subject specific ways in which the use of technology could make lessons more interesting. In light of this, I also carried out a pupil survey to establish their use of technology both in school and at home (See Appendix 5, p.184).
4. Materials were prepared in advance and once all pupil participants were present a workshop was held. This involved general guidance on etiquette as well modelling scenarios of dialogues between teachers and pupils.

The pupil cohort for this project was self-selecting and they were asked to nominate the teacher that they wanted to work with. This secondary process of selection also encompassed features of what is commonly referred to as snowball or chain sampling (Denscombe, 2007; Ritchie *et al*., 2006) given that the sample grew as a result of pupils nominating teachers to take part. This partnership, however, depended upon whether

the teacher was open, willing and knowledgeable in their role to work with them (Cohen *et al*., 2011). I considered snowball sampling to be an appropriate strategy in this context because it was using and activating existing social networks in school and therefore had the potential to deliver 'a unique *type of knowledge*' (Noy, 2008: 331). In addition, the notion of collectively owned social capital (Bourdieu, 1986) is productive here because snowball sampling as a sampling method has a tendency to generate knowledge that is emergent, interactive and political in nature (Noy, 2008).

Once pupils had identified the teacher they wanted to work with, it was agreed that it would best if pupils approached their chosen teacher in person. To help facilitate this process I produced an Information Sheet for them to share with their teacher and although this seemed straightforward, as with the selection of pupils, events did not turn out as expected with the selection of staff (Kemmis and McTaggart, 1988). During the process of identifying and selecting eight teachers, some twenty teachers were either approached or nominated by name. The pupil-teacher grid was therefore constantly changing as some teachers declined and others needed to be approached. After several months, the cohort of 24 participants for the *Teach a Teacher* project was finalised and to protect both the pupils' and teachers' anonymity pseudonyms were used as follows (see Table 3 below):

Teacher's Subject Area	**Teacher's Name**	**Pupils Paired with the Teacher**
1. Geography	Mr Kennedy	Marcus + Leon
2. Maths	Ms Caterham	Claire + Katie
3. History	Ms Flowers	Sarah + Hermione
4. RE	Ms Keane	Lenny + Craig
5. History	Mr Williams	Rebecca + Alice
6. Maths	Ms Sanderson	Barry + James
7. Science	Mr Harvey	Frank + John
8. Science	Mr Maxwell	Simon + Chris
	8 Teachers	***16 Pupils***

Table 3: The Final Pupil-Teacher Cohort for the 'Teach a Teacher' Project.

Once teachers had agreed to work their pupils, I contacted the teachers via email and attached an Information Sheet and a Consent Form (see Appendix 2, p.175) to be

completed on the day of the meeting and following any questions they might have about the project.

In any research project the researcher is expected to anticipate questions about the credibility of the sampling design (Marshall and Rossman, 2011) and should be able to present rationales with which to defend its use (Creswell, 2005; Leedy and Ormrod, 2012). With the formation of any sample of the population – and the relationship that the researcher has with the group – there are a number of aspects to take into account, for example, the need to be mindful of the divergence of the participants such as their ethnicity, gender and social class. These issues are particularly relevant when assessing the cohort at Appledawn (see Table 3, p.65). Firstly, all the pupils are white, middle-class and of comparable educational attainment to each other and secondly, as researcher, I sit within the same social demographic as the teachers myself. There is therefore the question of neutrality and the extent to which cultural forms and experiences in this situation are being reinforced in terms of people's understanding of their social world and each other (Barker and Johnson, 1998) and whether researchers should work with participants who share similar socio-demographic characteristics (Legard *et al.,* 2006).

On the surface, unlike probability or random approaches, purposive sampling is unashamedly biased (Cohen *et al.*, 2011) and so this study is constrained by any claims it makes about the wider significance of the research findings (Knight, 2002). Purposive sampling, however, is deliberately selective and involves choosing those who match the desired criteria (Cohen *et al.,* 2011; Knight, 2002) and may therefore be suitable for particular research problems or projects (Leedy and Ormrod, 2012). Choosing purposive sampling means using my discretion in the selection of the sample (Robson, 2011) which, in this case, involved targeting Year 8 pupils. By way of selection it also promoted those pupils with technological expertise who were willing to work with teachers and teachers who were both aware of their own ICT CPD needs as well as being open to coaching from their students.

Looking back on how the cohort of pupil and teacher participants for the *Teach a Teacher* project evolved through this process of self-selection and nomination, four distinct groups emerge: (1) Those pupils who may or may not have had the perceived social and cultural capital but for whatever reason chose not to take part; (2) Those

pupils who possessed the requisite capital and recognised the benefits of taking part; (3) Those teachers who chose not to take part either because they perceived their IT skills to already be sufficient, or because of a reluctance to engage with, or benefit from, pupils' technological expertise; and, (4) Those teachers who recognised their own lack of IT skills yet saw an opportunity to benefit from pupils' greater knowledge in this area.

For both teachers and pupils, participation in the research ultimately rested with recognising the extent to which they identified with the project which in turn determined the degree to which they bonded together with each other in their commitment to achieving shared or common goals (Lizzio *et al*., 2011) which in this case involved a collaborative shift in the existing pattern of teaching and learning using ICT. Given that the sample size was small and that I had not thought about the problem of attrition (Lewin, 2005) beforehand, I was fortunate that over the duration of the project the cohort remained constant with only one teacher and one pupil withdrawing over the eighteen-month period of research.

Access to the Setting and Piloting the Study

Much of the preparatory work described in the section above – such as finalising the cohort, ensuring I had a place to carry out observations and interviews, even getting to know my way around the building and know pupils' names – needed to be in place before data could be collected. In this respect, this phase of the research can be considered to be a part of the piloting process. I also needed to test and ensure the functionality and setting up of equipment such as the video app on the tablet, and the digital voice recorder, as well as being able to log into the school network if required. Communication systems also needed establishing which involved collating pupil and teacher email addresses, working with admin staff to circulate register reminders as well as procedures for locating pupils or teachers once I was in school. Generally, it was advantageous to spend time in the field to gain trust, build up a rapport with people as well as getting an overall feel of the place and the situation (Denscombe, 2007).

The pilot period also allowed routines to be established and research techniques such as interview questions to be refined to get them right in terms of developing familiarity and accuracy (Cohen *et al.,* 2011). Interview questions for teachers were piloted with Belinda the Deputy Head as well as my university supervisors, and focus group questions

and questionnaires for pupils were piloted with a small number of comparable pupils the same age, but from other schools. During the pilot phase I engaged the pupils in a number of activities. For example, to help establish their skills sets and find out about how they used ICT in school and at home, pupils completed a short questionnaire which helped me learn a bit more about how they use ICT. Before pupils began teaching their teacher, I reminded them emphatically about the need to ensure that the teachers were the ones controlling the equipment.

Piloting was practical because it helped to ensure the credibility and the feasibility of the study by checking the appropriateness and accuracy of the data I was going to be collecting, for example through respondent validation (Denscombe, 2007). It also gave me time to prepare and learn on the job (Robson, 2011) as well as allowing for any changes or adjustments to be made (Creswell, 2005). Piloting was also instrumental in helping to foreshadow and eliminate any potential misunderstandings, gaps, omissions or wastage when collecting the data (Sampson, 2004). It is helpful here – in light of this – to begin by outlining briefly the initial focus of IT training for each of the teachers in the project, which was negotiated and agreed with the pupils training them (see Table 4 below).

Teacher	Application	Initial Training Need Identified
Mr Kennedy	MS PowerPoint	Downloading and embedding video files in presentations
Ms Caterham	MS PowerPoint	Inserting graphics; slide navigation using hyperlinks
Ms Flowers	MS Outlook/Excel	Managing Outlook folders/basic spreadsheet formatting
Ms Keane	Movie Maker	Editing movies; creating You Tube channels
Mr Williams	MS PowerPoint	Animating objects; slide navigation using hyperlinks
Ms Sanderson	MS PowerPoint	Inserting graphics; slide navigation using hyperlinks
Mr Harvey	MS PowerPoint	Downloading and embedding sound files in presentations
Mr Maxwell	MS PowerPoint	Embedding sound files; slide navigation using hyperlinks

Table 4: Overview of Teachers' Initial Training Needs.

During the process of building the cohort and piloting the tools and materials, defining the forms, methods and functions of communication patterns at Appledawn and with

the participants were essential in ensuring that all of those involved were kept up-to-date and informed (Creswell, 2005; Silverman, 2013).

On reflection, I came to understand that piloting was vital in many ways. Perhaps the most substantial thing I learned was patience and the need to wait until the cohort of pupils, which fluctuated at the beginning, finally became settled and consistent which to me showed their measure of commitment. This was borne out by having a very low attrition rate over the eighteen-month research period. Another valuable lesson learned from the pilot was the importance of having a contingency plan for technology. Dealing with an equipment malfunction early on and having a backup device meant that data capture was not lost. Overall, the importance of the piloting and access phase of a research project cannot be underestimated. Not only does it help to reduce any error in the main research design, it can also be seen to constitute a form of action research, because after all 'the intention is to learn and change future action . . . [and] to find out how to conduct a project more effectively. A reflective piloting phase is likely to increase the validity of the research results and can in itself be viewed as action research' (Gudmundsdottir and Brock-Utne, 2010: 359).

Research Tools and Instruments

The research tools and instruments employed in this study were:

1. Observations
2. Interviews
3. Focus Groups
4. Questionnaires

Before looking at each one in more detail, I will briefly summarise here how data was captured. Observations of pupils training their teachers were video recorded in C-71 (a computer suite). A tablet – which used a digital video camera app – was positioned at a distance of between 1 – 2 metres so that I could see all three participants in each group (1 teacher and 2 pupils) as well as the computer screen where they working. The teacher interviews were conducted in a small, quiet meeting room and were audio taped using a digital voice recorder which was positioned on the table between myself and the teacher. The pupil focus groups took place in C-71 and these sessions were audio taped

using a digital voice recorder, apart from the initial one which was video recorded (see p.75 for an explanation of this). In all cases a back-up audio recorder was also running in event of the primary recording device failing. The only exception to this was that one of the observations was not digitally recorded due to the parental wishes of one child. Instead, hand written notes were taken to record what happened and what was said. As for the questionnaires, the first one on pupils' use of ICT at home and school (see Appendix 5, p.184) was used to help steer the pilot phase and was completed electronically online. The second questionnaire was a pupils' IT skills audit (see Appendix 6, p.186) which was administered on paper and was used at the end of the study to support the continuation of the *Teach a Teacher* project.

[Participant] Observation

Using observations as a research method is very much down to how well the data they produce will address the research questions (Robson, 2011; Simpson and Tuson, 2003) and so, for this reason, it is helpful to reiterate them here:

1. How might pupils leading ICT CPD for teachers influence the ways in which teachers and pupils engage with technology?

2. In what ways might pupil-led CPD for teachers affect the relationships between pupils and teachers, and between the pupils themselves?

3. How is pupil-led ICT CPD for teachers different to peer-peer or professionally led CPD, in terms of both experiences and skills development for teachers and pupils?

I have chosen to bracket the word *participant* because there is a lack of clarity in the literature in terms of defining what *participant* observation actually is or what it involves and so, as a term, it is difficult to pin down (Atkinson and Hammersley, 1994). In much of the literature on research design there is consensus that participant observation entails the researcher joining the group they are studying and taking on a defined role or participating in the activities of those they are observing (McNeill and Chapman, 2005; Ritchie, 2006; Robson, 2011). Other definitions suggest that participant observation is about entering the group as an observer to gain a better understanding from the inside (Walsh, 2001) or getting a feel for the situation, the dynamics of the

personalities and their roles (Cohen *et al.*, 2011). Closely aligned with participant observation is the notion of *nonparticipant observation*. Whereas the former entails the researcher becoming involved in the situation, nonparticipant observation is unobtrusive where the observer just visits and records from a distance (Creswell, 2005) although this does not exclude the observer from playing a recognised role (Atkinson and Hammersley, 1994). The key characteristic which separates these two approaches is that nonparticipant observation seeks to focus on particular behaviours to generate quantitative data about a situation, whereas participant observation aims to gain a deeper understanding of the people and the place through qualitative data (McNeill and Chapman, 2005; Robson, 2011).

Elsewhere in the literature, *observation* manifests itself as a generic term, therefore providing an umbrella for its various permutations (Denscombe, 2007). What sets it apart from other research methods such as interviews or questionnaires, is that it moves beyond perception-based data such as opinions, attitudes and values and rather than asking people what they do or think, I could listen to what they said, and watch what they did (Denscombe, 2007; Robson, 2011; Walsh, 2001) which gave the data stronger ecological validity (Moyles, 2002). Carrying out observations was also appealing because they convey a sense of volatility and freshness that is often lacking from more static methods such as surveys (Cohen *et al*., 2011) as well as capturing the daily processes (Pole and Lampard, 2002) and the phenomena – in this case pupils educating their teachers – unravelling before my own eyes (Creswell, 2005; Foster, 1996; Ritchie, 2006). Although other approaches such as interviews are cognitively more reflexive, observation had a prime role to play because it afforded me the opportunity to watch how the pupils and teachers used localised resources such as language and their physical setting to define their social realities. In doing so, I employed an *emic* approach whereby situations were captured and defined through the eyes of those being observed (Cohen *et al*., 2011).

Studying the spectrum of definitions which surround the term observation prompts me to question and seek answers as to the capacity in which I used observation as a research method in this study myself. Associated with participant observation is the immersion of the researcher in the setting (Denscombe, 2007) over a protracted period of time,

often for weeks, months or even years (McNeill and Chapman, 2005; Robson, 2011). Although the research at Appledawn was carried out over an eighteen-month period, it was not continuous, and the duration of each visit was for about two hours each time. Opportunities to observe were planned and structured to form eight sessions over a two-week period where each teacher was observed working with two pupils (see Table 3, p.65) and therefore providing a planned and systematic way of noting relationships, behaviours and interactions between participants (Marshall and Rossman, 2011; Morrison, 1993). It is questionable as to whether I carried out participant observation in its truest sense, but rather in a diluted form it amounted to gathering open-ended data first hand by observing people in their natural environment in ways suited to the logistics of, and access to, the setting (Creswell, 2005). For this reason, although participant observation may constitute part of a spectrum of terms, I choose to refer to the research strategy I used as 'observation', and later on in this chapter I consider how it was employed to gather data at Appledawn.

As an outsider, it was difficult to judge the level or amount of discussion that the pupils and their chosen teacher had had prior to observation, although I knew that they had all had initial meetings with each other to negotiate the nature of the planned CPD session. Initially I had not planned to video record the sessions, but in retrospect I am glad that I did as this allowed me to capture not just what was said, but also body movements, non-verbal expressions, use of the equipment and the participants' interaction with it (Denscombe, 2007; Simpson and Tuson, 2003). This was challenging because the seating arrangement meant that the pupils were either side of the teacher in a row with the computer in the centre and I therefore needed to deal with issues concerning space (Simpson and Tuson, 2003). To maximise data capture, I not only needed to be able to see the participants, but also to observe the use of the keyboard and mouse as well as what was happening on screen. In this way, it allowed me to focus on significant units of *molecular* behaviour such as non-verbal gestures, or subtle switches or negotiations concerning control of the equipment (Wilkinson, 2000).

To return to the earlier discussion concerning the levels and nature of researcher intrusion in participant observation, it is fair to concede that essentially observation remains a non-interventionist strategy as the researcher does not interact with the

subjects or seek to manipulate them or interfere in the situation (Alder and Alder, 1994). Having said this, I did on one or two occasions intervene either to clear up pupils' misconceptions of what can or cannot be achieved with a given technology or address imbalances, where pupils were dominating control of the equipment.

As noted earlier in this chapter, observation is a powerful research tool because it allowed me to see and record what people do rather than what they say they do. The main reasons for choosing observation as my principal method of data collection, therefore, was so that I could observe first hand:

1. How pupils and teachers negotiated the space they were in, for example where they sat and who had control of the equipment and when.

2. How pupils shared, negotiated and orchestrated learning for their teachers.

3. How the process of instruction physically took place, what it was the teacher was being taught and what was happening on screen.

4. How the use of teaching strategies other than verbal instructions were being employed, for example pupils modelling operations for the teacher or pointing to menu options on screen.

5. How non-verbal behaviours such as gestures, body language and facial expressions indicated levels of engagement or interest.

Finally, whether I was or was not involved in *participant observation, nonparticipant observation* or just *observation* is open to debate. There is frequently contention in social research literature concerning the interpretation and definitions of research methods and the terminology associated with them and hence I am aware of the pitfalls of tagging a given research approach with a label (Symonds and Gorad, 2008). As an outsider I was involved in working with the pupils at Appledawn and took the lead in training and briefing them to work with their teachers, and therefore had a definable role although this did not extend to the situations where I observed pupils teaching their teachers. If I had been a teacher at Appledawn, however, then I may have been able to have conflated my roles as both a researcher, and participant observer as a teacher. Putting the different categories of observation to one side, the aim of any form of

observation in an educational setting is arguably driven by the principal desire to immerse oneself and learn about the situation (Denscombe, 2007). In this sense, it can be argued that any aspect of social research constitutes a form of participant observation because any study of the social world can never ever take place without us being a participant in it ourselves (Hammersley and Atkinson, 1995).

Interviews

Having observed the teachers working with their pupils it was logical to probe their experiences, thoughts and feelings regarding this process by following up with one-to-one interviews (see Appendix 3, p.181) which were recorded using a digital voice recorder. Rather than limit the discussion to a structured interview with closed questions, I favoured using semi-structured interviews because they allowed me to probe, and in doing so, revealed additional information and insights (Walsh, 2001). Adopting a semi-structured approach was also advantageous because it enabled me to develop a relationship with the participants (Borg, 2006) and provided a level of informality which helped to create an environment where the subject felt free and safe to talk (Kvale, 2008).

Although observation was the principal research method – because it allowed me to witness the dynamics involved when pupils teach their teacher – interviews were essential in the gathering of data following on from this experience. Combining a variety of approaches with a view to facilitating the answers to research questions is a legitimate approach and employing other methods can also be used to explore motivations or examine more closely unexpected results (Kerlinger, 1970).

'In some respects, doing an interview is the most natural thing in the world' (Silverman, 2013: 199) although in doing so, we cannot ever know for sure that what the person is telling us is the truth. Interviews might resemble conversation but the validity of the data may be highly suspect and therefore unreliable (Walsh, 2001). What might be of value, however, is the fact that the interview may constitute a mutual exchange which revolves around a topic of shared interest (Kvale, 2008). In this way, the interview as a research tool was a powerful instrument (Cohen *et al.,* 2011) because it afforded me the chance to exercise control over the situation (Creswell, 2005). Conducting interviews not only facilitated the collection of both factual and attitudinal data which were

instrumental to understanding this study (McNeill and Chapman, 2005), they also allowed me to frame specific questions which were geared towards providing answers to my research questions. Interviews are events which are planned in advance and therefore do not occur naturally, and in this case I decided to interview the teachers individually so as to establish both a rapport and gain a more honest and open account of their experiences (Cohen *et al.,* 2011).

Although interviews may provide a greater level of control than observations, the information obtained maybe be prone to distortion or lacking truth (Creswell, 2005; MCNeill and Chapman, 2005; Robson, 2011). Kvale (2008) likens the process of data mining to physically mining for precious metals themselves and uses the analogy of a miner whose job it is to dig out nuggets of gold. In doing so, this leads to discovering data which does not mislead but rather provides 'nuggets' of truth. Semi-structured interviews therefore assist in providing guided conversations although they invariably also provide extraneous information (Walsh, 2001).

I chose to use individual interviews with teachers as a secondary method of gathering data because they allowed me to:

1. Follow up and ask them about what they or the pupils said or did during the observation.

2. Ask them about issues which they might otherwise be sensitive about discussing in front of their peers, the pupils, or members of the Senior Management Team.

3. Explore or probe their answers to questions or adopt additional lines of inquiry which might not be easy to do in a group.

4. Seek their individual opinions about the project and about the process of role reversal and how they feel themselves and the pupils have benefitted.

Finally, there is the need to be aware of the "interview effect" and that the identity of the researcher and the participants – in terms of ethnicity, age and gender – will determine what people are prepared to divulge (Denscombe, 2007; McNeill and Chapman, 2005) and is an issue returned to in the *Focus Groups* section below.

Focus Groups

Focus groups, by definition, are inherently a form of interview (Denscombe, 2007; Williams, 2003) and although there is no clear consensus on how many people should form the group, it typically numbers 4–6 people (Creswell, 2005). Robson (2011), however, suggests the optimum size should be 6–12, whereas Finch and Lewis (2006) propose a group size of 6–8 with children particularly feeling more comfortable in smaller groups. Given that the cohort of pupils in the project numbered 16, I worked on the basis of 4 pupils in each group. The use of small focus groups can be justified as they supplemented my use of other methods, in this case observations, teacher interviews and questionnaires (Robson, 2011). They were also considered to be suitable as children tend to feel more supported and ready to express themselves when they are with their peers (McNeill and Chapman, 2005).

The dynamics of the focus groups also enabled the pupils to interact with each other as opposed to myself controlling the discussion and the pupils' views therefore tended to predominate (Cohen *et al.,* 2011). In addition, the face-to-face meetings facilitated discussion as to how they see the world and themselves (Deacon *et al.,* 1999). In this regard, it was felt that the focus groups would provide deeper insights into their experiences and offer their opinions more readily than during individual interviews. To a large extent, the questions given to the groups for discussion (see Appendix 4, p.183) mirrored those questions given to teachers with the aim of providing insights and answers to the research questions. It was also considered advantageous for the pupils to work in peer groups where they could make sense of their experiences and formulate their views (Barbour and Schostak, 2005) and therefore more likely to cooperate with one another (Creswell, 2005).

Within this configuration it became necessary for me to mediate group dynamics. To begin with I had planned to run same sex focus groups reasoning that the pupils would be inclined to open up more than they would in a mixed gender group. With the first all-male group, this rationale, along with the decision to video record the session, uncovered hidden power hierarchies where two of the group affected the contributions of others by dominating the discussion and playing up to the camera which called for sensitivity and tact on my part in dealing with the situation (McNeill and Chapman, 2005;

Robson, 2011). The balance of gender can influence how productive group discussions may be (Finch and Lewis, 2006) and as a result, I decided to carry out mixed gender focus groups and to use an audio recorder rather than video. In doing so, the social make-up and similarity of the group still allowed for members to share common attributes or shared experiences which were relevant to the research (Denscombe, 2007).

To supplement the use of observations and teacher interviews, pupil focus groups were perceived to be particularly useful because:

1. Their organisation afforded the opportunity to have a gender balance and a mix of pupils in these groups who had taught different teachers and were able to come together and compare their experiences.

2. It offered a supportive environment for pupils to voice their opinions openly about the project but without being in the presence of the teachers.

3. It provided a social dynamic whereby they could interact with peers they might not otherwise engage with.

4. It offered a supportive forum where the exchange of ideas meant they might volunteer opinions or ideas they might not have thought of independently.

Although the sessions went smoothly from that point on, it bears out the fact that once gathered, focus groups can be unpredictable and may assume a life of their own (Barbour and Schostak, 2005) and that however carefully groups are organised the intended balance within the group may not always be achieved (Finch and Lewis, 2006).

Questionnaires

During the *Teach a Teacher* project I chose to use questionnaires on two occasions to gather additional data to help steer the project. Although the principal research methods I used for this study were qualitative ones, carrying out questionnaires was the most suitable and efficient method for capturing a snapshot of pupils' uses of ICT. There is consensus in the literature that one of purposes of carrying out surveys can be to identify and describe the characteristics of the population under study (Creswell, 2005; Lewin, 2005; Robson, 2011; Williams, 2003). The advantages are that they can be

completed in large numbers and generally the bigger the sample size, the more accurate the findings whereas smaller samples of less than twenty will not usually be sufficient to generate meaningful statistics (Walsh, 2001). I am mindful that the sample size for my questionnaires was limited to only 16 respondents, however, I chose to employ questionnaires because they were quick and convenient and the information required was reasonably straightforward (Denscombe, 2007).

The first questionnaire *Pupils – Using ICT at Home and in School* was carried out with the Year 8 pupils and the purpose was in response to my original premise that pupils would be able to train their teachers in the use of new and emerging technologies. I also wanted to gain an insight into the characteristics and patterns of their behaviour with ICTs prior to them meeting their teachers so the questionnaire was used to explore how they used technology at home and in school (see Appendix 5, p.184).

The second Questionnaire – *Pupil Skills Audit* (Appendix 6, p.186) was undertaken towards the end of the project with the purpose of auditing the ICT skills sets of the pupils. Because the project was coming to a close, the rationale for collecting the data was to provide a means of facilitating the continuation of the *Teach a Teacher* project in my absence. This was achieved, in part, by passing on the analysis of this data in the form of an 'ICT CPD Menu' (Appendix 7, p.192) to the member of staff who was taking over the project.

Data Analysis

Analysing qualitative data is a complex process because it involves making sense of data where often multiple interpretations can be made and therefore can entail a toing and froing between the data collected and its analysis (Teddlie and Tashakkori, 2009). Given that qualitative research, even with a small number of participants, generates huge amounts of data, the researcher needs to think about fitness for purpose when analysing and presenting data because there is no one right way of doing so (Cohen *et al.*, 2011). In the case of my data, I have loosely followed the process of axial coding whereby I have specified the properties and dimensions of categories and sub-categories to bring some coherence to the data and this provided me with an appropriate framework (Charmaz,

2006). The process of how I initially identified themes, and how categories and sub-categories emerged and were defined are outlined in Table 5 (see below).

<table>
<tr><th colspan="2">Categories</th></tr>
<tr><td>Main *
1. Teacher knowledge and skills
2. Pupil knowledge and skills
3. Relationships
4. Impact on teaching
5. Benefits on pupils
6. Benefits on teachers
Sub 1 **
S1.1 Teacher confidence/sense of achievement
S1.2 Technical vocabulary
S1.3 Barriers and enablers
S1.3 (a) Control of equipment
S1.4 Digital divide
S1.5 Preferred methods of CPD
S1.6 IT activity outside of school</td><td>Sub 2 ***
S2.1 Relationships between pupils & their skills
S2.2 Impact on learning
Sub 3 ****
S3.1 Pupils' knowledge being tested
S3.2 Pupils knowledge and skills delivering CPD
S3.3 Pupils and teachers – role reversal
S3.4 Wider impact on subject departments
Data Collection Methods Used
Observations (8)
Teacher Interviews (7) †
Focus Groups (4)
SLT Interview (1) ‡</td></tr>
<tr><td colspan="2">Notes
* Prior themes informed by Literature and RQs. ** Sub-themes identified following initial coding.
*** and **** Further sub-themes emerging during analysis and combing of the 6 main themes. † From the original cohort of 8 teachers, one teacher withdrew during the project. ‡ Towards the end of the project, the gatekeeper (Deputy Headteacher) was also interviewed.</td></tr>
</table>

Table 5: Categories Listed According to Codes/Themes and Sub-themes.

Once transcripts of the observations, interviews and focus groups (see Appendix 8, p.193 for an example) had been completed, I began seeking ways of classifying the data by starting out with taking a deductive approach to the analysis (Thomas, 2006) and identifying six themes informed by the literature and the research questions. These provided initial typologies and taxonomies for measuring, categorising and ordering according to type or properties and hence this exercise started the process of developing a coding system (Walliman, 2006). Taking one theme at a time I recorded all the occurrences throughout the full range of transcripts before moving onto the next. Some of the themes identified (for example, "relationships") emerged from the literature on student voice and my wider reading from the literatures concerned with ICT CPD, and the digital natives/immigrants debate. Whilst involved in this process I moved on to focussed coding to further break down themes or noted new occurrences which had previously been missed, and in doing so moved beyond identifying concrete statements

into analysing and interpreting them (Charmaz, 2006) thereby adopting a process of inductive analysis (Strauss and Corbin, 1998). I worked with printed copies of the transcripts and used a process of colour coding for themes. Sometimes themes overlapped or gave rise to another strand which meant provisional 'double' coding until statements were finally assigned to a theme. In total, from the original 6 themes, a further 12 sub-themes emerged (see Table 5, p.79). Working with a limited range of 5 colours meant developing combinations of two colours for codes, for example, highlighted dashes: orange/blue/orange/blue. Providing a sample page from an annotated transcript, with a colour coded key, provides an illustration of how the data was systematically analysed and annotated (see Appendix 9, p.194).

Coding the data was a constantly expanding process and there were moments when themes sometimes fractured. What was previously considered to be one theme, became two, for example, I found 'benefits on pupils' split in two to also become 'impact on teaching' i.e. two sides emerged – benefits of taking part in the project and benefits perceived in the classroom. I also found that new and unexpected themes presented themselves such as the idea of role-reversal which derived from the relationships between the pupils and their teachers and the explicit use of the phrase in the transcripts. This process – and my experiences of it – is closely mirrored in the literature concerning coding:

> [. . .] We *create* our codes by defining what we see in the data. Codes emerge as you scrutinise your data and define meanings within it . . . Through this active coding, you interact with your data again and again and ask many different questions of them. As a result, coding may take you into unforeseen areas and new research questions . . . Codes are also provisional in the sense that you may reword them to improve the fit. Part of the fit is the degree to which they capture and condense meaning and actions (Charmaz, 2006: 46–47).

Although this thesis sits within an action research paradigm, and does not seek to generate new theories, the analysis of the qualitative data has drawn upon some of the principles of grounded theory. Having trawled through the data many times I reached a stage where I could see no new insights or themes emerging and therefore reached a point of data saturation (See Appendix 10, p.196).

Establishing the Trustworthiness of the Research

In qualitative research the concepts of validity, reliability and generalisability do not carry the same bearing as they do in quantitative studies and so the robustness of qualitative research is instead achieved through assessing the credibility and rigour of the inquiry. The need to provide a framework for establishing trustworthiness in naturalistic studies is therefore an important one, particularly given that 'it is precisely on the point of trustworthiness that the naturalist investigator is most often attacked' (Lincoln and Guba, 1985: 289). It is acceptable to acknowledge that it is inappropriate to employ quantitative measures to qualitative research designs given that generalisations are often not possible and so it is advisable to seek alternative criteria with which the research can be defended. Guba (1981: 80) provides a useful point of reference in transposing the scientific measures and their terms into naturalistic ones and hence into the four aspects of trustworthiness, (see Table 6 below), and each of these in relation to this research study will be considered in turn.

Aspect	***Scientific Term***	***Naturalistic Term***
Truth Value	Internal Validity	Credibility
Applicability	External Validity Generalisability	Transferability
Consistency	Reliability	Dependability
Neutrality	Objectivity	Confirmability

Table 6: Scientific and Naturalistic Terms Appropriate to the Four Aspects of Trustworthiness – After Guba (1981) .

In terms of credibility (internal validity) the study reported here meets this criterion given that as an outsider I was engaged in the setting over an eighteen-month period which was sufficiently long enough to build trust with the participants, whilst at the same time avoiding the pitfalls of 'going native' and therefore being able to account for any distortions which may have crept into the data. Credibility – arguably – can also be achieved through the technique of triangulation of data although triangulation is a contested notion. In mixed method research designs triangulation is often accomplished by complementing quantitative methods with qualitative ones although this invites criticism of relying on one method to support a shortfall in another (Symonds and Gorard, 2008). In qualitative research studies achieving validity in this way is not always

feasible or necessarily desirable, but rather the concern is with ensuring that the findings are well developed and that 'a true picture of the phenomenon under scrutiny is being presented' (Shenton, 2004: 63). Although I did not undertake a mixed methods design, different research methods were employed to complement and support each other. For example, issues encountered during observations were followed up during interviews and the use of questionnaires were used to gather supplementary data to inform and steer the research.

Another technique that Lincoln and Guba (1985) recommend to establish credibility is peer debriefing. This entails involving a peer to regularly debrief and cross examine the researcher about their research and the research methods they have employed. To maintain an audit trail, notes of each meeting need to be kept which very much mirrors the process of supervision I experienced during the period of my doctoral study. Although not included as part of this thesis, observations of the participants were video recorded and could therefore be used to establish what Guba (1981) refers to as 'referential adequacy' as they provide a benchmark with which to test the robustness of the data analysis and the subsequent interpretations. Finally, to ensure credibility 'member checks' where participants are able to review and confirm interpretations of what was said during interviews can be carried out formally or informally and although I offered pupils and teachers the opportunity to do this, they trusted me as a researcher and declined mostly due to constraints on their time.

Although establishing transferability (external validity) is expected in quantitative studies – often by way of statistical confidence tests – doing so in naturalistic enquiries is in a sense impossible because most socio-behavioural phenomena are context bound and cannot be generalised (Guba, 1981; Lincoln and Guba, 1985). Instead, given the nature of this research study, I have relied upon using those sampling strategies best suited to maximising the range of information uncovered (Guba, 1981) as well as providing the thick description (Geertz, 1973) necessary to allow any interested parties to reach their own conclusions as to the potential transferability of the study. Given that there cannot be validity without reliability and therefore no credibility without dependability, then the former can be considered to be adequate in establishing the latter (Lincoln and Guba, 1985).

In order to ensure dependability (reliability) and the stability of the data, I used a combination of interviews, observations and focus groups which allowed me to gather findings from a range of different methods in different situations (Denscombe, 2007). With a cohort of twenty-five participants I was fortunate to be able to explore a range of perspectives including pupils, teachers and senior management in a variety of social situations therefore providing a deeper understanding and a wider lens on their social interactions (Cohen *et al*., 2011). I was able to follow up findings from one method with the use of another. For example, having carried out observations of teachers and pupils together, individual interviews with teachers allowed me to probe and question what I had observed them say or do.

With regard to the naturalistic inquirer demonstrating confirmability (objectivity) Lincoln and Guba (1985) propose the use of an audit trail which includes the raw data, evidence of data reduction and analysis, findings and conclusions linked to existing bodies of literature, a rationale for the choice of methodological procedures and designs, reflexive notes and evidence of the research instruments used. As with financial auditing, Lincoln and Guba suggest that an auditor should be employed and that they should be satisfied that the audit trail is complete. The description of the audit process they provide would accord with how this doctoral thesis has been constructed, presented and then assessed. As a minimum expectation of demonstrating confirmability, Guba (1981) suggests there are two steps that naturalists need to take. The first, as outlined earlier in this section, is through triangulation so that any predilections can be tested as strenuously as possible, and the second is through keeping a reflexive log of activity which may reveal any underlying epistemological assumptions that the researcher may have. As stated in the introduction to this thesis, this study does not claim to be a mixed methods design because the findings reported here are derived purely from qualitative data. Taking a pluralistic approach by supplementing my qualitative methods with questionnaires I was, at various points, able to steer the path that the project took. For example, surveying pupils on their use of ICT at home and in school at the start helped me to identify what activities would be feasible and achievable in the setting. Through seeking the additional perspective of Belinda, the Deputy Headteacher, I was able to understand the wider social aspects of the research in a way I was not able to through the teachers and pupils alone. Throughout the duration of my

research I also established an audit trail which included keeping a reflexive journal which enabled me not just to keep a running account of the process, but also to record my analysis and interpretations (Guba, 1981; Lincoln and Guba, 1985).

To conclude this section, it is worth reflecting on the difference between the need for rigour and relevance. Whilst rigour may be the single most important criterion for assessing a quantitative study, for the qualitative researcher, relevance may have far more bearing. Rigour – and therefore internal validity – may be possible to achieve in a laboratory setting, but in naturalistic theory, the notion of trustworthiness is incomplete because it is only possible to assemble evidence that might persuade – rather than be accepted – by another person of its relative trustworthiness but then, for the naturalist researcher, 'indeterminacy is what they expect of the "real" world' (Guba, 1981: 88).

Ethics

As an educational researcher and a member of the British Educational Research Association [BERA] I adhere to their ethical guidelines (BERA, 2011). Whilst conducting my research at Appledawn, the main principles which I observed were:

> *Voluntary Informed Consent* – participants need to understand how they will be engaged and why their participation in the research is required.
>
> *Openness and Disclosure* – voluntary informed consent needs to be secured prior to the research getting underway.
>
> *Right to Withdraw* – participants must be informed of their right to withdraw from the research at any time without needing to give a reason.
>
> *Privacy* – participants have the right to confidentiality and anonymity and researchers must recognise and accord them of these rights. Participants have the right to know how their data is stored and how it will be used and to whom it will be made available. Researchers have the duty that data is kept securely.
>
> *Disclosure* – In respect of the agreement that the researcher has made with participants regarding confidentiality, any illegal behaviour which come to light during the research or behaviours which may be harmful to the participants or others, may need to be disclosed to appropriate authorities (BERA, 2011).

To carry out this research I also needed permission and ethical clearance from the university's research and ethics committee [UREC]. This is a rigorous process and in my application I needed to:

1. Provide a brief description of the proposed research, including the requirements of participants.

2. Provide a clear justification for the proposed research, why it should proceed and a statement on any anticipated benefits to the community.

3. Provide an outline of the methodology for the proposed research, including proposed methods of data collection, tasks assigned to participants of the research and the proposed method and duration of data analysis.

4. Explain how I would identify, approach and recruit the participants for the proposed research, including clarification on sample size and location.

5. Identify if the participants would include children, and if so, supply a Disclosure and Barring Service check [DBS].

In addition to the above I needed to supply (a) Participant consent forms for adults and children and their parent/guardian, and; (b) Participant information sheets for adults and children and their parent/guardian. Both of these items fully address BERA's ethical guidelines. Because I was conducting the research off site and working with children, I also needed to complete, and have approved, a risk assessment form (see Appendix 11, p.203).

Children are often confident in expressing their views about their experiences and their social world, but if they are to be participants in research then they need to be given an understandable explanation about how they will be expected to be involved and be clear about making the choice to participate or not (Robson, 2011). As part of the UREC application regarding children, I also needed to ensure that I complied with the Data Protection Act (1988) and that the children were be protected under the United Nations Convention on the Rights of the Child (Articles 3 and 12) (UNICEF, 1989).

In line with UREC and Appledawn School Policy, pupils were not allowed to be involved until they and their parents had read the information sheet, discussed it with myself and the school if they wished, and returned the signed consent forms (see Appendix 1, p.169). Concerning the issue of consent within the research process it is fitting to mention here how policy at Appledawn operated. Under the school's opt out clause, all

pupils had parents' consent to be filmed in school for educational and promotional purposes. There was only one exception where parents had not given permission for their child to be videoed or audio taped.

Referencing the Participants

All participants in this study are referred to or cited by using pseudonyms. I could have chosen to use alphanumeric codes for people, but the use of such codes are reserved purely to denote the source of the citations. I have decided to use title and surname to identify teachers (e.g. Mr Maxwell, Ms Caterham) and first names for pupils. Not only does this distinguish staff from students in this study, but it also follows the protocol for conventions of address used at The Appledawn School. Another reason to employ names, albeit invented ones, was to maintain the human and social aspect of what is a qualitative research study about people. To distinguish the circumstances in which a certain pupil or teacher may have said or done something, the following abbreviations are used in this thesis, particularly in the next chapter. **OPT** = Observation of pupils and teachers working together; **TI** = Interview with teacher; **PFG** = Pupil Focus Group; **SLI** = Interview with Senior Leader. Numbers were then added to these abbreviations to identify the person or group. For example, the first occurrence of a quotation from a teacher is recorded as T-1, the next teacher to be quoted as T-2 and so on. A full break down of this system of notation can be found in Appendix 12, p.204.

Summary

In this chapter I have justified my chosen methodologies and methods in relation to my ontological and epistemological perspectives in seeking answers to my research questions. I have set the scene and established the environment in which participants were selected and how I went about gathering the data. A commentary has been provided in terms of the process of analysing the data and how the study is deemed to be trustworthy before closing with a consideration of ethics with a particular regard to working with children. The limitations of this study and its methodology are considered in Chapter 8, Conclusions. The next two chapters present my findings and the discussion of them follows in Chapter 7.

CHAPTER 5 – RELATIONSHIPS BETWEEN PUPILS AND TEACHERS AND THEIR ENGAGEMENT WITH ICT

Introduction

In the previous chapter I documented how I employed an inductive approach towards the process of coding and the use of themes to explore and analyse the data. The purpose of using an inductive approach was not just to develop a framework with which to map the experiences and processes which emerged from the data, but also to establish meaningful connections between the research questions and the findings. Although an inductive approach may not be 'as strong as some other analytic strategies for theory or model development' the findings presented in this chapter, and the next, are nonetheless derived through a focused evaluation which responds to the research questions posed by this thesis (Thomas, 2006: 237). Rather than deciding to organise the findings directly alongside those questions (see p.70), I have chosen to group them thematically and indicate below where they align with the themes. The reason for doing so is because the use of themes provides a conceptual coherency to the findings and allows the narrative surrounding the project and its participants to develop naturally and logically.

I begin this chapter by providing a point of reference as to how student voice operates at Appledawn and then move on to consider *Trust and Empathy*, *Role Reversal and Status, Generational Perceptions*, and *Pupils' and Teachers' ICT Skills*. These four themes relate to the first two research questions which concern how the reversal of the teacher-to-pupil model of instruction influences relationships between pupils and teachers and the ways they engage with technology.

Contextualising Voice at Appledawn

Student voice is one of the theoretical concepts which underpins this study and it permeates and manifests itself throughout the findings reported here. I have made the decision to introduce voice as the first theme as it serves as an overarching banner with which to encompass the themes covered in this chapter. The purpose of this section is not to look at how voice manifests itself in the findings – as this is covered implicitly elsewhere in the other themes – but rather to present the conditions under which the

project took place. Understanding how the Appledawn School operates existing student voice initiatives goes some way to explaining why the *Teach a Teacher* project was able to be embedded successfully.

It was during my interview with Mr Harvey (teacher) that I was able to gain a bit more insight into the various student voice schemes at the school which I was unaware of. His comments arose when I asked him what he thought about migrating the *Teach a Teacher* project with the current Year 9 pupils to training those in Year 8 with a view to taking over their role. He responded by saying that he thought it was 'an excellent idea' and that it would 'take off really well'. He went on to tell me about how the school's mentoring system was recently praised by Ofsted:

> The children are helping other children, from Sixth Form all the way down . . . children literally go and get together with each other and help each other through problems. The oldest children are mentoring the younger children, and it really works extremely well (TI-1).

When asked to elaborate further on the school's ethos, Mr Harvey considered levels of pupil engagement in light of his own teaching experience elsewhere:

> I've never come across a school like this [Appledawn] before anywhere. I've taught in quite a few, five schools over the years and never known kids so keen to do it [peer mentoring], because normally you ask kids and [they say] "oh, we don't want to do that", because it's in their own time, you see, but they seem keen to do it [here] and love doing it. It's a group of girls giving [younger] girls more self-esteem and then some of them are bullying groups and all sorts of things, so it works really well. So I think it is a good idea, and those are two ideal candidates [Frank and John] for it because they're quite confident, aren't they? (TI-1).

Emotional and social well-being are evidently important to pupils at Appledawn and it appears they feel empowered to tackle bullying and help raise their peers' self-esteem. In the same way, there is reason to believe the pupils working with Mr Harvey, John and Frank, and those in the *Teach a Teacher* project, value the opportunity to be involved in initiatives which influence teaching and learning. On this basis, there is good ground to assume that it is these existing conditions which may have allowed the project not just to flourish, but to embed itself as a structure and system long after the research had concluded. It may also help to explain why the pupils I worked with were receptive to coaching and mentoring. Not only this, but there was very low attrition and from the original cohort of sixteen only one pupil withdrew during the project. Returning to the second quotation from Mr Harvey concerning student commitment, it merits pointing

out that when I returned to Appledawn a year after the project ended to see how things were going I met up with eight of the original fifteen pupils. Two others were on prefect duty and of the remaining five, three pupils had withdrawn due to the pressure of being in an examination year group, but between them, and overseen by a member of staff, they had kept the *Teach a Teacher* project running. Not just by continuing to work with the teachers themselves, but to echo Mr Harvey's comments about student mentoring, they had been training pupils in Year 8 to take over their role.

Building upon a climate and environment at Appledawn which already promotes and fosters active and supportive peer-to-peer networks as well as a culture of mentoring, leads me to suspect that this has provided fertile ground upon which to build empathy between teachers and pupils. The theme of empathy cropped up during pupil focus groups, teacher interviews and was evident during observations where pupils were teaching their teachers, and is considered in the next section.

Trust and Empathy

There is good reason to believe from the literature that when pupils are safe in the knowledge that they will be listened to (Mullis, 2011) and their opinions taken seriously (Stenhouse, 1975), then they will trust their teachers to the extent that they can be open and honest (Lodge, 2005). This was noticeable during the *Teach a Teacher* project and was exemplified by the level of openness and trust which appeared to exist between the teachers and their pupils when it came to them declaring their lack of IT knowledge and skills.

During a session where one teacher, Mr Maxwell, was being shown by pupils how to embed sound files, he said, 'I've tried and failed in the past to do stuff like that', and when being shown how to create hyperlinks he openly confessed that: 'This is brand new territory for me' (OPT-1). Another teacher, Mr Kennedy, found keyboard shortcuts confusing and preferred to use the menu options he was used to rather than being shown alternative ways, and when asked by pupils to open a new tab in his browser he said: 'I don't know what a tab on the internet is, guys' (OPT-2). What is evident here is that where teachers build such narratives with pupils there needs to be openness and honesty in order for that trust and empathy to take place. Although Mr Maxwell

provides pupils with a straightforward account of how technology is a challenge for him, and Mr Kennedy is quick to declare unfamiliarity with terminology, the question which remains for me, however, is why these teachers are not afraid to admit their lack of knowledge in front of their pupils. One possible explanation might be that these teachers feel more secure and able to declare their lack of knowledge with their pupils as opposed to admitting that they do not know how to do something in front of their peers, which could potentially be embarrassing. What is clear from the data is that they had a level of trust with their pupils which allowed them to make such an admission. It is possible that this trust stems from the reasons pupils gave for wanting to work with chosen teacher. In the first instance, all pupils wanted to work with their chosen teacher because they liked them, and secondly they showed empathy in recognising that their teachers needed help and were non-judgemental about their lack of IT skills.

During one of the pupil focus groups when asked about why they wanted to work with their teacher, Craig notes: 'She's a really nice teacher and sometimes when we're in her lessons she struggles with things to do with the computer. She doesn't know that she's frozen the [interactive] board and then its simple things that she forgets,' to which Lenny adds: 'Yeah, she gets a bit confused sometimes' (PFG-1). This exchange between Craig and Lenny raises the question as to why they felt they could approach their teachers so openly about what potentially is a sensitive area for them. In the same way that the teachers were honest and upfront with their pupils there evolves, from the data, the possibility that there existed a shared commitment to achieving common goals (Lizzio *et al*., 2011), in this case the development of teachers' capability with ICT to enhance teaching and learning.

Above and beyond liking their teachers and accepting that they needed help with their digital skills, another feature noted in the focus groups was the perceived shift in their relationship with their teacher as a result of the project. Pupils felt that: their teacher 'connected' with them [Lenny – PFG-1]; they had 'bridged a gap' between themselves and their teacher [Claire – PFG-1]; that their relationship had become more informal rather than 'teacher-student' [Katie, Craig – PFG-1], and; they'd 'got closer' to their teacher [John and Frank – PFG-3]. Pupils also reported how they conversed informally at school, for example with Craig noting that: 'Ms Keane can talk to us a lot more now.

If she sees either one of us round school she'll quickly tell us what she's been doing on her own in her lessons' (PFG-1). It is tempting to ask at this point why this evolution of teacher-pupil relationships had not taken place at Appledawn before, given the climate and culture of mentoring in the school. Having said this, it may also explain why the school was receptive to me as an outsider seeking to bring about changes in pupil-teacher relationships and why the project was embedded successfully.

Another finding which perhaps helps to explain the shift in relationships and the "connection" pupils felt with their teachers stems from the process of what they were doing – teaching their teacher. Through having subscribed to the project, pupils put themselves into a situation of responsibility where they knew that the traditional teacher-pupil model of instruction would be reversed. However, what they may not have been able to judge or anticipate was the way in which this experience changed their perception of their teachers and in particular how it enabled them to develop a sense of empathy with them. As Barry reflects:

> When that teacher is teaching you, you think that what they do is just to teach, [that] they don't really do anything else. But then when you start actually teaching them you realise that they don't know everything and that they still want to learn other things (PFG-2).

Ms Keane provides additional insight into pupils' perceptions of their teachers when she affirms that the process of role reversal is a positive experience in encouraging pupils to empathise with them as people:

> I think it [the project] has helped the relationship between teacher and pupil. Sometimes they do expect teachers to know everything and be perfect at everything, and I think it takes away that pedestal that sometimes teachers are put on. We're not perfect, we don't know everything, it's OK if we don't know everything, and I think they've benefited from that and becoming more confident in their own knowledge (TI-2).

Not only does she reiterate Barry's realisation that teachers do not know everything, but she recognises how this has led to not just a deeper understanding of teachers as learners, but also pupils' self-assurance in their own knowledge. Ms Sanderson extends this line of thinking to recognising how, for pupils, it has led to more than just a question of knowing more than their teacher, but understanding the intricacies and practicalities involved in imparting this knowledge:

> I think its made them realise that teaching isn't as easy as perhaps they thought it was, in terms of having to break it down. Or perhaps they just think I'm thick. But, yeah, I

> think it's made it much clearer to them how a teacher has to approach a particular subject by breaking it down (TI-3).

Through this process of empathising with their teachers, pupils come to understand that the transmission of knowledge is not just a simple didactic process but one that requires patience from the person doing the teaching. So, from this perspective what the students are learning is how to see things from the position of the person being taught, and the complexity of when and where knowledge may need to be presented in manageable chunks. It is through this experience that pupils may begin to see the wider implications of teaching. Not just teaching itself, but the challenge their teacher faces of teaching students who may not be engaged, as Mr Maxwell illustrates:

> I think mutual empathy is a key thing. I know that, not with these two young men who spoke to me, but I think in the grand scheme of things if this was a wider run thing I think potentially behavioural issues that occur because of a lack of empathy, both maybe teacher and student and vice versa, this will maybe make them realise that actually it's not easy to teach somebody else, imagine doing it now in front of thirty other people with a quarter of them who maybe are not interested. So actually it'll allow them to see a different world from a teacher's point of view, and I think that would be a good thing, not for them to feel sorry for us as teachers, but at least to understand the work that does go into what we do day in, day out, so I think it's a good thing (TI-4).

The connection that Mr Maxwell makes between empathy and engagement is something I have always personally suspected and was very much the premise for carrying out this research with the belief that it might be possible to engage hard to reach learners by involving them in initiatives like the *Teach a Teacher* project (Smyth, 2006a). As it turned out, and as Mr Maxwell notes, the pupils involved in the project were not disengaged but the point about mutual empathy is a fundamental one. Not just in terms of how developing trust between pupils and teachers may overcome behavioural problems, but how enabling a process whereby pupils experience things from a teacher's perspective can lead to a deeper understanding and respect for each other (Giroux and McLaren, 1989). To all intents and purposes, it is fitting to acknowledge here that without teachers possessing this kind of vision, the project would probably not have got off the ground. A teacher's attitudes, beliefs and experiences invariably nuance the way they perceive the relationships they have with pupils and the degrees of distance between them, and this is something which Ms Sanderson comments upon in terms of seeing the benefits of the project for pupils:

> I think that kids should really see teachers in a different light and them [sic] feeling that they could help the teachers I thought would be really good, not only for their self-

> esteem but also in how they viewed teachers. Because I think, it depends how you teach. Some teachers are, particularly in secondary, are very far removed from the kids, they're kind of a totally separate island. I think perhaps because I've taught in primary and I've taught in special [schools], I don't feel I'm quite that far removed so I think that maybe I [particularly] have a different relationship with the kids and I just felt it [the project] was a really good way for the kids to have a different relationship with teachers (TI-3).

Ms Sanderson's comments also raise questions concerning how there may be differences between teachers in different sectors of the workforce and how this affects the way they relate to pupils. If, in Ms Sanderson's words "it depends how you teach", then for those teachers involved in the project it may say something about how they can bridge their authoritarian role and the institutional distance which exists between themselves and pupils that some of their peers may find more difficult.

Being open to re-shaping the hierarchy of the school authority system is something which is seen to be especially beneficial for pupils. As Ms Sanderson comments, not only do pupils come to realise the challenges of teaching, it also gives them a degree of licence:

> . . . I think it's empowered them and also as I said, it's made them realise just the ins and outs of teaching, it's not as easy as just standing up there and waffling. You have to actually think [about] what you're doing (TI-3).

To summarise, the findings reported in this section suggest that the *Teach a Teacher* project facilitated empathy to develop between some of the pupils and teachers and that through this process a mutual trust developed which led to empowering both pupils and teachers. What is noteworthy here, is that by opting into the project, those teachers not only engaged in a process of mutual empathy with their pupils, but also effectively agreed to a shift in pupils' status by subscribing to the process of role reversal, which forms the theme of the next section.

Role Reversal and Status

This section considers how role reversal has not just brought about a shift in participating pupils' status, but has also brought about a change in the relationships between the teachers and their pupils. Consideration is also given to how this process has fostered both pupils' confidence and their sense of responsibility.

As noted at the start of this chapter, before the project began there was evidence to suggest that openness between the teachers and pupils at Appledawn already existed and one example of this emerged during my interview with Mr Harvey. He is dyslexic and has always declared this to the pupils he teaches. This is meaningful because on the one hand such a disclosure may enable students to identify with his human, personal side, whereas on the other, it is at odds with the infallible image of the teacher as the 'model' learner. This is potentially disruptive to the extent that it may not gain a vote of confidence from some pupils, yet for others it may be a source of inspiration. Either way, in terms of seeking pupils' support, Mr Harvey maintains that it fosters the belief that learning is a two-way process:

> A lot of the kids who have got that problem [dyslexia] themselves or just think I'm not very good at spelling, suddenly realise, "oh, well, if he's having trouble and he's teaching us perhaps I can improve". And it does, it helps a lot with a lot of different kids. And very often I've asked children in lessons, as well, "I'm not sure how to do this, is anyone good at computers, come and help me." And they've come to help me, anyway. So I've always been doing that the last three or four years, and this [the project] is just like a formalising of that particular response, really, where kids are helping me out for a change (TI-1).

This endorsement of pupils helping out their teacher supports the earlier observation that the climate at Appledawn is conducive to collaboration and mentoring, amongst the students at least. It also bears out my own experiences as a teacher that pupils – of all ages – relish the opportunity to troubleshoot technical problems for their teachers. It empowers them, they feel valued and it helps to build positive relationships. In situations where pupils assume greater responsibility, or leadership roles, however, they frequently state the need for recognition that what they have to offer is appreciated (Waterhouse, 2011).

This shift towards a more informal approach of teaching and learning is something that Ms Keane commented upon when she was asked if she felt her relationship had changed with the pupils since being in the project:

> Oh, definitely. I think that it's broken down the whole I'm a teacher, you're a student, and there's, like I was saying earlier, much more open dialogue especially between Lenny and Craig and myself. There's so much more, they feel much more able to put their point across. I've seen them become so much more vocal in the lessons because they know that they can talk to me outside of just a classroom setting. It's been really good (TI-2).

When I responded by saying, 'So it's levelled the playing field a bit' her reply was, 'Definitely.' I suspect that although there are generally positive relationships between pupils and staff at Appledawn, such a response indicates that there are still contrived distances between pupils and staff which reinforce the 'dominant view' (Meyer, 1977). To some degree, this provides evidence that the role reversal and shift in status has in some ways overcome the routine protocol of student-teacher relationships.

The project would seem to have opened up something different which was not there before as Ms Sanderson echoes a similar line of thinking to Ms Keane in that she felt the project 'was a really good way for the kids to have a different relationship with teachers.' She felt that rather than change or have an impact on the relationships she had with the pupils, it added a new dimension of quasi friendship to what was already there:

> Maybe it's because I had a different kind of relationship, or viewed my relationship with the kids slightly differently anyway, but I just think it's nice to involve them in this, in the teaching side, for them to see a different side. I don't think it's made me view them differently although, no, I think I was really pleased that there were kids who volunteered to do it, I thought that was really lovely (TI-3).

What emerges from the teacher interviews is that those teachers in the project actively welcomed the process of role reversal and saw it as a positive experience. There was the perception that role reversal and handing 'control' over to the pupils were desirable outcomes, as Mr Harvey points out:

> It's good experience for them to be able to be in a situation where they're in control of a teacher, an adult. How many kids are in charge of an adult? Very few. And I've never been threatened by that at all. I've always found that as useful, and they knew far more about computing than I did, so I thought they're ideal lads [to work with]. Again from the unique situation they've been put into where they're actually in control of an adult, and they control what the adult does to a certain extent, and they were testing me when you came to us last time. They said, right, you do it by yourself. And then put me on the spot. And it's just to be in that situation, isn't it? It's role reversal (TI-1).

Why this is a 'good experience' for students and why these two pupils are 'ideal' candidates to work with, filters back to the previous section and the notion of there being genuine trust and potential for there to be empathy between teachers and pupils. It also suggests that the pupils are eligible for engaging with the process because they have the necessary social and cultural capital and therefore symbolic power and hence legitimised 'control' over their teacher. However, Mr Harvey's comments also prompt me to question again what is it that makes these teachers – most of whom are relatively unskilled in ICT – embrace this situation. They clearly see it as an enabler where as many

teachers would see it as a threat as arguably it is a situation where the pupil gains control of a system which usually controls them (Taylor and Robinson, 2009). Mr Harvey's comment about not feeling 'threatened' by the process of role reversal also leads on to the question of generational divisions and the extent to which some adults may feel uncomfortable about young people teaching them (Hollingworth *et al*., 2011), an issue which is explored in the next section. It also invites further discussion as to not just the unusual situation of a pupil overseeing an adult's learning, but how this scenario is rarely reported as a model of teachers' professional learning in the literature on CPD.

During my interview with Mr Maxwell he talks about the status that pupils' technological expertise gives them – and therefore their empowerment – in relation to their teachers. He suggests that for the pupils the process of role reversal is a positive experience in coming to terms with a situation which they may not be used to and one which initially they might feel uncomfortable with (Lensmire, 1998):

> I think they feel empowered in the fact that they know that actually it's quite empowering to know that they know certain things about the 21st century tools that we use, actually they know a little bit more than their own teachers, so I think they feel the confidence to maybe ask more about their own issues that they feel difficult with or find that they have difficulty with. But, yes, I think they're just going to feel more confident knowing that actually, yeah, they do know a little bit more than the teacher does, and not to feel that they've got one over on us. Quite the opposite. I think actually they'll use that to think, well, this is great, they are just human beings, as well, and they probably need to drag themselves into the 21st century (TI-4).

The acceptance that pupils are more conversant with '21st century tools' is seen in a beneficial way and that the pupils – at least those at Appledawn – will use their status to narrow the 'digital gap' (Gu *et al.*, 2013) between themselves and their teachers. In doing so, Mr Maxwell suggests that the project will encourage pupils to see their teachers as more 'human' which raises the question as to whether pupils did not see them as 'human' before, perhaps because they have not previously been directly involved in their teachers' personal and professional journey to become more technologically competent.

Although it is evident from the findings that the project has facilitated a reversal in roles and has enabled pupils to take greater control in certain situations, this is viewed as a positive thing by the teachers at Appledawn. Pupils' status is recognised and their contributions valued because they are more knowledgeable about IT than their

teachers. This in turn has led teachers to comment upon the generational divide – not just in relation to their pupils – but in terms of their own generation and the difference in attitudes between themselves and their peers. The next section will explore findings relating to the perceived generational differences between teachers' and pupils' engagement with technology as well as looking at how issues to do with generation have shaped the views of the participants in the project.

Digital Literacy and Generational Perceptions

One recurrent perception which emerged during the interviews with the teachers was the suggestion that pupils were more knowledgeable and confident with technology than their teachers. Ms Caterham noted: 'I'm aware that the youngsters are more up to date in ICT knowledge than us (TI-5),' and similarly, Mr Maxwell recognises that, 'actually they know a little bit more [about ICT] than their own teachers (TI-4).' Although the teachers are not specific about the aspects of IT where they feel the pupils are more knowledgeable, this generally concerned their own lack of basic skills with generic software. Although these assumptions, therefore, may in some respects be misinformed it is not only expedient to consider why these perceptions arose or where they came from, but also how teachers feel about this perceived imbalance in knowledge. Ms Sanderson (who is in her mid-forties) takes a somewhat defensive view of the situation and considers that, 'if people are confident with IT they don't realise how difficult it is for those people who aren't, who haven't grown up with it (TI-3).' There is a need to recognise here that this is a somewhat slanted view because confidence and competence with technology do not necessarily equate with age (Guo *et al.*, 2008), but can be affected by other factors such as attitudes, beliefs, experiences or access (Johnson, 2009).

To understand the viewpoint above, it warrants considering what she has to say about her own experiences with technology:

> . . . a long time ago, when I was 18, 19 when computers were just starting to come in, I had a summer job for the electricity board where I was inputting data and I made one mistake and I deleted huge numbers of files and it took me the rest of the summer holidays to put back in what I'd deleted, and from that point on I was just so wary of computers that I think my brain shuts down (TI-3).

What clearly emerges here is how background, age and experience have shaped her views and attitudes. She states that she is 'wary' of technology and that mentally she 'shuts down' when using computers, and so the formation of her professional habitus is infused with those earlier experiences of 'technological incompetence'. Yet, to return to a question already asked in this chapter, there remains the issue of what it was that made her willing to take part. An answer of sorts is provided, and Ms Sanderson talks about her IT skills and why she decided to join the project:

> My IT skills are not as good as they could be. I'm from an era where we didn't learn IT at school and as I've gone through [teaching], I hadn't had that much training in IT because it's kind of assumed, isn't it, that you know how to do it. And there were lots of gaps so I thought it [the *Teach a Teacher* project] was a really good thing to get involved in (TI-3).

There are two issues to raise here. The first is the assumption in teaching that teachers are digitally literate and the second is the point about a lack of training. Given this teacher's age, it is likely that although they may have had the New Opportunities Fund [NOF] training back in 2000, they would not have had the same levels of ICT training as those teachers entering the profession at that time. She admits that there are 'lots of gaps' in her knowledge and felt that joining the project would be a good thing, which may be in response to a lack of training whilst in the profession. Such experiences not only demonstrate the power of the habitus, but also her agency in getting involved in the project to accrue the technological capital necessary to function in the field of education as a professional. To return to the earlier question as to why she is willing to work with the pupils, it is interesting to note what Belinda, the Deputy Headteacher, says:

> . . . I know that there are [sic] a cohort of teachers who weren't brought up with IT, I think my expectations would be that they were very keen that the students taught them stuff because of the fact that it's embarrassing to say to your peers, yeah, I don't know how to do that (SLI).

This view suggests that even if there is a generational divide between teachers' and pupils' knowledge, there are some teachers who would rather bridge this gap by working alongside students, as opposed to other colleagues, where they feel their status may be threatened or otherwise defined. It therefore entertains the view that learning from pupils is possible from the teacher's perspective because it is not a relationship of equals although other findings would seem to contradict this. When I mentioned to Ms Sanderson about promoting the *Teach a Teacher* project at a staff meeting she said that:

> I think it's a really good idea. I do think some teachers, I don't know, maybe it's the younger ones because they already know, but some teachers, like we were saying, if you have a different attitude towards pupils, may feel, I don't know, threatened or whatever or uncomfortable about pupils teaching them. So there may be resistance (TI-3).

Unlike those teachers in the project, this indicates that there are other staff at Appledawn who would not be able to accept a shift in the balance of power relations. Alongside this, there was a general perception that younger teachers are more confident with IT. For example, during an interview with Mr Harvey (who is in his mid-fifties) I raised the question about ways of getting other staff involved in the project. Knowing the staff team, his response implies there may be a generational division amongst the staff at the school:

> I think if you did you might find more staff will be interested, quite a few, especially the younger members of staff. Older ones, I don't know. Some are set in their ways (TI-1).

There are two points which are of interest here. The first is why Mr Harvey feels younger teachers would be interested in the project and the second is why he feels older teachers might be more resistant when he himself is in his mid-fifties.

To conclude this section, it seems that the teachers in the project consider pupils to be more technologically skilled than they are and they attribute this generational digital divide to the era in which they grew up which broadly aligns with the associated literature (Jones *et a*l., 2010; Kolodinsky *et al*., 2002; Tapscott, 2008). Alongside this, there exists a locally constructed divide with 'younger' teachers believing that the 'older' teachers to be set in their ways and therefore likely to be uncomfortable about pupils teaching them. Mapped into this equation is the question of teachers' professional habitus and the extent to which this does or does not extend to agential relationships with pupils.

Pupils' and Teachers' ICT Skills

The findings presented here support the view that pupils' ICT skills were more advanced than those of the teachers in the project with some pupils reporting both a resistance to ICT and outmoded teaching practices. There was also evidence that teachers were underusing Interactive Whiteboards and that as a follow on from the project, pupils took the initiative to support teachers in acquiring these skills. This landscape, however, may not present a true reflection of the wider staff and student body at Appledawn.

During the interviews with the teachers they were asked about what they hoped to gain from working with their pupils. In response to this question some of them used this as an opportunity to provide an overview of what they could already do as well as identifying what they wanted to learn. Mr Harvey discussed how he hoped to develop his IT skills from what he considered to be a low staring point:

> I can use a normal computer. I can order things online, but that's different, to put together a PowerPoint and taking information from the net, pictures, documents, and then cutting and pasting, making your own things up, it's all new to me, and so I thought with this opportunity [the *Teach a Teacher* project] I can improve the skills I've already gained (TI-1).

In contrast to Mr Harvey, not all teachers were at the same baseline with their IT skills. Ms Flowers, for example, was one of the more confident teachers with Microsoft Office and her needs were notably different from most of the others in the cohort:

> . . . I don't think there's anything massively that I need to do for my teaching because I can do my PowerPoints, I can make videos, I can embed them, I can add my sound, I can do all of that which are the main things that I'd use for teaching. So I can do Movie Maker, I can do the PowerPoints and I can do worksheets and Publisher. It was only Excel that really was lagging behind (TI-6).

Rather than needing wholesale development with IT her skills, Ms Flowers is specific in identifying the aspects of ICT that she feels she needs to work on. Although not reported in the above quotation, as well as Excel she also sought help from her pupils in managing her Outlook email system. Coupled with help using spreadsheets, she was the only teacher out of the cohort who sought support with ICT skills which were not related to her classroom teaching, but rather for her wider professional practice. Given her confidence with curriculum software, it later emerged during an observation of her working with her pupils that she used the *Teach a Teacher* project to specifically develop her knowledge of spreadsheets as part of her role as Head of Year. However, it still becomes apparent, like other teachers in the cohort, that she was self-deprecating about her own abilities. For example, when she experienced repeated difficulty creating a formula in a spreadsheet, she said to her pupils: 'I'm running out of opportunities to try. Oh dear, this makes me look incompetent, doesn't it?' (OPT-3). She also experienced mental blocks on more than one occasion during the spreadsheet session. For example, when working with cells she said: 'You see my brain just freezes when I see these little boxes [cells]. I'm just, like, it's a little box and how's it going to tell me anything?' (OPT-3). This leads me to suspect that although the most skilled and confident teacher in the

cohort, she still experiences, like many of the other teachers, a degree of trepidation when learning aspects of ICT which are new to her. This could be down to being in the spotlight and feeling nervous learning in front of the pupils or due to a general lack of familiarity and experience with the software application.

Throughout the data elsewhere, it becomes very clear that pupils have a more extensive understanding of Office programs than their teachers do. For example, it was evident from pupil teacher observations that pupils have a better knowledge of shortcuts and use vocabulary and a terminology which their teachers are not familiar with. In the example below this concerns a teacher's lack of familiarity with menu shortcuts (which are routinely displayed when you place your cursor over icons in the tool bar of Microsoft Office programs):

> Alice: Then you copy this [presses Ctrl + C]
>
> Mr Williams: How do you do that, then?
>
> Alice: Oh, Control C. [Shows buttons on keyboard] It's the copy shortcut.
>
> Rebecca: Or you can just right click.
>
> Mr Williams: Okay (OPT-4).

Pupils showed an awareness that skills or knowledge which they took for granted were not always known by their teachers, and in this respect they were mindful of wanting to help their teachers, something which emerged during the pupil focus groups:

> I could see that she [Ms Caterham] struggled a bit. She'd end up asking people in the class and so we'd have to stop the lesson and people would have to go up there and help her out with the [IWB] board (*Katie* – PFG-1).
>
> . . . On [sic] our first lesson with Miss Keane, I'd say "click this button" then she said, "well where is that?" Because obviously I know where it is, doesn't mean she knows where it is. So yeah, it would be a bit, just thinking about, in a way, to know what they know, if that makes sense? (*Lenny* – PFG-1).
>
> . . . Yeah, she sometimes got a bit stuck in lessons so I thought she might need a bit of help (*Hermione* – PFG-2).
>
> . . . It's mainly just been like us teaching him the basics. So we pretty much know everything that we've done so far with him (*Alice* – PFG-3).

The extent to which pupils felt they were ahead of their teachers in terms of having a good knowledge of the features of programs like PowerPoint, is encapsulated by Rebecca's comment that: 'It's just like revision to us' (PFG-3). Although this remark indicates pupils felt that what they were teaching their teachers was common

knowledge, it belies the empathetic nature of the relationships and patience that students showed in helping their teachers develop these basic IT skills. For both parties the imbalance between teachers' and pupils' skill levels was common ground and one which teachers were not just open about, but a weakness they would joke about or make light of with pupils. Ms Flowers, one of the more confident teachers, talks about how she will 'always give something a go' when trying to develop her computer skills and that 'the kids know that I joke with them about, "oh look, I've managed to do this." So they enter into that with me so it's quite good to be able to say, "oh well, now I can do this too"' (TI-3).

For the least confident teachers, such as Mr Kennedy, there is an air of honesty and openness even where there is no immediately identifiable starting point from which to develop his IT skills, with Mr Kennedy saying: 'That's the problem, I don't know what I don't know for you to tell me what I don't know' (OPT-2). The pupils, however, are supportive in negotiating what they are going to teach him. During one pupil focus group it was evident that even from a very low starting point a particular teacher had moved away from getting pupils to copy from the board and was making an effort to incorporate the PowerPoint skills pupils had taught him into his lessons:

> Leon: I had that teacher last year and it sounds like he's improved because last year it was writing on the board and copying down, writing on the board and copying down although that was good in the long term it didn't make the lessons as exciting as they could be.
>
> Chris: You don't really look forward to that lesson. Just another boring lesson (PFG-4).

A different focus group identify a similar starting point regarding one of their teacher's adoption of technology in the classroom:

> Alice: . . . do you have Mr W? Does he put animations and stuff in his PowerPoints?
>
> Frank: He doesn't really use PowerPoints that much, he uses books.
>
> Alice: Wow, OK.
>
> R: Does he use hyperlinks?
>
> Frank: Techno bods use hyperlinks.
>
> Alice: Yes, we taught him something.
>
> Frank: Yeah he'll use hyperlinks to get onto YouTube and stuff like that (PFG-3).

What stands out here is pupils' reactions to traditional teaching methods. Alice expresses surprise at the choice of books over presentation software and Leon's defence of his teacher's didactic and old fashioned approach is uncritical. These reactions suggest acceptance of their teachers' slowness to adapt technology, but of more concern is how staff in a maths and computing academy are seemingly able to continue using questionably unsound pedagogical teaching practices. This leads on to consideration of perhaps the most pervasive technological tool in a teacher's armoury – the Interactive whiteboard [IWB].

Although there were IWBs in every classroom, it emerged that not only were they being underused by staff at Appledawn, they also did not configure anywhere in the *Teach a Teacher* project – either from teachers requesting training or from pupils offering assistance in this area. However, during my interview with Ms Flowers, she highlighted this as a potential area for development:

> . . .The only other thing I suppose as staff we don't use perhaps as well, that the kids possibly don't know but might be able to explore better than us, is the interactive boards. Because I just use mine to show my PowerPoints, I don't use it interactively at all apart from for them to write on occasionally, which I could do with any board that it's projected on. And there's all sorts of software on there to use, but I haven't ever explored it (TI-6).

It has already been noted in Chapter 3 as to how teachers often lack the ability to employ the full range of tools that some technologies such as IWBs have to offer (Becta, 2010; Cox and Marshall, 2007), and it was interesting – once the project had finished – to return to Appledawn and to find out how things had progressed. I made a visit a year after the research had finished and met with Miss Hill, the teacher who had taken over running the project, and at the time noted the following in my reflective journal:

> IWB training is a result of pupils identifying that this is a skill area their teachers are lacking in and an area the pupils wanted to help their teachers with. It was down to Miss Hill to use the Thursday sessions [so that the pupils could acquire the IWB skills themselves]. She said these sessions were very pupil-led and very hands on. She said this seemed a very natural thing for the pupils to do, having the knowledge and experience from their Primary schools where pupil interaction with the board is routine whereas in Secondary it is teacher-led and depends on the teacher's skills. With time to explore, the pupils were able to embed the skills they needed before passing them on to their teacher (Field Notes).

This scenario is in some ways linked to the earlier theme of role reversal in that sense that pupils are not usually the ones who would be expected to actively seek to acquire

IWB skills. It also echoes the earlier idea from the literature about how pupils are our 'expert witnesses' (Rudduck, 2004: 80). The most powerful indicator of how the *Teach a Teacher* project has moved forward since I left Appledawn, however, is perhaps the way in which the pupils themselves had driven and taken ownership of the training. When I began the project the pupils were in Year 8 and when I left, they were in Year 9, and when I revisited, they were in Year 10. In addition to the IWB training, I also noted that:

> Miss Hill's principal dealings were almost exclusively with the pupils. Thursdays was identified as the best day to hold meetings and she had held 6 – 7 lunchtime sessions. Year 9 (now Year 10s) began by training Year 8 (now Year 9s) by example where Year 8s observed Year 9s in training sessions with their teachers. Having had the process modelled [by the older pupils], Year 8s then chose and approached their teachers (Field Notes).

This arrangement of peer-to peer training demonstrates two things. Not only does it show the continued involvement and commitment of the original pupils, but it also indicates how by cascading the project themselves, they have taken responsibility for sharing the 'common good' of their practice (Fielding, 2011).

Summary

Teachers at Appledawn are open and honest with pupils about their lack of ICT skills and pupils are empathetic towards this deficiency and there was a willingness from both teachers and pupils to work together. Pupils felt that the *Teach a Teacher* project enabled them to develop closer relationships with their teachers as well as allowing them to better understand their teachers as fellow learners, and as a result, teachers felt pupils were better able to empathise with the challenges of being a teacher. The process of role reversal was embraced by the teachers who saw this as an empowering experience for the pupils, as well as breaking down traditional student-teacher power relations.

There was the widely held perception among the teachers that the pupils were more skilled with ICT than they were, and for some teachers their own lack of skills was attributed to not having grown up with ICT themselves. Pupils were aware that their ICT skills were in advance of those of their teachers, and subsequently they showed patience when teaching them. Although previously raised in this chapter, and earlier in Chapter 3, there is still the issue as to why some teachers – as reported above – have still not

developed their basic IT skills. This is relevant given that ICT CPD is still being seen by many in-service teachers as both a priority and an ongoing need (Micklewright *et al*., 2014). The next chapter leads on to looking at how the teachers and pupils negotiated these learning processes and CPD opportunities regarding the use of ICT.

CHAPTER 6 – KNOWLEDGE EXCHANGE BETWEEN PUPILS AND TEACHERS

Introduction

The previous chapter identified how reversing the teacher-to-pupil model of instruction influences relationships between pupils and teachers and provides a stimulus for change not only in the ways they engage with technology, but how they interact with each other on a personal level. To develop and extend the narrative of pupil-teacher relationships concerning ICT in the context of negotiating and delivering training for their teachers, this chapter explores the themes of *Learning Processes and Pedagogy*, and *Approaches to CPD*. These two themes, and the findings which illustrate them, intersect at various points with each of the research questions, especially the third one which concerns the different ways in which pupils helped to steer and influence approaches towards ICT CPD and the subsequent process of knowledge exchange between themselves and their teachers.

Learning Processes and Pedagogy

This section encompasses findings from the data which concern the ways in which the teachers engaged in acquiring IT skills and the approaches pupils took in terms of structuring and delivering training for their teachers. It concerns how these learning experiences were negotiated, for example through the control of the computer equipment, and the strategies pupils deployed to ensure the consolidation of their teachers' learning. Other learning processes, such as knowledge exchange between the pupils themselves, and how the teachers could apply what they had learned to their teaching, are also explored.

One finding – which leads on from the section on ICT skills in the previous chapter – is the way teachers often struggled to come to terms with the multiplicity of ways of completing operations on the computer, and the language associated with these processes. This was mentioned by Ms Sanderson who noted: 'This is what's confusing. Each time I'm shown a different way [of doing the same thing] I have to write it down' (TI-3). Another teacher, Mr Kennedy, also found keyboard shortcuts confusing and preferred to use the menu options he was used to rather than being shown alternative

ways, for example when being shown how to preview his presentation with the press of a key: 'I'm not brilliant on F5, I'm better on [using] left [mouse] click' (OPT-2). This echoes another teacher's comment that for her, acquiring IT skills is 'like learning a language . . . it hasn't become intuitive at all yet' (TI-3). Given the level of challenge this new terminology seemed to present, one pupil, Lenny, spoke about developing support materials and resources for his teacher which included 'putting together a glossary of words that she [the teacher] didn't understand, but now does' (PFG-1). As well as acquiring the technical language, and being familiar with carrying out operations on the computer, a key pedagogical aspect of the training the pupils provided was ensuring that the teachers were fully involved in this process which leads on to the next finding which concerned the control of equipment.

Given the teachers' lack of confidence and familiarity with ICT, their ownership of the learning experience by controlling the mouse and keyboard was something I considered to be pivotal. Although pupils had been given training which emphasised the need for the person learning the IT skills to have control of the equipment, not all pupils were always able to ensure this happened with their teacher. In the example below, pupils were showing their teacher how to create a hyperlink between two slides. What is evident from the exchange, is that the pupils were performing the operations for the teacher, and the teacher was passive and only involved in decisions about content:

> Katie: So you've got that now. [Says to Claire] Shall we show her how to hyperlink two slides?
>
> Claire: Oh yeah, you can hyperlink two slides together.
>
> Ms Caterham: Oh right?
>
> Claire: (takes control of the mouse and keyboard and performs a number of operations moving between programs) So, if you get a picture . . .
>
> Ms Caterham: We'll go for that one (points on screen).
>
> Claire: (continues to control of the mouse and keyboard and performs a number of operations moving between programs) And you'd right click and select "hyperlink". Then you'd go "place in this document" and so if you wanted it to take you back to the first slide, you'd click "first slide".
>
> Ms Caterham: Right, yeah.
>
> Katie: So it can move you from different slides so if you wanted it to take you back from the third slide to the first one (OPT-5).

Sometimes the above process of pupils carrying out a given task with the equipment was used as a form of modelling, with the pupils then getting the teacher to perform that particular operation by themselves. On other occasions there was a tacit exchange of the equipment, with members of the group taking control of the equipment when it was not being claimed. During some of the observations, however, there was verbal negotiation between the teacher and the pupils regarding the use of the equipment, as illustrated below:

> [Leon takes over keyboard and begins typing. There is discussion between Marcus and Mr Kennedy about what they have been studying in geography]
>
> Mr Kennedy: Hang on, I'd better do it rather than you do it (takes control of the mouse). It's like playing the piano, people get on a piano and start playing it, and they go "it's dead easy, just play the piano". So what do I do?
>
> Marcus: Highlight the text.
>
> Leon: Yeah. Highlight the text, right click . . .
>
> [Later on in the training session Leon and Marcus are proposing to teach Mr Kennedy some basic spreadsheet skills and I intervene and suggest that it would be better if he took control]:
>
> Mr Kennedy: To be honest I think that's probably better. I get this piano player syndrome when people start teaching me IT that I've got to do it because I can't do it by watching what you guys are doing. Nothing goes in. It's like almost programming me [sic] brain to go left click and then you do right click and then trying to work out whether you do left click or right click just throws me. Once I know a way of doing something that's the way I always stick to (OPT-2).

What is of significance here, is Mr Kennedy's reaction to the situation where (a) he politely demands to be in charge of the equipment and, (b) he states his own personal reasons for wanting to do so. He recognises that he will not acquire the skills he is being shown without actually operating the equipment himself. His approach differs to the ways in which other teachers – for example Ms Caterham – responded to this situation of control. I suspect that those teachers who did not challenge the domination of equipment were either being polite or were not aware of the importance of performing operations on the computers themselves. The 'piano player' scenario with Mr Kennedy raises several issues. The first concerns why he was so open in not just challenging the control of equipment, but in demanding it. The second, which perhaps relates to the issue of trust raised in Chapter 5, was the informal and honest way he did this, which would indicate the strength of the relationships that he has with his pupils. The third point relates to his awareness as to his own needs and the best way he felt able to acquire the skills – by doing and experiencing things himself (Kolb, 1984).

Leading on from this there were, however, some good examples from the data, where pupils actively ensured their teachers took control of the equipment and ownership of their learning. During my interview with Mr Harvey, he talked about how his pupils were 'testing him out':

> They said, right, you do it by yourself . . . they're very supportive, as well, which is good, so when I started to stumble through it [adding audio files to PowerPoint] they said, "hang on, do you remember this?" And they take me back through the sequence, and that reinforcement helps. So, yeah, I think that helped (TI-1).

Not only are these pupils being 'supportive' of their teacher by 'testing' that he can perform tasks independently, they are also aware of the pedagogical approaches required in consolidating the learning of new tasks – in this case importing a sound file into a presentation. Other teachers talked about the importance of being in charge of the equipment and hence their own learning. For example, Mr Maxwell said that he wanted 'to see if I can do it on my own' (OPT-1), and Ms Flowers talks about how her pupils were able to ensure that she consolidated what she was being taught, and to echo Mr Harvey's words, that to a degree they were 'testing' her:

> Ms Flowers: We've kind of had fleeting talks about stuff and they've checked that I've recalled how to do certain things, rather than actually teaching me anything else, but they have checked even, do you still know it? Quote to me, Miss, tell me what you're going to do with your spreadsheet, sort of things.
>
> Researcher: So that's quite nice in the sense that they're monitoring it in that way?
>
> Ms Flowers: Yes. Testing me (TI-3).

Through the process of teaching their teachers, what emerges from the focus groups is that the pupils felt they were learning more about the process of instruction themselves. For example, Hermione and Sarah talked about gaining a better understanding of what teaching involves:

> Sarah: . . . it's helped me understand more of what I'm teaching as well because you have to know it even better than you are when you're learning it, to be able to teach it to someone. So that helps me in my IT skills as well.
>
> Hermione: It helps you, normally when you try to teach something to someone you just reel off a couple of ideas whereas now you're having to actually spend time and go over it and show them practically what to do (PFG-2).

This example provides evidence of both the teacher and the pupils learning at the same time, but in different ways. During the pupil focus groups, it became evident that their

experiences of teaching the teachers promoted a process of team teaching (Welch *et al.*, 1999) between the pupils themselves, as is illustrated below:

> Claire: Well if one of us, say, forgets to say one thing, well say I forget to say one bit that might be a bit important, or just how something would help Miss, then Katie would always just butt in and say, "Oh you forgot this bit". And then it really helps both of us.
>
> Craig: Same with us really.
>
> Lenny: Yeah.
>
> Craig: Sometimes Lenny knows stuff that I don't and then I know stuff that Lenny doesn't and we're just there to help each other out, as well as the teacher.
>
> Lenny: So he tries teaching me things and I'm trying things at the same time as us teaching Miss things.
>
> Claire: Well, I didn't actually know how to hyperlink pictures. That's something I've never known how to do, but Katie knew how to do that. When she taught Miss that part of it then I can now use that, so . . .
>
> Craig: Yeah, yeah. And then [to Lenny] you've taught me how to use Windows Movie Maker, which I didn't know at all. It's a new thing completely to me (PFG-1).

The knowledge exchange taking place between the pupils presented here illustrates three characteristics of the teaching and learning process. Firstly, it demonstrates the extent to which pupils may have been unaware of each other's own knowledge about ICT prior to being involved in the project. Secondly, it shows how they were able to use their collaborative skills to pass on this shared knowledge to their teacher, and thirdly it provides a good illustration of how taking on the role of educators has added another dimension to their friendships with their peers. To follow on from the dialogue above, when pupils were asked to comment on whether they had learnt any specific skills from teaching their teacher, they talk again about how the project had enabled them to learn from each other:

> Sarah: There have been some things that I didn't know how to do that Hermione did and vice versa. So yeah, I think it has helped.
>
> Barry: And, as Sarah said, bouncing ideas off each other and getting to know each other and one another and all that (PFG-2).
>
> Frank: Well it's easier to bounce off each other for ideas. It's easier when you have two people when you're doing it because, if one person doesn't necessarily know one thing, the other person does. So it's like you can put your ideas together to get the best outcome that you can when it comes to lessons (PFG-3).

This collaboration between adults and children facilitates the exchange of technological capital between pupils and their teacher as well as allowing the pupils to develop their skills of communication. It also suggests that learning is activated and more engaging when students are able to exercise their 'voice' on the teaching process, for example,

by determining the approaches and methods of how they want their teacher to consolidate and demonstrate what they have learned. Furthermore, through the process of delivering CPD for their teachers, pupils find their own voices with each other, which they feel leads to optimising the quality of their provision. The only exception to the pupils' view that the process of knowledge exchange was mutually beneficial was Leon who felt he did not learn anything: 'I taught Marcus some stuff and Mr Kennedy some stuff but I didn't get anything out of it myself' (PFG-4). Although Leon was not invited to expand on this statement, with hindsight a follow up question might have probed why he had chosen to remain in the project if he felt he was not benefitting in some way himself.

Overall, data from the teacher interviews and the pupil focus groups would seem to indicate that as a result of the project there had been a positive shift in the way teachers and pupils engage with technology. When I asked Ms Keane: 'What do you personally hope or expect to gain from working alongside your pupils?' she spoke about the socio-cultural dimensions of using technology in her lessons:

> Well, it's just making my lessons more interesting and more dynamic for them. IT's such a big part of their life, all of them with their phones all the time, things like that, so any way in which I can make my lessons more interesting to them is really the biggest hope that I can have, definitely (TI-2).

Rather than using technology as a teaching tool in itself, she sees technology as a cultural 'language' through which she can better engage with the pupils and their digital world. Given the classes she teaches, Ms Keane also felt the project had an impact on her practice in terms of how it has shaped her pedagogical thinking:

> I think teachers can plan and be completely oblivious [and] think it's a really good lesson because it ticks all these boxes, but actually what they think is a really good lesson is something completely different. It's opened up my eyes a little bit, made me try and think what would they [the pupils] want to do in my lesson, what would make them engage with the work and things like that . . . [I'm] trying to really plan from a student's perspective . . . I'm definitely thinking more about IT, the ways that they can use IT, even if it's not in the exact, the specific lesson, the ways that they can use IT and things like that at home to help them, definitely (TI-2).

This insight into considering different approaches to planning is compelling in that it denotes a distinct change in her perception of what constitutes best practice. There is a shift in her understanding of pedagogy insofar as she considers the misconceptions of what teachers may think is a good lesson, to realising the importance of the need to

integrate the use of technology in lessons from her pupils' point of view. Being part of the *Teach a Teacher* project has evidently encouraged her to reflect on her practice as a teacher where she has extended her thinking beyond school to contemplating how her pupils are using IT in their personal lives.

Moving the link between planning and teaching forward here, pupils commented during the focus groups about how the project had benefitted not just the teachers but also themselves as learners:

> Claire: The class has got a lot more concentration because there's not much stopping and starting, it just flows right the way through . . . It's made it much more enjoyable to learn.
>
> Katie: She's [Miss C] definitely started to use my internet hyperlinks more to get videos and things like that.
>
> Craig: Yeah, she's [Miss K] started to use a lot more videos hasn't she?
>
> Lenny: Instead of just text all the time (PFG-1).
>
> Simon: It's made the classes more interactive and entertaining (PFG-4).

Although the project has seemingly had a positive impact on the quality of teaching, Craig's comment about the use of video in lessons needs treating with caution as there is no specific evidence here of the pedagogical benefits or impact on pupils' progress.

In terms of findings to support the impact of the project on teaching, there is evidence from the teachers who provide specific examples of how they are using what they have been taught in lessons. For Mr Harvey and Mr Maxwell this involved being shown how to make interactive quizzes using hyperlinks in PowerPoint. For Ms Caterham – a maths teacher – there was clear evidence that the training she was receiving was being integrated into her teaching, as shown in her discussion during a training session with her pupils:

> That looks very good, girls. That is definitely something for me to play with because the vast majority of my lessons get done through this PowerPoint. And what that does, it gives me another whole resource that I could have really done with if I'd thought about it last lesson or not last lesson, period 3 in seconds but it's already there if I need it.
>
> . . . I'm saving it. That's on there for tomorrow. See Boys 1 [maths class] if you want to check that I've used it. Thank you, girls, I'm really chuffed with that (OPT-5).

When I interviewed Ms Caterham and asked her: 'how has the project influenced or changed the way you engaged with and used technology?' she talked about how she already used ICT in her teaching, but added that:

> Now, I've got the extra kind of tiering, so I use the hyperlink an awful lot . . . I've started using another maths package that I would've historically have had to go in, come out of the PowerPoint, go into, and it would've taken time, a lot more time . . . [and so] . . . It's timesaving in the long run, and more importantly it's timesaving within the classroom. Takes me a little while to set it up outside the classroom, but once it's there, it's there. And so when I'm switching between things it's a lot sharper within the lesson (TI-5).

The impact on teaching is evident here as Ms Caterham points to the shifts and changes in approaches to her practice identifying 'historically' what she used to do before outlining the practical benefits from the training her pupils have given her. Notably she feels how both the structure and the pace of her lessons have improved through the additional control over content that ICT has given her.

Before moving on to the final theme of reconceptualising CPD it is pertinent to note how the development of knowledge and learning is very much seen as a reciprocal process, as Mr Maxwell notes:

> I think from a teacher's point of view I always want to have a relationship between a student and teacher where actually education can be a two-way thing, and I very much go away from the idea of "I'm the teacher, I'm the fountain of all knowledge and you're going to listen to me." I think it's important in order for us to progress to make sure that the students know, well, sometimes, 21st century, they are going to know more than I am with certain things, and I welcome them to teach me. And I think actually teaching is a key skill for a student, whether they realise it or not. If they can teach another person something I think it's going to cement their understanding of the topic them self, so that's always got to be a good thing for me (TI-4).

Perhaps it is those very tensions between teachers' and pupils' knowledge that can be channelled in a creative way and can provide students, in Mr Maxwell's words, with not just 'a key skill' as a teacher, but also teachers with an alternative home grown source of CPD. Ultimately, the point that Mr Maxwell makes about pupils developing their skills as educators themselves provides a good illustration of how the outcomes of the *Teach a Teacher* project are beneficial not just for the teachers, but for the pupils as well.

Reconceptualising Approaches to CPD

This section concerns itself with teachers' preferred approaches to CPD; pupils' expertise in delivering CPD; and, teachers' sense of achievement and engagement with their professional development. In doing so, this section considers how the *Teach a Teacher* project changed perceptions of the form that CPD can take as well as redefining the way stakeholders engage and benefit from it.

Acknowledgement needs to be given to the extent to which the *Teach a Teacher* project was successful in terms of the commitment from the pupils and teachers as well as its longevity, given that the project continued to flourish long after I left the school. As was noted at the start of this chapter, this was no surprise given Mr Harvey's observations about the existing mentoring initiatives at Appledawn, and so it is salient to register the reaction from Belinda, the Deputy Headteacher in the school:

> I thought they [the teachers] might be interested and stick with it for a few weeks. What I didn't expect is them to stick with it and really, really, really get on board with it in terms of wanting to carry on. I think, I expected them to say, "Yeah, that's really good, thank you for showing me that", and that was the end of it. I didn't expect people to take it into their lessons the way they have done, and the kids involved have told me that they have done, and [so have] sparked that interest. One of the teachers that's participated, and doing something unrelated to spreadsheets with the students, has now come to me . . . and challenged me and my knowledge with spreadsheets to enable her to get a tracking system going, and she would not have done that had she not taken part in the project. So, unbelievable impact (SLI).

The response above raises the question of the pupils' and teachers' commitment to the project and why a Senior Leader in the school felt that the project would be short lived and would not sustain itself. This may point to the belief that teachers would resist any long term investment either because of the many demands on teachers' time or because of it not being part of any greater directional school-wide policy. Alternatively, there may have been the underlying belief that any interest from teachers would have been tokenistic or shown out of politeness rather than genuine interest. I suspect there are two main reasons as to why the project sustained itself. The first is perhaps due to the pupils' high levels of motivation to be involved in initiatives of this nature, something which Mr Harvey observed and which the school encouraged. The second reason is down to the teachers recognising the quality and suitability of the training the pupils were giving them, which was a main finding.

The one-to-one support teachers received during the *Teach a Teacher* project meant that they did not have to figure things out completely on their own. When Ms Caterham was asked 'What impact has the project had on your own learning in general, considering the pupils you teach?' she said:

> Well, I'm not frightened to try anything new anyway. That's a difficult one [referring to the question]. From my point of view, it's a new skill that I utilise a lot. But at different points I have to learn new things regularly. It's an easier way [working with the pupils] for me to learn the skill, rather than trial and error (TI-5).

There was a general sense of willingness from the teachers and – alongside a recognition of the need to develop their IT skills – a genuine desire to give the project a go. The opportunity to learn under the direction of their pupils would indicate that this was perceived to be an effective approach to CPD given that it provides a pedagogical model that works, as opposed to the more traditional delivery of school-based ICT In Service Educational Training [INSET], something which Mr Williams was critical of. During my interview with him, he talked about how the *Teach a Teacher* project has worked much better for him because of the supportive nature of its delivery:

> I just think it's developed my confidence to not shy away from what's there because a little bit of a guidance on it and you can do it, basically. So it's definitely something I've been saying every time we get asked about staff training, what would you like? I keep saying help with PowerPoint. Then when we go to one of those sessions, because we are all at different levels it tends to go quite quick and rapid, so by the time then, I think of another teacher I was sat beside, by the time we'd done task 1, people were finished so that wasn't helpful, whereas this [the *Teach a Teacher* project] was a little bit more go at your leisure, what do you want to do (TI-7).

Such a one-size-fits-all approach where the pace or differentiation of the training is not adequately matched to the needs of the individual would appear to be frustrating for Mr Williams. In contrast, the pace and bespoke nature of the *Teach a Teacher* project are more desirable, and in addition he points out that the pupils training him are always ready to hand:

> I've gone away myself and tried to do bits, but I know that if I do struggle I can just give them a shout (TI-7).

What emerges here is not just the strength of the bespoke approach to CPD, but also the presence of a supportive network which allows teachers to gain one-to-one follow-up support after the training session. The 'intimate' nature of the support pupils were able to provide materialises elsewhere, sometimes as a result of pupils identifying how their own knowledge could assist teachers in developing their IT skills. For example, one teacher, Ms Sanderson, is being shown how to add graphic objects to a presentation and says: 'I need to write this all down, otherwise I'll forget how to do it.' At this point I supply pen and paper but one of the pupils, Barry, says: 'It's okay, Miss, I can record a [video] tutorial for you if you like' (OPT-6) before explaining how he can send her the video link using You Tube.

The above offer of help and support provides an example of the ways in which pupils were adept at showing a level of sensitivity and 'expertise' in their methods and approaches to delivering CPD. As this following segment demonstrates, it was often – in many cases – very much a hand-holding process. In the following extract, Mr Harvey is being helped by his pupils, Frank and John, to embed sound files into a PowerPoint.

> Mr Harvey: So how do I get back to your stuff again? Start?
> Frank: Open PowerPoint.
> Mr Harvey: So, all programs.
> Frank: Microsoft Office, PowerPoint. Right, so now insert the sound.
> Mr Harvey: So, if we go to insert.
> Frank: That's it.
> Mr Harvey: And then we go to audio.
> Frank: That's it.
> Mr Harvey: And then we go . . . recording would it be?
> Frank: No, from files.
> Mr Harvey: Okay we go for that one again.
> (Completes operation)
> Mr Harvey: Done.
> John: Well done, Sir.
> Mr Harvey: Excellent! (OPT-7).

Three elements emerge from this instructional exchange. Firstly, the pupils are consolidating or revisiting learning and taking their teacher through the operation step by step, secondly they are modelling both the language and the process whilst allowing Mr Harvey to complete the actions himself, and thirdly, they are praising his efforts upon successful completion which leads to the teacher expressing a sense of achievement. John and Frank also demonstrate patience during the instruction and are non-judgemental when their teacher suggests an incorrect step in the sequence. During his interview, Mr Harvey noted that he had also benefitted from working with Frank and John because 'they're very good at organising things' (TI-1). Pupils' patience and sensitivity for the pace and delivery of the training were further attributes identified by Ms Sanderson:

> One [pupil] was perhaps more patient than [the other], no, no perhaps it wasn't patience but more, they could understand [the need to slow down]. I think it was Barry who was better at actually stopping and realising that I'd lost them, and breaking it down into smaller steps. Because I know when my son was trying to teach me something, if they know how to do it they just zoom to that end point, instead of breaking it down.

> And yeah, one [pupil] was definitely slightly better than the other. But I think perhaps that was just enthusiasm and wanting to zoom ahead and do things (TI-3).

From the extract above, I would suggest that this teacher's account says more about pupils' sensitivity to delivering CPD than it does about the skills they may have been teaching her. There is evidence, for example, of empathy where one of the pupils recognises the need to alter his pace to suit the needs of his teacher, yet at the same time she understands from having similar aged children herself how the pupils' enthusiasm might override the need to consider the adult and slow things down. Apart from patience, pupils also demonstrated the ability to provide and extend support so that their teachers could consolidate their training. In some instances, consolidation took the form of "homework" – and was about getting their teachers to work independently through set tasks. Katie, for example, provides an illustration of how this helped her teacher to move forward:

> We've had a few [training sessions] and we've also been sending her work for her to do . . . we've been putting questions on slides like, if I wanted to hyperlink this, how would I do it? And then we'd get her to actually do it . . . So she can show us how far she's managed to get with it (PFG-1).

I would propose that it is these subtle, considered and mature approaches to delivering CPD as much as the training itself that made these teachers appreciative. Certainly, what comes across is their gratitude and sense of achievement and success with the training they were being given. During pupil teacher observations, for example, comments were positive and complimentary:

> That's really good, right, done. I think I'll remember that and try it next lesson. That's great. I learnt a lot there, that's genuine learning. I've genuinely learnt a lot there (OPT-7).

> That's amazing. That's really good. That's fantastic. Now I've got to assimilate all this information because I want to try it out . . . Great stuff guys, thank you very much. That's brilliant. I've really gained an awful lot of information from a very small amount of time. That's great. Thank you (OPT-1).

The two extracts above do not just demonstrate the positive expression of satisfaction with the practicality of the training they have received, but also show how both teachers appear to be motivated in the sense that they clearly intend to practice and apply what they have learned.

On occasion, when teachers were asked about what impact the project had had on their training, some were able to provide an illustration of this. For example, Ms Keane identifies the skills she has learned:

> I've learnt lots about IT and the different shortcuts you can do, and URLs. I didn't know what a URL was. I had no idea, so that's been really good, becoming more confident in my own skills, using the computer for different things and things like that (TI-2).

She also comments positively on how the pupils working with her, have helped her move forward with her ICT skills:

> . . . They really have developed my use of Movie Maker. That was my focus, and so to begin with it was just changing between different pictures. Then we started to look at putting in music and text and things like that, and we're currently working on how to input movement in the video (TI-2).

There is evidence here to show that not only has there been a discernible and logical progression of skills which have been in response to her chosen area of development, but that this has been an ongoing schedule of training over a period of time. Wider benefits of the training given by pupils were also realised by two teachers who were also heads of department and who reported cascading what they had learned from their pupils to colleagues on their teams:

> If I get a new idea, I'll tend to roll it out. I've mentioned it to another two people [in the department], so it's about spreading the idea really (TI-5).

> I've learnt from them [Rebecca and Alice] about how to do this and that, different little bits, and I think what I've then taken from that, as well, is to try and utilise professional development time within the history department to say, right, [let's] do this, this and this (TI-7).

These two extracts would tend to suggest three things. Firstly, there is personal value attached to what they have been shown by their pupils; secondly, they feel there will be wider benefits for their colleagues; and thirdly, that they are sufficiently certain these teachers do not already possess this body of knowledge.

At other junctures, there were moments which I observed when how the teachers felt about the training experience with their pupils were not necessarily vocalised, but were demonstrated positively and just as – if not more – powerfully in a non-verbal way. These instances were noted – usually in parenthesis – on the transcripts. They often reflected the teacher's sense of achievement, success or confidence. For example, there was a visible display of excitement at her success when Ms Keane was editing movies in

Movie Maker and setting up a Google Mail account to access You Tube. This may seem to be a routine operation, but proved challenging for Ms Keane:

> Lenny: (points) so if you sign in and use your Google email account.
>
> Ms Keane: Ah, okay (types) this may take a while (evident she is not sure about password)
>
> Lenny: Or you can use a new password if you want to.
>
> Ms Keane: (types and punches the air with both fists when she successfully logs in.)
>
> Lenny: There you go (OPT-8).

The second was when Ms Caterham was being shown how to import graphics from the internet and create hyperlinks within PowerPoint. When the desired effect happened, she clapped her hands together and smiled and then performed various operations moving between programs independently. Once she finished, she clapped hands and smiled again before saying: 'And guess what's in my lesson for tomorrow!' (OPT-5).

Summary

Many teachers struggled with the multiplicity of ways of completing operations on the computer, and were often not familiar with these processes or the language associated with them. Pupils were sensitive to their teachers' needs and were mindful of providing opportunities for their teachers to consolidate the IT skills they had learned. In turn, teachers talked positively about the impact that the training had had on the development of their skills and confidence with ICT and how this helped develop an appreciation of, and sensitivity towards, their pupils' needs when planning and delivering lessons using ICT.

As a result of the project, there was also evidence of teachers cascading what they had learned to other teachers in their department, and pupils learning skills from each other which they felt added a new dimension to their friendships with their peers. Pupils found the process of working in pairs supportive because it allowed them to share ideas and approaches as well as learning ICT skills from each other.

Although there was some surprise from Senior Management as to the success of the project, it is quite likely that pupil commitment and the quality and relevance of the CPD they provided were contributing factors towards its longevity – evidenced by provision of IWB training a year after the fieldwork ended. Overall, teachers were able to engage

in their preferred model of CPD delivery – one which not only provided bespoke training, but also offered follow up support from the pupils. Finally, what is apparent from the findings is the appreciation teachers showed their pupils, as well as their motivation and sense of achievement from being in the project.

CHAPTER 7 – DISCUSSION

Introduction

This chapter presents a thematic discussion of the findings outlined in Chapters 5 and 6 in relation to the conceptual framework of student voice and Continuing Professional Development [CPD]. This discussion will be guided, in part, by also drawing upon literature concerned with school leadership, as well as considering the debates surrounding the generational divide. The discussion begins by contemplating the role of leadership in facilitating student-teacher partnerships before moving on to explaining how this fosters conditions of trust and empathy which in turn enable the process of role reversal and knowledge exchange to take place between pupils and teachers. Explanations are offered as to why the *Teach a Teacher* project provided a successful model of ICT CPD and how in doing so, pupils offered a particular sensitivity in tailoring their provision to meeting their teachers' needs. This chapter will not cover the limitations of the study, implications for future research or the contribution to the existing body of knowledge as these will be discussed in the next chapter.

Pupil Empowerment and School Leadership

The relationship between strategic leadership and the success of student voice initiatives in schools became apparent during my interview with one of the teachers, Mr Harvey. From what he told me, there is certainly evidence of a style of leadership and a culture at Appledawn that both fosters and encourages students to be involved in mentoring and leadership roles. Successful and effective strategic leaders would appear to share a common set of attributes – they are committed to prioritising pupils' interests ahead of personal or political agendas, seek to develop an understanding of people and their context and are prepared to take risks and question accepted beliefs and behaviours (Barber *et al.*, 2010). The National College for Leadership of Schools [NCLS] (2010) also found that successful school leaders focus on the levels of motivation and well-being amongst staff and pupils and the contribution that the school plays towards the wider community. The emerging consensus, in terms of school leadership, points towards Headteachers who consider teaching, learning and people to being instrumental in the success of their schools (Barber *et al.*, 2010). This would certainly go a long way to explaining why – as Mr Harvey noted – the pupils seem so keen and

committed to being involved in student voice initiatives. It would also help to explain in wider terms why school leadership and the culture in the school were fundamental to the success of the *Teach a Teacher* project.

The words 'empowerment' and 'confidence' often cropped up in the data to describe what teachers felt their pupils had gained from teaching them. Within the lexicon of the *Teach a Teacher* project, the word 'empowerment' holds meaning because it signifies the degree of student participation in partnerships with teachers (Hart, 1992). Involving students in addressing the state of the toilets or fixing the lunch queue does not empower them in the same way as consulting them about classroom issues which may concern them (Deuchar, 2009). Empowering students by allowing them to determine agendas (Gunter and Thompson, 2007) – such as the *Teach a Teacher* project – removes the oppressiveness of speaking on their behalf (Fielding, 2001). In its purest form, student voice affords the opportunity to build the capacity for students to lead student voice initiatives themselves and become active in the decision-making process (Mitra, 2006b).

What emerges from the data is the way teachers and pupils felt the project allowed them to develop and deepen their relationships. To explain why this was successful, or even possible, points back to models of leadership which places people high on its agenda (Barber *et al*., 2010). This is a complex matter because not only does it require a process of school-wide reform and a shift in the identity of the pupils and teachers themselves (Morgan, 2011), it also requires implementing processes which are mutually supportive (Deuchar, 2009). To a large degree the *Teach a Teacher* project exemplifies this because it allowed the teachers and pupils to build empathy (D'Andrea, 2013; Gamliel and Hazan, 2014) which is the next theme to be discussed.

Trust and Empathy Between Students and Teachers

There are three findings which will be explored and discussed in this section: The first concerns the levels of openness, honesty and trust that were evident between the pupils and their teachers in relation to their ICT skills. The second is why the pupils were not reticent in approaching their teachers and why their teachers were not afraid to admit

their technological deficiencies. The third concerns the perceived change in relationships on both sides.

Trust and empathy between students and teachers – and the 'agency' which it may subsequently generate – is a theme which crops up frequently within the literature on student voice, and hence student-teacher partnerships (Czerniawski, 2012; Fielding, 2001; Rudduck, 2005). Empathy is also a word which permeated the data and it is not just important to see how it manifested itself, but rather to understand the conditions which allowed it to grow. Being able to trust a teacher opens up channels of communication which may not otherwise exist (Kjellin *et al.*, 2010) and can create a culture of respect where pupils are not only listened to (Mullis, 2011) but treated with both transparency and compassion (Czerniawski and Garlick, 2011). It also requires that trust to be 'authentic' rather than 'synthetic' in the sense that authentic trust is genuine and born out of establishing professional and democratic partnerships between pupils and teachers rather than being driven by an agenda of compliance or tokenism (Czerniawski, 2012). Nurturing authentic trust is also down to the way the school operates on a daily basis and how those systems provide the basis and act as a vehicle for pupils to become involved in bringing about educational change (Fielding, 2001). Another condition required for levels of openness and trust to thrive is a process of pupil consultation which responds to the needs of both pupils and teachers (Demetriou and Wilson, 2010). The *Teach a Teacher* project very much exemplified this process in the way that it drew upon pupils' expertise with ICT to help fill these gaps in their teachers' knowledge. Despite there being institutional conditions favourable to there being trust between pupils and teachers, however, tensions may still exist where individual teachers' attitudes or beliefs preclude them from being open or receptive to becoming involved in student-led initiatives.

The second finding concerning the ease with which pupils approached their teachers and the openness of the teachers themselves may be harder to answer. As already noted, conditions at Appledawn are conducive to allowing pupil-teacher relationships to flourish, but this does not explain the social dynamics which clearly emerge from the data. Perhaps one way to understand how and why this agency works is to recognise how the dispositions of empathy were to some extent already embodied in the habitus

of both the pupils and teachers and reflected in their ethos of being approachable and open with each other.

To explain the perceived shift in relationships on both sides – and to understand why this evolution of pupil-teacher relationships had not occurred in this way before – it is necessary to recognise how participating in initiatives like the *Teach a Teacher* project provided both students and teachers with the opportunity to acquire different forms of capital. Pupils were not only valued for their technological expertise, but also their role and sensitivity in facilitating and delivering the training. By becoming part of the project, teachers were able to access and acquire IT skills fundamental to their role as educators. Cumulatively, it is worth noting that this collaborative network of social connections – or field – did not take place naturally or randomly but was sculptured by the collective investment of individuals within the group (Bourdieu, 1986). Subsequently, those relationships which formed as a result of the project generated feelings of empathy between pupils and between pupils and teachers. The commitment, initiative and team spirit which existed during the project can be measured by the reciprocal ways in which the teachers and pupils supported each other. On the one hand, teachers were committed to carrying out their "homework" tasks and on the other, when pupils were not sure about an aspect of IT they went away and researched it.

Finally, to answer my own question as to why this evolution of pupil-teacher relationships had not occurred at Appledawn before is to conclude that although student voice activity did exist, there had not been a network or mechanism like the *Teach a Teacher* project in place to facilitate such a process. And once the project got underway, this brought about a step change in pupil-teacher status and therefore a reversal of roles, which will be explored in the next section.

Pupil-Teacher Partnerships: Negotiating Roles

Following on from pupil-teacher relationships explored in the previous section, the focus here is with the finding that all teachers in the project unanimously embraced the process of role reversal and saw it as a positive experience. This leads on to exploring what it was that made these teachers – the majority of whom were relatively unskilled

in ICT – embrace this situation. There are no straight forward answers and what I put forward here is not only speculative, but also complicated by divisions in the literature.

It is perhaps best to begin by revisiting where exactly the *Teach a Teacher* project sits within the literature on student voice. From there, it may then be easier to understand why the teachers in this study were so willing to hand over some control to their pupils. To return to the literature it is helpful to return to Fielding's hierarchical 'Patterns of Partnership' as a means of aligning where the *Teach a Teacher* project sits within this classification of voice. Most easily identifiable, from my position as researcher, is seeing those pupils in the project as 'joint authors' of their teachers' CPD which constitutes a 'high-performance schooling' position on the scale in terms of instrumental and fellowship dimensions where students and staff decide upon courses of action together (Fielding, 2011). How these decisions involving teaching a teacher are negotiated, contracted or implemented involves a democratic partnership and form the basis of what is the top rung of Hart's 'Ladder of Participation' – child-initiated shared decisions with adults (Hart, 1992). Not only does the project demonstrate a dramatic shift away from more tokenistic approaches to student voice, it also seeks to bring about change in the established balance of power between pupils and teachers by handing control over to the students (Quintelier and Hooghe, 2013; Mitra, 2006b; Morgan, 2011). Engaging in situations which actively empower students, however, can be seen as problematic (Lodge, 2005; Thomson, 2011) not least because of the implications in terms of the balance of power which such student voice or student-led initiatives may entail (Moran and Murphy, 2012; Rudduck and Fielding, 2006; Taylor and Robinson, 2009).

This process of role reversal can be considered to constitute an act of resistance because it challenges the hierarchy of the school system (Smyth, 2006b). However, considering the existing culture at Appledawn it is possible that the teachers were willing to embrace role reversal because they recognised that the pupils could provide unique perspectives and offer forms of knowledge or knowledge exchange that they did not otherwise have (Rudduck and Fielding, 2006; Samways and Seal, 2011; Soo Hoo, 1993; Stenhouse, 1975). To return to the findings, explaining why the teachers embraced the process of role reversal may not just be down to benefitting from their pupils' expertise with ICT

(Dudek and Johnson, 2011) but how the teachers saw being in charge of an adult's learning as a positive experience for the pupils themselves.

Teacher Perceptions About Pupils and ICT

This section seeks to explore why it is that the teachers in this study perceive pupils to be more accomplished and confident with IT than they are. For some teachers, there was also the perception that learning IT skills is like mastering a new language and throughout the data this was evident with teachers frequently being unfamiliar with keyboard shortcuts and computer related terminology.

A good place to start in relation to understanding these teacher perceptions about IT, is by unpacking Prensky's contested concept of digital natives and digital immigrants. To recap, the digital natives debate concerns those who are natives born after 1980 and immigrants born before that date (Prensky, 2001) and whether those people who have grown up with technology are better skilled and more competent than those who have come to use IT later in life (cf. Bennett *et al*., 2008; Bennett and Maton, 2010; Guo *et al*., 2008; Johnson, 2009; Li and Ranieri, 2010; Selwyn, 2009). Johnson (2009) breaks up the rigidity of Prensky's model by entertaining further categories to include digital newcomers – those who come to technology later in life, digital insiders who, regardless of age, are technology experts, and digital outsiders who for whatever reason have not been introduced to technology. Research suggests that age is not a determining indicator of technical competence (Guo *et al.*, 2008; Teo, *et al*., 2016) but rather the ways in which people of different ages engage with technology may vary (White, 2007).

I believe the reason that the teachers at Appledawn perceive pupils to be more IT competent and confident is perhaps partly down to pupils' familiarity and dexterity with newer technologies such as smart phones and social media. Whether such a digital gap really exists has been questioned and it has been argued that pupils may be less skilled with IT than they are perceived to be (Li and Ranieri, 2010; Selwyn, 2009). In relation to teachers' perceptions about IT, one thing to concede is that the *Teach a Teacher* project attracted those teachers with very low skill levels and so this does not reflect the ICT competencies of the wider staff population in the school who technologically may be highly skilled. Even though the teachers at Appledawn may have felt the pupils knew

more than they did, there is the question of the fluidity of technological capital. For example, it is reasonable to assume that a teacher knows far more about technology than a six-year-old, but that child, however, may well know tricks and shortcuts that the teacher does not (Martinez and Prensky, 2011). In my experience, this entertains the idea that IT knowledge is so pervasive that we invariably all may know how to do something that another person does not, regardless of age.

Although those teachers in the project were receptive to working with their pupils, they felt that the older teachers in the school might be resistant to being taught by their pupils. In terms of the literature on student voice there is evidence to suggest that partnerships which are pupil directed tend to be thin on the ground because teachers are not always good at responding to student-led initiatives (Hart, 1992). In the cases where such enterprises involve ICT, the problem seems to be exacerbated to the point where some teachers feel threatened when they find themselves in a situation where the pupils they teach are more knowledgeable about ICT than they are (Coleman *et al*., 2015; Condie *et al*., 2005; Condie *et al*., 2007; Ofsted, 2009). For those teachers involved in the *Teach a Teacher* project this was not the case, but Mr Harvey and Ms Sanderson did comment, respectively, that some of their older peers – those teachers in their late forties and above – tended to be 'set in their ways' and therefore 'uncomfortable about pupils teaching them' (TI-1, TI-3). Paradoxically, it merits mentioning again here, that respectively these two teachers were in their mid-fifties and mid-forties.

At this stage, it is worthwhile returning to the findings of a study that examines the notion of confidence and competence with IT in relation to age through 'a narrative of generational change' (Hollingworth *et al.,* 2011). Although conducted with parents and their children, this study is relevant because it mirrors the findings of the *Teach a Teacher* project in the sense that it revealed that some adults have a negative attitude towards young people teaching them which they find both off putting and humiliating, whereas others see 'children as a new generation they can learn from' (Hollingworth *et al.,* 2011: 357). This difference in parents' receptions to their children being seen as IT experts also relates to teachers' 'computer anxiety' where negative feelings about technology influence attitudes to using computers with children (Coleman *et al.*, 2015).

The cohort of teacher participants at Appledawn were self-selecting in becoming involved in the *Teach a Teacher* project and were very much open to being taught by their pupils but this does not account for the other teachers in the school. Although this is speculation, I am assuming that those teachers at Appledawn who do feel threatened by pupils did not choose to take part in the *Teach a Teacher* project – and there were some teachers who were approached by pupils who declined to become involved and who were known to be lacking IT skills.

What is significant here is that even if being a digital native is determined by exposure to a different "language" and technological experiences, 'it should not be an issue as older people can improve technology knowledge and skills when they collaborate and interact with younger people' (Teo, 2013: 51). If a gap between teachers' and pupils' knowledge does exist, then it is always possible to close it (Helsper and Eynon, 2010), which in many ways was the original intention of the *Teach a Teacher* project.

Developing Teachers' ICT Skills: Changing Approaches to Practice

Two findings of interest concerning teachers' and pupils' ICT skills emerged from the data. The first finding, that pupils' ICT skills were more advanced than those of their teachers, was anticipated. The second finding was the way in which pupils were mindful of wanting to help their teachers improve their own IT skills.

Turning to the first finding, the comments made by pupils (see pp.98-99) concerning their interactions with their teachers indicate that pupils possess technological skill levels beyond those of their teachers, which Ng (2012) defines as digital literacy skills. A range of interpretations and definitions of digital literacy exist in the literature and these can be broadly tied together to encompass the ability to use, understand, access and synthesise a wide range of digital resources to collaborate, communicate, create and share ideas. Much of the discussion in the section preceding this one could also be applied here to support the finding that pupils are more digitally skilled than their teachers, although it would be profitable to try and open up other angles and opinions from the literature. One of the reasons why there may be differences in IT skills sets can be attributed to not just the way teachers use technology, but also their acceptance of it (Gu *et al.,* 2013).

Perhaps what distinguishes those teachers with low skill levels who took part in the project from those who chose not to, can be separated by their levels of engagement and the importance they attach to their orientation and valuing of technology (Gobel and Kano, 2013; Hermans *et al.*, 2008). There are other factors which may also account for why teachers, generally, may have a lower set of IT skills, for example their pedagogical beliefs and attitudes and the perceived value and role technology plays in defining their ICT practices (Ertmer *et al*., 2012). With this in mind, there is also the argument that digital natives may be skilled in new and emerging technologies, but lack knowledge of how to use and apply technology for learning (Ng, 2012) and that they are consumers rather than creators and that their use of ICT may vary and may often be relatively unsophisticated and unspectacular (Selwyn, 2009).

The second finding as to why pupils were keen and willing to help their teachers arose from the novelty value that the project offered and when asked about why they decided to volunteer for the project, Frank said: 'I just find the whole idea of it quite interesting; the idea of the students teaching the teachers just sounds really fun to me' (PFG-3). Other reasons given by pupils for choosing their particular teacher included choosing a teacher who they liked, 'catches onto things quickly' and who would adopt the wider use of technology to make the subject [history] 'more fun' (PFG-1-3). In this sense – and to return to the literature on student voice – affording pupils the opportunity to help their teacher develop their IT skills may have appealed because it concerned issues which they felt were directly relevant to them (Cheminais, 2011). There were negative comments from some pupils about their teachers' lack of ICT skills and an over reliance on getting pupils to copy from the board which suggests that a teacher's reluctance to engage with ICT is down to having traditional beliefs (Hermans *et al.*, 2008).

To conclude, it is pertinent to note that one noticeable area of growth is the 'self-help' agenda (Pachler *et al*., 2010). This informal form of continuing professional development involves teachers meeting with each other during lunch times or after school and although not always constituting formal CPD, most teachers increasingly experience ICT CPD this way (Daly *et al.*, 2009b). Although this model concerns teachers meeting with their peers – and not pupils – it employs a similar approach to the *Teach a Teacher* project.

Pupils and Teachers Working Together: Perspectives on Knowledge Exchange

The way teachers often struggled to come to terms with the multiplicity of ways of completing operations on the computer, as well as the language associated with these processes was frequently apparent in the data. Teachers talked about how developing their ICT skills was like mastering a new language because of their lack of familiarity with both the processes and the terminology. As noted in the previous chapter, this gap in knowledge was so pronounced that one pupil saw the need to put together a glossary of terms for his teacher and it is expedient to explore and better understand this finding by drawing upon Bourdieu's idea of the 'cultural lag' which exists between teachers and pupils.

Over the last fifty years – in terms of this gap between pupils and teachers – it would seem that not much has changed in schools. Back in 1965 Bourdieu observed that 'adolescent subculture' is very distant from the culture of teachers and that the 'clear gap' which exists between the values and experiences of teachers and their students is due to a 'cultural lag' in which society outstrips the education system at an ever-increasing pace (Bourdieu *et al.* 1994: 10). In the sixties, the Bourdieusian notion of a 'cultural lag' or 'gap' referred to tastes in contemporary music, in Bourdieu's case jazz, as well as the terminology and language used by young people but not understood by their teachers – the origins of which Zwerin (2000) chronicles back to the z*azous*[11] teenage sub-culture of occupied France in the 1940s. In the context of this thesis, 'cultural lag' can be considered to translate itself into the digital tapestry of the 21st century where, in many cases, pupils' knowledge and habitual use of ICTs – and the associated terminology – differs to that of the teachers teaching them (Gu *et al*., 2013; Lin *et al.,* 2012; Morris and Burns, 2013). To build upon the earlier discussion concerning generational divisions, there is every reason to believe that teachers can 'speak the same language' if they want to (Helsper and Eynon, 2010: 516). However, given that it

[11] The Zazous were so named after the jazz artist Cab Calloway's scat singing a string of syllables 'zazouzazou . . .hey!' Zazous defined themselves by the style of their hair, the clothes they wore, the music they listened to and the adoption of a vocabulary associated with these tastes (Zwerin, 2000: 147).

will almost always be adults who teach children, there is the question as to whether this 'lag', or 'gap', or 'divide' will ever be truly surmountable.

Another area for discussion concerns issues surrounding the control of equipment – notably the mouse and keyboard – during the sessions where pupils were training their teachers. In some ways, this finding overlaps with the theme of CPD although it also pertains to learning processes and will therefore be given consideration here. The main issue concerns the fact that as part of their training, pupils were explicitly told to allow their teachers control of the equipment in order for them to carry out the processes and procedures themselves and engage with experiential learning (Kolb, 1984). Although the process of modelling skills is important – and pupils did take control of the equipment to do this – it is useful here to return to '*The ICT CPD Landscape*' presented by Daly *et al.* (2009a). The techniques of 'modelling' and 'demonstration' by 'experts' sits within the 'lowest' quadrant on the model and are seen as being the least effective approaches to support learning. It is in this sense that modelling and demonstration can be seen to belong to – and mirror – what Mr Kennedy describes as the "Piano Player Syndrome", even though the 'experts' in this case are pupils and not teachers or external agents.

As opposed to a didactic approach to teaching, other findings to perpend are concerned with the collaborative nature of the project and how pupils felt they were able to learn from each other; how pupils felt they were learning themselves whilst teaching their teacher, and how both teachers and pupils felt there were positive outcomes in terms of teaching and learning. In particular, data from the pupil focus groups provided many examples which illustrate how pupils engaged with each other's knowledge of technology. This process of peer-to-peer learning between pupils to facilitate adult learning would arguably not have occurred if the *Teach a Teacher* project had not taken place. It was expected that there would be collaboration between pupils and teachers and that teaching and learning would take place as a consequence of this activity during the *Teach a Teacher* project (Morgan, 2011; Samways and Seal, 2011). When pupils work together there will usually be some form of collaborative peer-to-peer learning also taking place. This became evident during observations of pupils working with their teacher and this was followed up during the pupil focus groups. However, I had previously overlooked this body of literature which is not only extensive, but also

highlights the principles of Vygotsky's (1978) socio-cultural theory of learning. Although the benefits of pupils learning collaboratively have been called into question (Wood and O'Malley, 1996), there were numerous instances during the project where pupils cited it as a valuable process and one where they could share and exchange their technological knowledge with each other.

Two pupils, Hermione and Sarah, felt they benefitted from the project because it gave them a better understanding of what teaching involves. It is difficult to comment upon this because a comparable or readily identifiable body of literature concerning pupils teaching their teachers does not exist. It is perhaps easiest to explain this finding by turning to the literature on student voice and the widely reported view that pupils can provide unique perspectives and can offer forms of knowledge or knowledge exchange that teachers do not otherwise have (Rudduck and Fielding, 2006; Samways and Seal, 2011; Soo Hoo, 1993; Stenhouse, 1975) and that for the pupils at Appledawn, their distinction was their digital expertise. In this instance, the challenge for Hermione and Sarah was the test of being able to disseminate and explain their technological knowledge in a way which their teacher would understand, and in this sense, such engagement depended upon them having the necessary linguistic capital to achieve that end (Robinson and Taylor, 2009).

In the study reported here, there was only one isolated instance of negativity in a focus group where one pupil claimed he had not learned anything from his peers or from being in the project. In the Arab-Israeli study referred to in Chapter 3, a similar case of pupil negativity was reported which took the form of one pupil showing a lack of empathy and resenting having to teach their teachers computer skills (Gamliel and Hazan, 2014). This thesis does not set out to examine pupils' disaffection with the schooling process although if it did, then there is clearly the need to understand the reasons why such disengagement exists, rather than focussing on the symptoms (Osler and Starkey, 2005).

The last finding to be considered in this section is how both teachers and pupils felt there were positive outcomes in terms of teaching and learning. The *Teach a Teacher* project enabled teachers to better plan from the pupils' perspectives, pupils said they were more engaged in lessons, and teachers were able to implement what they had been taught into their teaching. To explain the perceived positive outcomes and success of

the project, it is useful to consider them alongside the framework of professional development provided by Guskey (see Table 2, p.42). The model operates on five levels and the premise is that each level needs to be achieved before the next one can be reached. Essentially the model is comprised of the following criteria: (1) satisfaction with the experience; (2) acquisition of new knowledge and skills; (3) advocacy from the organisation; (4) use of new knowledge and skills; and (5) improved learning outcomes for students. It is pertinent to note here that not only did the project meet all of these outcomes in terms of impact in the classroom, but it also provided the pupils with experiences and skills which might otherwise not be easily accessed through the National Curriculum.

Giving Pupils the Licence to Lead: Bringing Vision to CPD Provision

The findings which are under discussion here concern the surprise at the longevity and success of the project, pupils' expertise in delivering CPD, and teachers' appreciation and sense of achievement from being in the project. There has already been some discussion as to why the *Teach a Teacher* project was successful and sustained itself beyond expectation. This finding has already been considered in the wider context of the climate and conditions at Appledawn which allowed it to grow, and so now its success will be considered in terms of the nature of its provision.

One of the reasons why the project was successful was because of the bespoke aspect of the training and the unique and special nature of the teacher-pupil relationships given that these partnerships were initiated by pupils' responding to the needs of their teachers, rather than the other way around. It was also evident that teachers were able to negotiate their training needs as well as determining the pace and direction the training took. After all, the main reason why teachers engage with CPD is to choose the kind of training they would like to take part in (McCormick *et al.,* 2008). Much of the training that took place during the *Teach a Teacher* project was carried out by a process which can best be described as one of negotiation. It was also a process which seemed to be geared around meeting teachers' immediate needs rather than fulfilling any wider agenda (Pedder and Opfer, 2010).

As has already been noted in this thesis, the pupil-teacher relationships of those involved in the project were strong. There were high levels of mutual empathy and trust which undoubtedly helped to shape the co-ordination – and mould the content – of the CPD sessions. In this respect, even though there was an imbalance between pupil and teacher skill levels, there was a shared belief and common ground between them in terms of cherishing the partnership, which may well have come from a shared social and cultural belief in the importance and value of education. Perhaps one of the most salient factors in explaining the success and longevity of the project is that it presented a model of CPD which very much leant itself towards a bottom-up and hands on approach (Twining and Henry, 2014) which specifically dealt with learning through collaboration. This approach is high in terms of its 'vision-sharing' and is 'inward-looking' because it seeks to directly address the needs of individuals (Daley *et al.*, 2009a) and can be illustrated from the teachers' responses which report on cascading their training within their subject departments.

The next finding to be considered concerns the levels of pupils' sensitivity and expertise in their methods and approaches to delivering CPD – which are outlined elsewhere in this chapter. However, further discussion or analysis is restricted here due to the fact that there is virtually no literature which reports on pupils delivering ICT CPD or otherwise teaching their teachers, although the model of Digital Leaders – where pupils act as consultants and are involved in decision making – does exist in some schools. In one case, the ICT leaders who organised the pupil-led training felt that 'the children had more impact on the practitioners' commitment to learning about ICT than they did' with teachers reporting that it 'was amongst the most useful and challenging' training they had attended, and that the pupils were 'not only knowledgeable but inspirational' (Pachler *et al.*, 2010: 73).

The final finding discussed here relates to the teachers' expressions of gratitude and sense of achievement and success with the training they were given by their pupils. The reasons why teachers were grateful and experienced a feeling of accomplishment are in some ways explained in the previous paragraph. It is also relevant to point out that this satisfaction may also be been down to the fact that The *Teach a Teacher* project very much mirrored teachers' preferred approaches to CPD found in the literature. For

example, teachers report that they prefer face-to-face support (Adam, 2007; Boylan, 2016; Coleman *et al*., 2015; Daly *et al*., 2009a; Daly *et al*., 2009b; Pachler *et al.*, 2010) which is ready available and differentiated to their needs (Adam 2007; Daly *et al*., 2009a; Daly *et al*., 2009b; Dixon *et al.,* 2005; Pachler *et al.*, 2010; Twining *et al*., 2013). Teachers are also more motivated to use ICT when they are part of a supportive network and learn collaboratively (Daly *et al*., 2009a; Daly *et al*., 2009b; Pachler *et al.*, 2010; Sime and Priestley, 2005; Twining and Henry, 2014; Witte and Jansen, 2016) and where they get advice and support from those who are more skilled than they are (Bradshaw *et al*., 2012; DfES, 2004; Hennessy and Deaney, 2004; Twining and Henry, 2014), which in this case was not other colleagues – but the pupils.

Conclusion

Strategic leadership very much determines the co-ordination of practices and the practice of co-ordination within schools (NCLS, 2010; Chapman *et al*., 2009). With this comes the understanding of the conditions and climate within an organisation which very much influence the ways in which stakeholders may choose or not choose to engage in student voice initiatives. Following on from this comes the realisation that there needs to be established levels of 'authentic' trust already in place between pupils and teachers before student-led initiatives can become truly emancipatory. Any process which hands control over to the pupils needs to be mutually supportive and where and when this happens, there is potential to build empathy. With empathy comes agency and the power to form democratic partnerships which are not afraid to challenge or deconstruct the hierarchy of the school system. However, even where empathy exists or can be further cultivated between teachers and pupils through collaborative initiatives such as the *Teach a Teacher* project, there may be generational divisions which can either provide a catalyst for knowledge exchange and the development of teaching and learning or act, for some teachers, as a barrier to participation. In the interest of bringing things together, it is important to try and understand why the *Teach a Teacher* project was successful. Not just in terms of the broader school-wide issues already considered, but rather in the nature of its provision. To do this, it is necessary to draw conclusions concerning the various components and factors involved.

One of the main conclusions to be drawn is that despite a range of factors including teachers' low levels of confidence, weak ICT skills, and lack of knowledge concerning the 'language' of digital technologies, they were all still motivated to engage and persevere with the project and their training. Returning to the model for the integration of ICT (Lin *et al*., 2012) introduced in Chapter 3 (see p.43), it is possible to identify how, over the course of the project, teachers developed their competency. For most teachers, there was a distinct move from mundane use of ICT and traditional teaching methodologies to greater independence and capability to produce their own multimedia teaching resources for their pupils. Presented in the context of other models of CPD such as external course based training or 'one-size-fits-all' provision, it is likely that any chances of pedagogical improvement or success would have stalled and failed (Daly *et al.,* 2009a). I also feel confident in concluding that if pupils were taken out of the equation, and the project had been run just by teachers working with other teachers, it may well have experienced a degree of success, but not nearly to the same extent. Perhaps what made the project work beyond expectation was not just the bespoke and visionary nature of the provision, but the relationships that the teachers had with their pupils and the unique perspectives and sensitivities they could offer. What emerged from the data was a sense of inhibition, trust, openness and levels of shared commitment that teachers most likely would not have found, even with their peers.

CHAPTER 8 – CONCLUSIONS

Introduction

In this chapter I will review the aims of the research and provide a summary of the findings in relation to the research questions. This is followed by a commentary which reviews this study in relation to the conceptual framework. The limitations of this study and its methodology will then be considered before moving on to discussing the implications for further research and recommendations for future practice. A case is then put forward as to why this research offers a unique contribution to the body of knowledge on student voice and teachers' Continuing Professional Development [CPD]. This thesis then closes with a brief personal reflection.

Review of the Research Aims

The research project I planned and prepared for was, in some ways, different to what took place. Entering Appledawn School and becoming immersed in the setting changed not just my expectations, but also the way in which the fieldwork unfolded. The two findings which had sparked my interest for this thesis arose from my secondment to Becta during 2008 – 2009. The first was that nearly 40% of secondary school teachers and 20% of primary teachers had sought advice from pupils about the use of ICT (Kitchen *et al.*, 2007). The second was the extent to which newer technologies were reportedly under employed in lessons with the use of social media such as instant messaging, wikis, blogs, and online discussion groups being very rare with many teachers being mostly unfamiliar with these types of application (Becta, 2008).

The landscape of technology in education has shifted considerably since I embarked on this thesis. There have been two changes in government, the introduction of a new National Curriculum with Computer Science replacing ICT in 2013, as well as a growing trend in the use of mobile technologies to support online learning in the classroom. Teachers entering the teaching profession today are far more likely to be technologically savvy and this has been reflected in the elimination of ICT skills test in 2012 which was previously a requirement for gaining Qualified Teacher Status [QTS]. Rethinking approaches to teachers' CPD have also occurred during that time through initiatives

such as the DfE funded Vital programme and the introduction of a new government standard for teachers' professional development (DfE, 2016c).

I had envisaged a situation where relationships between pupils and teachers could be enhanced through a student voice initiative which would give pupils the opportunity to provide training for teachers on how to use Web 2.0 technologies such as wikis, blogs and podcasts. The premise was then for teachers to employ these tools in their lessons to support learning in their subject area thereby engaging students with the types of technology they enjoy using. The reasons why this did not happen will be discussed in the section on the limitations of this study, but for the purposes of this review section it is sufficient to note that as it turned out, the focus for CPD was far less spectacular and was primarily concerned with developing teachers' skills in the use of some aspects of Microsoft Office, especially PowerPoint.

As identified in Chapter 1, this study set out to facilitate a process of role reversal whereby the pupil becomes the educator, and the teacher becomes the learner. The rationale behind this aim was based on the premise that pupils' ICT skills are sometimes more advanced than those of their teacher (Morris and Burns, 2013; Teo, 2013) and that there are teachers who still lack basic IT skills (Coleman *et al*., 2015; Morris, 2010a; 2010b; Prestridge, 2012). Given the existing body of student voice literature which reports the benefits of pupils and teachers working collaboratively (Fielding, 2011; Mitra and Gross, 2009; Rudduck, 2005) the second intention of my work was to establish a self-sustaining readily available system of ongoing ICT CPD at the Appledawn School. In doing so, a third aim of the research was to improve relationships between teachers and pupils at the same time as shifting cultures within the school with the hope of embedding the *Teach a Teacher* project into school policy.

Although not formally written into any policy documentation, when I returned to Appledawn a year after the fieldwork ended, the *Teach a Teacher* project was still active and being led by a member of staff at Appledawn. There was a visible presence in the school through the system of pupils wearing blue and gold lapel badges to denote their involvement, as well as the project forming part of a communal display celebrating student voice activity in the school (see Appendix 13, p.205). I have already reported in Chapter 5 how I returned to the school to learn about how the project had developed

to extend to Interactive Whiteboard [IWB] training for teachers and how lower year groups have been trained to take part by those pupils already in the project. The longevity of the project is significant given the low attrition rate of the participants and the fact that half of the pupils from the original cohort were still involved in the project more than two years after it began. I have sought to explain why the project continued to sustain itself and apart from recognising a style of leadership in the school which promotes student voice initiatives, the success comes from the working relationships that the pupils and teachers established with each other.

Review of the Research Questions

The research questions for this study are couched within areas of school practice and so the summary of the findings presented here places them within their school setting. Rather than seeing each question as a separate entity the evidence from the findings is often systemic and therefore interconnected between or across the research questions.

1. *How might pupils leading ICT CPD for teachers influence the ways in which teachers and pupils engage with technology?*

Under the direction of their pupils, teachers carried out "homework" tasks which were designed to help the teachers consolidate the new skills the pupils had been teaching them. Pupils responded to their teachers' needs and when they did not know what their teachers wanted to know, the pupils were proactive in going off to research a specific operation or aspect of ICT. Other shifts in the way pupils engaged with technology included one pupil offering to create video tutorials and other pupils creating instructional learning resources to help their teachers consolidate skills through independent study. Rather than using IT for their own purposes, pupils needed to give attention to the dissemination of their technological knowledge by developing approaches and strategies to facilitate the teaching of IT skills to their teachers.

Although most teachers identified that they were personally starting from a low baseline, they were enthusiastic and welcomed the opportunity to work alongside pupils in order to develop their ICT skills. There was wide acceptance of the role reversal this involved with teachers seeing it as a positive experience in terms of learning from their students. Teachers were honest and open about admitting their lack of ICT knowledge and skills. Teachers demonstrated perseverance and patience in developing the new

skills their pupils taught them and clearly saw the benefits in terms of their teaching with many identifying ways to integrate what they were learning into their lessons. There were feelings of satisfaction and achievement as well as a commitment to consolidating IT skills following training sessions. Significantly, by working with the pupils there was also a noticeable shift in teachers developing a knowledge of computer shortcuts and a better understanding of the language and terminology associated with technology.

2. *In what ways might pupil-led CPD for teachers affect the relationships between pupils and teachers, and between the pupils themselves?*

Pupils showed no reservation in approaching their teachers and for those teachers who took part, there was a surprising openness and receptivity to being taught by their students. For the pupils, there was both acceptance of their teachers' deficiency in IT skills but also an existing willingness and desire to help them out and in this sense the project allowed this support to be formalised and therefore extended to a higher level. Another finding which was notable was the way in which pupils, and particularly the teachers, embraced the process of role reversal. Teachers did not see it as threatening but rather as empowering for both themselves and their pupils.

A particular feature of this role reversal and the nature of the relationships was the overall perception from the teachers that as a result of having grown up with technology the pupils were more skilled with ICT than they were. Those teachers in the project did not find this in anyway threatening and were willing to acquire new skills and learn the 'language' of technology. On a more general level, pupils talked about how their relationships with their teachers naturally extended to include wider social interactions with their teachers around the school.

Although the pupils were working with their friends, comments they made would suggest that through delivering CPD to their teachers, the relationships they had with each other developed an additional dimension. Most of the pupils reported peer-to-peer knowledge exchange where one person knew how to use aspects of software that the other did not know. They also found working with each other supportive in terms of planning and delivering training to their teachers which subsequently gave them feelings of increased confidence in their own abilities.

3. *How is pupil-led ICT CPD for teachers different to peer-peer or professionally led CPD, in terms of both experiences and skills development for teachers and pupils?*

Those teachers who were subject heads reported cascading the training the pupils had given them within their department teams. There was evidence from the teachers that becoming involved in the project had heightened their awareness of planning lessons from the pupils' perspective and led to developing the use of ICT to make learning more engaging. There was also a sense of the project 'opening their eyes' to understanding what, for pupils, constitutes a good lesson. Teachers felt the project not only gave the pupils more self-confidence but through the process of teaching themselves, it provided pupils with a new perspective and insight into what the job of teaching entails. In this way, the project led to feelings of understanding, empathy and respect from the pupils who not only realised that teachers do not know everything, but that teachers also see themselves as learners.

The programme of CPD itself began with identifying what it was the teachers wanted help with or wanted to learn. In all cases, apart from one teacher, this involved developing ICT skills to improve their classroom teaching. One of the implications for pupils in terms of the training they were delivering was the realisation that some of the teachers were not familiar with keyboard shortcuts or knowing how to perform a specific task on a computer in several different ways. Pupils also found themselves having to develop a range of strategies and approaches conducive to meeting the needs of their teachers. This involved being patient, being able to explain processes, breaking down tasks into small steps, encouraging teachers to consolidate their learning by practising their skills and giving their teachers homework tasks. Although pupils had been trained on how to work with their teachers during the pilot phase, one finding, or rather issue, concerned control of the computer equipment given the importance this plays in learning processes with IT. During instances where pupils tended to dominate the use of the mouse and keyboard, some teachers were more vocal than others in reclaiming control as a means of ensuring they could master the skills independently. In cases where teachers did not challenge this control of equipment, it was unclear whether they did not feel, or did not recognise, the need to intervene, or whether they felt it would have been impolite to have done so. From the pupils' point of view, they considered that as a result of the training, teachers were using the skills they had taught

them and they noticed that their peers had greater levels of concentration during lessons. They also noted that the pace of their teachers' lessons was better and that learning had become more enjoyable.

Limitations of This Study and its Methodology

This doctoral research study is limited in scope, not only because of the small number of participants but also because it was undertaken in one secondary school and has therefore not been replicated elsewhere. By choosing to adopt an action research methodology I have been challenged by undertaking the research as an outsider rather than seeking to bring about change from within (McNiff *et al.,* 2002). Being an outsider may enable me to see things differently to an insider but any view of the setting and the players within it cannot be impartial. I am aware of my personal relationship with the Deputy Headteacher, who was my gatekeeper, and how this may have influenced my experience of the school. I am also aware that as a researcher with a particular agenda I am potentially prone to seeing what I want to see and it is possible, when collecting the data, that pupils and teachers told me what they thought I wanted to hear. In this respect, I tried to minimise this by carrying out observations of the teachers and pupils together as unobtrusively as possible. I also chose to interview the pupils in groups and the teachers separately so that they might feel they could talk more openly without being in the presence of each other.

Given the insider/outsider binary of the situation, however, I was aware that as an ex-teacher myself the teachers may have seen me as being 'one of them' and therefore a sympathetic colleague, on the other hand as a teacher trainer and academic researcher they may have seen my presence as an outsider as being judgemental, and therefore critical of them as practitioners. I was aware that in terms of my relationship with the pupils my status as an outsider was both positive yet potentially unsettling. On the one hand I was not their teacher but rather their confidant and sympathiser, on the other, I did not have the same perceived level of authority as their teachers and as an outsider they did not know me other than in my capacity as a visiting researcher.

Another limitation of being an outsider was the issue of access as I was dependent upon balancing my own work commitments with arranging times when it was convenient with

the school for me to visit. Further restrictions which arose from this was perhaps a lack of insider knowledge about the participants. For example, if I had been a member of staff in the school, then I would have had more immediate access to, and knowledge of, the participants' biographies, although this could lead to forms of bias. However, having the historical connection with the school as a place and being personally close to my gatekeeper problematizes the identification of myself as an outsider. These existing relationships meant that even before the project began I was not completely an outsider to the situation.

On a logistical level, the research was also limited in a number of other ways. As noted elsewhere in this thesis, I had intended to focus on new and emerging technologies but this was not possible partly due to the widely recognised need for online safety restrictions and filtering of websites on school networks, which have seen new measures recently introduced (DfE, 2015). Although the school has dedicated computer suites and class based ICT resources there was no immediate evidence of mobile technologies such as tablets or iPhones being used to support teaching and learning that I was made aware of, and instead the focus of ICT shifted on to the use and application of Microsoft Office, and in particular, PowerPoint. Being limited to such routine applications of ICT was disappointing because it meant that I was not able to explore the use of more current or innovative technologies in the classroom. This may have been due to the school environment rather than by the range of technologies pupils may have been conversant with outside of school (see Appendix 5 – Pupils' Home and School Use of ICT, p.184). This situation may in part also be explained by a traditional ICT curriculum in Key Stage 3 which, although it includes computer programming and web design, also consists of file management, presentation software, spreadsheets and databases (Appledawn School Website, 2017).

Although I was fortunate to experience a low attrition rate over the period of research, one of the teachers and one pupil withdrew during the project and so I was not able to interview them and therefore did not fully capture any opinions that they may have been able to offer. During data collection, one of the observations of pupils training their teacher was restricted as one pupil's parents did not consent to their child being videoed or having their voice digitally recorded so this was circumvented by using pencil and

paper and therefore limited the extent of data capture. Poor pupil dynamics in one focus group (see Chapter 4) resulted in spoiled data which coupled with participant withdrawal and ethical considerations outlined above meant that not all data could be reported. As mentioned previously in Chapters 5 and 7, a further restriction of the study concerns the cohort of teachers in the project and that their low level of ICT skills may not be typical or representative of the teaching workforce at Appledawn.

On a final note, there needs to be consideration of the extent to which the *Teach a Teacher* project can be considered to have been transformative. Surprise at the longevity of the project and the extent to which it was a success have already been discussed elsewhere in this thesis and although the *Teach a Teacher* project is to my knowledge still alive, the capacity to which it still influences practice is not known. In the short term, over a time frame of two to three years, it did alter approaches to teaching and learning for those pupils and teachers during, and beyond, the time I was there. For some of the pupils, their identity of belonging to the *Teach a Teacher* project endured from Year 8 until Year 10 – a good proportion of their time at secondary school, and therefore a prominent part of their formative years.

Revisiting the Conceptual Framework

The bodies of work on student voice and teachers' Continuing Professional Development [CPD] – alongside the literature on school leadership being relevant to these two areas – formed the conceptual framework for this thesis. To review and draw conclusions about the research presented in this thesis it is therefore useful to return to these sets of literature. However, because this study concerns pupils, teachers and their use of ICT, this thesis has argued that it is not possible to divorce this conceptual framework entirely from the additional debates which concern the generational divide and the perceived differences in the way these two sections of the population engage with, and use technology (Herring, 2008; Prensky, 2001).

Although it was reported in Chapter 3 that there is no definitive evidence to suggest a link between age and a person's ability or competence with ICT, what is clear from the ICT CPD landscape is that there is a strong need, regardless of age, for teachers' professional development in both the use of new and emerging technologies and ICT

skills (OECD, 2014). The presence of initiatives where pupils are Digital Leaders and take a role in the development of ICT for teaching and learning in schools suggests that there is a place for pupils to support teachers' professional development with technology (DLN, 2016; EdFutures, 2017; Pachler *et al.*, 2010). The success of student voice initiatives which facilitate this process are dependent however, upon teachers' receptiveness to being taught by their pupils. Research suggests that people's skill levels with IT are prone to vary even amongst the young (Bennett and Maton, 2010) yet there was the perception – at least with the teachers at Appledawn – that pupils' ICT skills were well in advance of their own. How teachers – and adults in general – respond to being taught by the younger generation can engender either resistance where they feel threatened, or acceptance where they perceive the benefits of this situation (Hollingworth *et al.,* 2011). Significantly, although some teachers with a low level of IT skills declined to enter a partnership with their pupils, other teachers with a similarly low skill set welcomed the opportunity to be taught by them.

The School Brochure (Appledawn, 2013), interviews with staff, as well as the commitment shown by the pupil and teacher participants themselves, point towards a school which promotes a culture of mentoring and values student voice. The forward thinking and unorthodox nature of the *Teach a Teacher* project can be seen to align with the participatory and transformative nature of student voice activity which is characterised by the dimension of 'intergenerational learning as lived democracy' (Fielding, 2011: 12) and 'child-initiated shared decisions with adults' (Hart, 1992: 8). Both of these strands represent the highest degree of student participation on their respective models which are strongly linked to 'agency' in terms of making a contribution to shaping policy and practice in schools (Morgan, 2011; Rudduck, 2005) through, for example, organising CPD activity for teachers (Mullis, 2011; Pachler *et al*., 2010).

The literature on student voice suggests that the process of student-teacher role reversal, which took place at Appledawn, is not just challenging (Rudduck, 2005) but also problematic (Lodge, 2005; Thomson, 2011) because it calls into question the balance of power between pupils and teachers. This reversal of power is perceived to be a potential source of tension where both sides may feel uncomfortable with this situation (Flutter

and Rudduck, 2004) and one which can be seen as an act of resistance against the school system (Smyth, 2006b). Overall, the process of student-teacher role reversal was embraced by the teachers and pupils at Appledawn although some resistance was experienced from those teachers who declined to work with their students or become involved in the project. One teacher who did take part commented that she only did so because the pupils had approached her and would not otherwise have openly entertained the pupil-teacher alliance that the project offered. Other tensions included one pupil who was dismissive of the project to the extent that he felt he had not learned anything new or otherwise benefitted from the alliance and was openly critical of the traditional teaching methods used by some of his teachers. In the main, however, the pupil-teacher partnerships were viewed positively from both sides.

The high levels of trust and empathy between pupils and teachers reported in this thesis very much mirror the literature in the sense that trust between pupils and teachers can only be authentic when it is based on democratic partnerships (Czerniawski, 2012) which value the opinions of students (Waterhouse, 2011) and empowers them in decision making processes (Lizzio *et al.*, 2011). The informal, warm and sometimes honest exchanges between teachers and pupils also indicates that the project created channels and levels of communication that may not have otherwise existed (Kjellin *et al.*, 2010).

Although there are varying interpretations in the literature, CPD can be defined as learning processes which arise from interaction in meaningful contexts which lead to teachers bringing about changes in their thinking and their practice (Kelchtermans, 2004). This would offer an accurate reflection and description of the knowledge exchange during the project, as would the notion that it represents informal opportunities which meet the immediate needs of the individual teacher, rather than any programme of school-wide professional development (Pedder and Opfer, 2010). There is also recognition in the literature that teachers' CPD should be an active and engaging process which takes into account what teachers already know and can do (Dadds, 2014; DfE, 2016c; Earley and Bubb, 2004) which is very much reflected in the dialogues between teachers and pupils at Appledawn.

One misalignment with the literature which needs to be raised is the assumption that the success of CPD initiatives can be judged by learning outcomes for pupils (Goodall *et*

al., 2005; Gusky, 2000; Pedder and Opfer, 2010) which are usually seen in terms of attainment in standardised tests or progress matched against specific curriculum outcomes. A conspicuous omission here is a lack of any evidence of the wider outcomes for pupils who deliver CPD for their teachers which is something returned to later in the section on 'Contributions to Knowledge'.

To further explain why the *Teach a Teacher* project was a success, the importance of evaluating the impact of professional development initiatives needs to be considered (DfE, 2016c). The research process reported throughout this thesis represents an in depth evaluation of the project's effectiveness based on the reflections and feedback of those participants involved in it and to this extent provides the basis for considering implications for further research as well as recommendations for future practice. It is also pertinent to look at the links in the literature between school leadership, student voice and teachers' professional learning. This entertains the premise that developing relationships with pupils which are built upon trust subsequently facilitate the capacity for student leadership (Fielding, 2001; Mitra and Gross, 2009; Morris, 2014; Rudduck 2005). At the same time there needs to be a school culture which recognises the value of pupils and teachers learning from each other and one that values relationships that are based upon mutual respect (Carnell, 2001; Day, 1999a; Earley and Bubb, 2004; King, 2014; Mitra and Gross, 2009; Soo Hoo, 1993).

Not only is strategic leadership a determining and enabling factor in how student voice initiatives may manifest themselves in schools (Barber *et al.*, 2010), but the effectiveness and success of how these partnerships function is down to the ways in which leadership is negotiated and distributed between pupils and teachers rather than through a hierarchical system of management (Harris, 2008; Woods *et al*., 2004). Even though the *Teach a Teacher* project was not formally recognised within school policy, and therefore operated under the radar, its characteristics fit broadly within the acknowledged model of Digital Leader initiatives where pupils support and lead on ICT related activity in schools (Anderson, 2013; DLN, 2016; EdFutures, 2017). The process of ratifying the role of young people within a recognisable and visible school policy provides an indication of the level to which student voice practices are embedded in schools. Other indicators of formal Digital Leader activity may involve collaborative partnerships with other

institutions as well as disseminating good practice online. Although the *Teach a Teacher* project was showcased through a communal school display (see Appendix 13, p.205) and gained attention in the local press, there is the question as to whether the project was seen to fulfil its purpose adequately enough within Appledawn without the need to serve the wider political interests of the school.

The perception of what constitutes successful models of ICT CPD for teachers has shifted over the last decade or so with a move away from a top-down, externally driven course-based provision towards a more informal 'bottom-up' self-help agenda (Davis *et al*., 2009a; 2009b; Pachler *et al*., 2010; Twining and Peters, 2014). Teachers' preferred approaches to ICT CPD reported in the literature tend to align with the provision provided by the pupils at Appledawn because they took account of, and were sensitive to their teachers' experiences, beliefs and histories of using technology (Daley *et al.*, 2009a). It is pertinent to emphasise here that the literature on teachers' preferred methods of ICT CPD refer exclusively to adults facilitating CPD for each other, and therefore apart from those cases already cited (EdFutures, 2017; Gamliel and Hazan, 2014; Pachler *et al*., 2010) exclude any consideration of pupils being involved in their teachers' professional development. The very nature of the *Teach a Teacher* project meant that teachers could access face-to-face support which was readily available, personalised to meet their individual needs, and was provided by those more skilled and knowledgeable than they were.

Implications for Further Research

Given the limited scope of this research study, particularly in terms of the white middle class socio-economic demographic that characterises Appledawn, I believe there are some implications concerning potential further research. I believe it would be illuminating to carry out similar fieldwork but in an inner-city school where the socio-cultural demographics would most likely be reversed. For example, where there may discernibly be a much higher proportion of pupils with English as an additional language [EAL] or those with special educational needs [SEN] and where – unlike Appledawn – there may be few families who are home owners and where pupils may be from more working class backgrounds. The purpose of such a study would allow me to compare and contrast outcomes, and some of the lines of inquiry I would be interested in pursuing

are as follows: (a) whether proportionately there would be similar levels of uptake from pupils and teachers; (b) whether pupils, and teachers, would join the project for the same reasons; (c) whether the project would sustain itself with similar levels of engagement overtime; (d) whether pupils' and teachers' perceptions of the benefits of the project would be the same; and (e) whether there would be similar outcomes in terms of a perceived change in pupil-teacher relationships. If the study were to be repeated in the above context, then it might allow a more critical framing by adopting a different theoretical lens. Bourdieu's concepts of habitus and capital for example, might provide useful insights particularly in an environment where the cultural and class dispositions of the teachers and pupils may not be as congruent as they were at Appledawn. In such a situation, there may be a greater likelihood of viewing more of a struggle and conflict concerning the value and meaning of the learning process and therefore more tension between teachers and pupils.

In respect of the above, if a second *Teach a Teacher* project were to take place, then questions would remain as to whether the same approaches to sampling would be employed. One aspect of this kind of intervention that I would like to explore, is the effect that this type of participation might have on those pupils perceived to be disengaged, and to see if involvement of this kind would bring about a shift in attitudes towards education and being in school. A further study would also need to entertain a much broader technological repertoire which might include a more pupil centric setting which encourages a 'bring your own device' [BOYD] culture, or at least a school where the presence and use of mobile and Web 2.0 technologies has a higher profile. Time and resources permitting, it might also be worthwhile exploring a comparative study of how the project might manifest itself within a primary school setting alongside a secondary one. Similarly, given the different international perspectives on student voice and CPD a study in another country would be interesting in order to draw wider comparisons.

Finally, one last implication is to raise the question as to the extent to which selection for the *Teach a Teacher* project was truly democratic – that is to say whether the selection criteria of pupils from a specific year group who then nominated their teacher was a fair process. As highlighted in Chapter 2, the word democracy frequently appears in the literature on student voice (D'Andrea, 2013; Davies and Kirkpatrick, 2000;

Deuchar, 2009; Dias and Menezes, 2013; Hart, 1992; Quintelier and Hooghe, 2013; Moran and Murphy, 2012; Mullis, 2011; Taylor and Robinson, 2009) and without repeating these debates it is apposite to be reminded of the following. On the one hand, there is the contention that schools perpetuate inequality and so can never be truly democratic institutions (Quintelier and Hooghe, 2013) whereas on the other, is the notion of 'emancipatory' practice whereby students are involved in radical democratic initiatives and therefore actively involved in bringing about change (Fielding, 2001). Perhaps student voice initiatives cannot be democratic because student opinions and beliefs vary from one individual to another and so there never can be one monolithic group (Cook-Sather, 2007). Returning to the participants at Appledawn, I am aware that there were teachers and pupils who either chose not to get involved or who showed initial interest but then chose to opt out. Ultimately, there was freedom of choice, but I still wonder about those individuals who may have wanted to get involved, but for whatever reason felt that they could not, or were not able to.

Recommendations for Future Practice

One frequently cited barrier to enabling effective CPD is the availability of funding (Pachler *et al.,* 2010) and the quality and value of the provision that is being bought into. Therefore, one of the main advantages of implementing an initiative where pupils are involved in providing ICT CPD for their teachers is that there is no financial outlay. Given the findings presented in Chapters 5 and 6, which would indicate good levels of teacher satisfaction with the value of the training and the partnership, then my principal recommendation is that this model of CPD merits promoting and migrating further afield. I consider this in terms of the setting where I undertook the research.

To begin with, the profile of the *Teach a Teacher* project could be strengthened by recognising it as a form of distributed leadership within the school. This might involve discussion at senior level to help streamline this process through consultation with students and staff, drawing up an action plan and allocating a lead person to steer the initiative. Pupils could be involved in the authorship and direction of this plan. Ideally they would be responsible for organising and running peer training and in the long term might run the project themselves with some minimal formative input from adults or

older pupils in school. Time, timetabling, space and resources in school would also need to be considered.

Moving the project forward in the ways outlined above could lead to it becoming part of school policy which is periodically reviewed. As part of this review process, effective systems would need to be in place for staff and students to evaluate the provision ensuring that impact is measured against intended outcomes[12]. At this stage, there is the potential to become involved in sharing good practice with other schools, which leads onto how online communities might facilitate this process. The Computing at School [CAS] online community is a supportive network of over fifteen hundred schools in the UK with thousands of members and discussion posts (CAS, 2017). Within this forum, and at the time of writing, there are schools wishing to learn from other schools about Digital Leader initiatives with the view to starting their own. Disseminating best practice could be developed through conferences, TeachMeets, or table discussions hosted by different individuals dealing with a range of topics and issues. Such collaboration can take place in person or via video conferencing, but either way would represent a form of knowledge exchange which is redolent of the original spirit of communities of practice (Lave and Wenger, 1991; Wenger, 2011).

Contributions to Knowledge

There are three areas of literature to which this study makes a unique contribution to knowledge and each of these – student voice in secondary education, teachers' CPD in schools, and qualitative research sampling designs – will be considered in turn. It is, perhaps, appropriate to begin with the approach to sampling given that this procedure is a crucial and dynamic moment in the evolution of the research design. Developing an effective sampling strategy is not only pivotal in responding to the needs of the research, is it also the point where the contact between the researcher and the participants – and between the participants themselves – is conceptualised, established and later on embodied in the research.

[12] A perennial shortcoming of school CPD initiatives that emerges from the literature is a failure of schools to adequately measure the impact of CPD on outcomes for teachers and pupils.

The unusual combination of employing aspects of opportunistic, purposive and snowball sampling methods in this thesis creates a unique sampling approach, particularly when snowball sampling itself is considered to reside on the periphery of research practice (Atkinson and Flint, 2001) not least because of the number of associated concepts and labels that it attracts. Given that the pupils who took part in the *Teach a Teacher* project were self-selecting and then nominated the teacher they wanted to work with, meant that as a researcher I had very little control over the sample given that I had relinquished control over the choice of participants. Another unusual characteristic of what I choose to refer to as an 'adoptive' sampling approach was the use of the pilot phase of the research to whittle down the pupil cohort (see pp. 62-65) until I was left with the 16 pupils who took part in the study. I use the word *adoptive* because the pupils chose their partner and between them 'adopted' a teacher who they wanted to work with. In this regard my 'adoptive sampling' strategy differs to snowball sampling because the chain did not extend beyond the choice of teacher who ended up participating.

Although there is student voice literature which reports on pupils organising CPD activity for teachers, the contribution that this study makes is significant due to the particular role pupils played in the delivery of that CPD. Pupils' involvement meant that they experienced taking on responsibility for teaching their teacher and to this extent it enabled them to empathise with their teacher and understand what the process of teaching and instruction involves. This was an overwhelmingly positive experience for those children who took part with many continuing with their involvement from Year 8 into Year 10 despite the pressure of preparing for exams. Some pupils felt the experience was valuable because even at their age it could help them decide whether they themselves would like a career in teaching and gave them access to experiences beyond the school curriculum. Not only is the process of pupils delivering ICT CPD for their teachers in English secondary schools rarely documented, this study is unique in terms of student voice in so far as it presents the pupils' thoughts, feelings and perspectives of this experience of partnership with their teachers. Within the literature on teachers' professional development, effective CPD in schools is measured almost exclusively in terms of outcomes for teachers and pupils' academic achievements or performance in standardised tests rather than on the broader development of their skills, attributes and capabilities as people. This thesis is therefore unique in the sense that it is the only

known research study within the western school education system that documents and reports upon pupils delivering a programme of ICT CPD which also takes account of and explores pupils' own development needs in terms of their capacity to deliver such a programme.

Personal Reflections

On reflection, I have learned many things during the process of this thesis. I have learned the importance of understanding that there is no one right way to conducting qualitative research and that as a researcher, there is always the need to choose the tools that are right for the job. In doing so, I believe it is advisable to try and avoid the casualty of using labels to brand an approach or method as by doing so it becomes restrictive and compartmentalised (Symonds and Gorad, 2008). I have also learned the value of taking both a deductive and an inductive approach to sparking a research interest and discovering a 'truth'.

However, it is the finding from Kitchen *et al.* (2007) – 40% of secondary teachers have sought advice about ICT from their pupils – which is responsible for bringing me to this point in this final chapter. When I saw that statistic, the whole idea of the *Teach a Teacher* project seemed so simple and patently obvious to me and I knew – at some level as a teacher myself – that it would work. I had a positive feeling about it from the start, and that persisted throughout as I entered the school and carried out the field work, even though the particular nature and focus of ICT was not, albeit, as ambitious as I had hoped for. One thing that did surprise me, however, was the extent to which many the pupils remained extraordinarily committed, an attribute and characteristic that cannot always be observed in the classroom.

On a parting note, it is worth remembering that in any school the student body accounts for 95% of the stakeholders (Roberts and Nash, 2009), yet 'somehow educators have forgotten the important connection between teachers and students. We listen to outside experts to inform us, and, consequently overlook the treasure in our very own backyards' (Soo Hoo, 1993: 389).

Word Count: 57,345

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APPENDIX I – Pupil and Parents' Information Sheet and Consent Form

Information and Consent form – Young persons

Teach a Teacher Project

Thank you for your interest in volunteering to be part of the Teach a Teacher Project. The project will take place at intervals over a period of time whilst you are in Years 8 and Year 9. This will hopefully be an exciting opportunity for you and will give you the chance to sit down with a teacher and teach them new skills in how to use ICT*.

During the next term, you and one of your class mates will be working with a teacher of your choice. This will be of benefit to you because you will be making decisions about how you are being taught. You will be teaching your teacher ICT skills that will help them use ICT to make lessons even more engaging. The researcher, David Morris will be voice recording these sessions so that he can learn more about the ways that you talk and learn together with your teacher. He will also come in to observe lessons to see the teacher using the ICT skills you have taught the teacher you have been working with. He will be voice recording interviews with you to talk about your experiences of teaching your teacher. During the project, the time you will need to spend during the project will be no more than half of one or two lunchtimes each month.

The researcher will also be talking to your teacher about their experiences of being taught by you. The researcher will be writing and talking about the project so that other people know about it, but he will not use your name or the name of the school.

Consent form

The project has been explained to me and I have been able to ask questions for example, about what I will be expected to do, the ways in which I will working with the teachers and about the kind of ICT skills they may want to learn.

I agree to be interviewed and have my voice recorded. I understand that I can stop taking part in the project at any time:

Name …….

Signature …… Age…….

Researcher's Name (BLOCK CAPITALS)

DAVID MORRIS

Investigator's Signature ……

Date: …….

* Information and Communication Technology [ICT] is a curriculum subject and a term all children should be very familiar with.

Information sheet – Parents/carers

The Cass School of Education and Communities
Doctoral Thesis Information Sheet

Conducted by: David Morris, Senior Lecturer, UEL

Supervisor: Dr Gerry Czerniawski

University of East London

Cass School of Education and Communities

Water Lane

Stratford

London E15 4LZ

University Research Ethics Committee

If you have any queries regarding the conduct of the programme in which you are being asked to participate, please contact researchethics@uel.ac.uk

The Principal Investigator

David Morris

Telephone: 020 8223 6304
Email: d.morris@uel.ac.uk

Consent to Participate in a Research Study

The purpose of this letter is to provide you with the information that you need to consider in deciding whether to allow your child to participate in this study.

Project Title

Teach a Teacher Project

Project Description

Over the next 2 years I will be carrying out research at your child's school. The project will involve pupils teaching a teacher new skills in how to use technology. Sometimes young people's knowledge of computers and the internet is better than that of older generations. As part of this project teachers will discuss with pupils the sorts of things they would like help with, for example using a particular piece of software on the computer. Once the teachers have acquired these skills, they will hopefully use them as part of their teaching and pupils' learning. The benefits of this project are that teachers will learn new skills they didn't have before and will make more use technology in their lessons. Young people generally enjoy using computers and technology and research has shown it has motivational impact on pupils' learning. Pupils will also benefit because the project will allow them to broaden their experience and role in school in the context of becoming leaders by being responsible for training teachers and the self esteem this will give them. The time your child will need to spend during the project will be no more than half of one or two lunchtimes each month.

Aims of the Research

The aims of this research are to assess the benefits that this pupil-teacher partnership has on teaching and learning as well as assessing the impact on any perceived benefits in terms of relationships between pupils and teachers. Over the next 2 years I will be gathering data through observation and interviews to investigate and evaluate the ways in which pupils can share their technological expertise with teachers with a view to bringing about a change in the way teachers teach and the way pupils learn.

Methodology and Methods:

Pupils will be working in pairs and will choose, with guidance from a teacher, the class mate they would like to work with. They will then be asked to select a teacher they would like to teach. Discussions, planning meetings and training sessions between pupils and teachers will be recorded using a voice recorder.

Conversations between teachers and pupils will be used to identify an initial focus for the training sessions as well as the potential benefits on teaching and learning. Classroom observations will be used to evaluate impact of the development of teachers' ICT skills on teaching and learning. Pupils will be interviewed to talk about their experiences of teaching a teacher and these will be recorded using a voice recorder. During the research there will always be a teacher present at all times.

Confidentiality and Anonymity:

During the project voice recorded data will only be heard by the researcher and the participants. Any transcripts of conversations made will be made available to those taking part and the identity of those participating will be made anonymous. Names and institutions will be kept confidential and anonymous and participants' privacy will be respected.

Ethics:

This project has been approved by the University of East London Research and Ethics Committee.

Data Protection:

Confidentiality of data will be protected, although the confidentiality of information provided is subject to legal limitations. All data generated in the course of the research will be retained in accordance with the University's Data Protection Policy. Audio files and transcripts will be stored electronically and password protected with access only to the researcher for a period of six years.

Limits of confidentiality:

Limitations of confidentiality may apply where disclosure of imminent harm to self and/or others occurs.

Confidentiality of the Data

All the data held by the researcher will be kept in a secure filing system, accessible only to the researcher himself. On completion of the researcher's Doctoral studies, all data from individuals and groups will be destroyed.

Location

School-based computer suites and classrooms.

Withdrawal from Project:

Your child is not obliged to take part in this study, and they are free to withdraw at any time and to withdraw any recorded data previously given in interviews or meetings with their classmate and teacher. Should your child choose to withdraw from the project they may do so without any disadvantage to themselves and without any obligation to give a reason.

Dissemination:

It is anticipated that the research findings will be disseminated via conference presentations, education seminars (for example, schools and local authorities) and academic journal articles.

Further Information:

If you have any further questions about this research, please do contact David Morris (Principal Researcher) on 0208 223 6304 or d.morris@uel.ac.uk

Concerns arising during the research:

If you have any concerns about the conduct of the researchers or any other aspect of this research project, please contact researchethics@uel.ac.uk

APPENDIX II – Teacher Consent Form and Participant Information Sheet

The Cass School of Education and Communities

Doctoral Thesis Information Sheet

Conducted by: David Morris, Senior Lecturer, UEL

Supervisor: Dr Gerry Czerniawski

University of East London

Cass School of Education and Communities
Water Lane
Stratford
London E15 4LZ

University Research Ethics Committee

If you have any queries regarding the conduct of the programme in which you are being asked to participate, please contact researchethics@uel.ac.uk

The Principal Investigator

David Morris: Telephone: 020 8223 6304 Email: d.morris@uel.ac.uk

Consent to Participate in a Research Study

The purpose of this letter is to provide you with the information that you need to consider in deciding whether to participate in this study.

Project Title

Teach a Teacher Project

Project Description

The duration of the project will last for 2 years. This project builds on research which has established that there are differences between the ways in which pupils and teachers use and engage with ICT (Becta 2007; Prensky, 2001; Morris and Burns, 2013). During this time I will be gathering data through participant observation and voice recorded interviews to investigate and evaluate the ways in which pupils can share their technological expertise with teachers with a view to bringing about a change in the way teachers teach and the way pupils learn. As part of this project teachers will discuss with pupils the sorts of things they would like help with, for example using a particular piece of software on the computer. Once the teachers have acquired these skills, they will hopefully use them as part of their teaching and pupils' learning. The benefits of this project are that teachers will learn new skills they didn't have before and will make more use technology in their lessons. Young people generally enjoy using computers and technology and research has shown it has motivational impact on pupils' learning. Pupils will also benefit because the project will allow them to broaden their experience and role in school in the context of becoming leaders by being responsible for training teachers and the self esteem this will give them.

Aims of the Research

The aims of this research are to assess the benefits that this pupil-teacher partnership has on teaching and learning as well as assessing the impact on any perceived benefits in terms of relationships between pupils and teachers. Over the next 2 years I will be gathering data through observation and interviews to investigate and evaluate the ways in which pupils can share their technological expertise with teachers with a view to bringing about a change in the way teachers teach and the way pupils learn.

Methodology and Methods:

Pupils will be asked to select a teacher they would like to teach. Discussions, planning meetings and training sessions between pupils and teachers will be recorded using a voice recorder. Conversations between teachers and pupils will be used to identify an initial technological focus for the training sessions as well as the potential benefits on teaching and learning. Teacher participants will benefit by learning new skills and knowledge in the use and application of technology. It will allow the teachers to improve their levels of usage of technology in lessons and it is hoped that this will have a positive and beneficial effect on the relationships between pupils and teachers. Upon the agreement of the teacher, classroom observations will be used to evaluate the impact of the development of teacher's computing skills on teaching and learning. The pupils that teachers will be working with will be given information about the project prior to volunteering and they and their parents/carers will be asked to give consent for them to take part and have their voice recorded. All parts of the research project will take place at in school. Demand on teachers' time will be kept minimal and over the duration of the project teachers can expect to commit no more than half of one or two lunchtimes each month at the most.

Confidentiality and Anonymity:

During the project voice recorded data will only be heard by the researcher and the participants. Any transcripts of conversations made will be made available to those taking part and the identity of those participating will be made anonymous. Names and institutions will be kept confidential and anonymous and participants' privacy will be respected.

Ethics:

This project has been approved by the University of East London Research and Ethics Committee.

Data Protection:

Confidentiality of data will be protected, although the confidentiality of information provided is subject to legal limitations. All data generated in the course of the research will be retained in accordance with the University's Data Protection

Policy. Audio files and transcripts will be stored electronically and password protected with access only to the researcher for a period of six years.

Limits of confidentiality:

Limitations of confidentiality may apply where disclosure of imminent harm to self and/or others occurs.

Withdrawal from Project:

You are not obliged to take part in this study, and are free to withdraw at any time and to withdraw any unprocessed data previously supplied. Should you choose to withdraw from the programme you may do so without disadvantage to yourself and without any obligation to give a reason.

Dissemination:

It is anticipated that the research findings will be disseminated via conference presentations, education seminars (for example, schools and local authorities) and academic journal articles.

Further Information:

If you have any further questions about this research, please do contact David Morris (Principal Researcher) on 0208 223 6304 or d.morris@uel.ac.uk

Concerns arising during the research:

If you have any concerns about the conduct of the researchers or any other aspect of this research project, please contact researchethics@uel.ac.uk

Consent form – Adults (Teachers)

UNIVERSITY OF EAST LONDON

Consent to Participate in a Doctoral Research Study Involving Pupils and Teachers as Participants

Teach a Teacher Project

Principal Investigator: David Morris, Cass school of Education and Communities, UEL, Water Lane, London E15 4LZ **Telephone**: 020 8223 6304 **Email**: d.morris@uel.ac.uk

I have read the information leaflet relating to the above programme of research in which I have been asked to participate and have been given a copy to keep. The nature and purposes of the research have been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which I will be involved have been explained to me. In particular, I note that:

- Participation is voluntary and participants have the right to withdraw at any time, or can withdraw any unprocessed data at any time.
- The consent from will be securely stored away from the data, and data will be stored electronically and password protected.
- When pupils and teachers undertake training sessions together or when teachers are being interviewed they will be recorded using a voice recorder.
- Anonymised transcripts may be used in any resulting publications.
- The researcher will take particular care in transcription and dissemination to ensure that organisation and participants will remain anonymous and will not be able to be identified in any way.
- The findings will be disseminated via academic journal articles, at academic and professional conferences, and at education seminars.
- That teachers may benefit in terms of their professional development by taking part in the project.
- Demands on teachers' time will be kept to a minimum and teachers will only be expected to commit to half of a lunchtime on no more than one or two days each month.

I understand that my involvement in this study, and particular data from this research, will remain strictly confidential. Only the researcher involved in the study will have access to the data. It has been explained to me what will happen once the experimental programme has been completed.

I give my consent to participate in the study which has been fully explained to me. Having given this consent I understand that I have the right to withdraw from the project at any time without disadvantage to myself and without being obliged to give any reason.

Participant's Name (BLOCK CAPITALS)

…….

Participant's Signature

……..

Investigator's Name (BLOCK CAPITALS)
DAVID MORRIS

Investigator's Signature

……

Date: …….

APPENDIX III – Teacher Interview Questions

1. Your pupils approached you as being the teacher that they wanted to work with. Firstly, can you explain to me the reasons why you chose to accept their offer?

2. Secondly, why you agreed to become involved in the Teach a Teacher Project?

3. Could you tell me about what you personally hope or expect to gain from working alongside your pupils?

4. Has being involved in the Teach a Teacher project influenced or changed the way you engage with and use technology?

5. Do you think Lenny and Craig have been empowered as students? Yes/No

6. If yes, in what way?

7. Do you think Lenny and Craig have benefitted from being involved in the Teach a Teacher Project? Yes/No

8. If yes, in what way?

9. What impact has the project had on your own practice, considering the classes you teach?

10. What impact has the project had on your own teaching, considering the classes you teach?

11. What impact has the project had on your own learning in general, considering the classes you teach?

12. Do you feel your relationships with pupils has changed since being involved in the Teach a Teacher Project? Yes/No

13. If so, in what ways?

14. Have you had further training or meetings with you pupils since we last met? Yes/No

15. If yes, can you tell me about this?

Interview questions for Senior Leader:

1. You were willing to allow me into your school to carry out my research in terms of enabling pupils to become instructors and teachers to become learners. Before I arrived, what outcomes did you expect?
2. Can you describe, in terms of your role as gate keeper and senior manager, how you feel your expectations of the Teach a Teacher project have:
3. Been met or turned out as anticipated?
4. Not been met or turned out not as anticipated?
5. What sort of impact do you think the project has had on pupils?
6. What sort of impact do you think the project has had on teachers?
7. What sort of impact do you think the project has had on the way pupils and teachers engage with technology?
8. What sort of impact do you think the project has had on the relationships between pupils and teachers?
9. To what extent are staff and other senior managers or governors in the school aware of the presence of the project going on in the school and what do they think about it?
10. To what extent do you think the Newsletter, Bulletin and media interest helped raise awareness of the project amongst staff and the community?
11. In what ways might this have an impact on the initiative?
12. Can you describe the pupils' responses and reactions the day when you told them the local newspaper were coming to school to find out about the project?
13. To what extent could a project like this be used to inform future school policy?
14. If so, in what ways do you think it can be sustained?

APPENDIX IV – Pupil Focus Group Questions

1. Can you explain to me the reasons why you decided to volunteer for the project?
2. What were the reasons for choosing your particular teacher to work with?
3. Before the project started, what did you hope to gain by taking part?
4. So far, in what ways do you think you have benefitted from working with your teacher?
5. So far, in what ways do you think you have benefitted from working with your classmate?
6. So far, has the project turned out as you expected? Yes/No
7. If no, can you tell me why and in what ways?
8. Can you tell me about the skills you have been teaching your teacher?
9. In what ways do you think your teacher has benefitted?
10. Has your teacher been using the skills you have taught them in lessons? Yes/No
11. If yes, what impact has this had on their teaching?
12. And has this had an impact on your learning? Yes/No
13. If yes, in what ways?
14. Have you learned any new skills yourself from teaching your teacher? Yes/No
15. If yes, can you tell me about them?
16. Since you started working with your teacher do you think your relationship with them has changed? Yes/No
17. If yes, can you tell me in what ways?
18. Since the first session, have you had any further training sessions with your teacher?
19. If yes, can you tell me about these?
20. Do you have any more sessions planned? Yes/No
21. If yes what will you be teaching them?
22. In what ways do you think the project could be further developed?

APPENDIX V – Pupils' Home and School Use of ICT Questionnaire

Year 8 - Using ICT at Home and in School

PLEASE READ THE QUESTIONS CAREFULLY.

For each of the technologies listed below, please indicate whether you use them: at home socially; in school as part of your lessons; at home socially and in school as part of your lessons or whether you don't use them.

YOU CAN ONLY MAKE ONE CHOICE FOR EACH QUESTION.

*** 1. Mobile phone - e.g. text messaging, camera, organiser**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 2. Mobile phone - i phone/android - downloading and using apps**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 3. Social Networking - Twitter, Facebook, wikis, blogs**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 4. Digital Cameras - still photographs/videos**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 5. Games consoles - Nintendo 3ds/wii/xbox**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 6. MP3 players - iTunes/ iPlayers**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 7. Mobile technologies - laptops, tablets (iPads, Google Nexus)**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 8. e book readers - e.g. Kindle**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

*** 9. Generic software - Microsoft Word, Excel, PowerPoint, Publisher etc. Paint programs**

- ☐ at home socially
- ☐ in school as part of our lessons
- ☐ at home socially and in school as part of our lessons
- ☐ I don't use them

*** 10. Email and internet**

- ◯ at home socially
- ◯ in school as part of our lessons
- ◯ at home socially and in school as part of our lessons
- ◯ I don't use them

Done

APPENDIX VI – Pupils' IT Skills Audit

Your personal details…

Your Name: ……..

Form: ……..

Your "Teach a Teacher" Partner's Name: ……..

Your Teacher's Name: ……..

Your Teacher's Subject: ……..

To complete this form…

There are a series of statements that I would like you to consider and THEN tick a response that describes your response the best.

There are five responses:

1. I do not know about this and I am not capable at all
2. I know a little about this but would need a lot of guidance or use of help menus
3. I feel fairly secure about this, but might need some guidance or use of help menus
4. I am capable in this skill area and need very little additional guidance or use of help menus
5. I am very experienced and capable in this area and need no guidance

A	Generic skills with ICT	Level of Skill (please tick one box — ✓)				
		1	2	3	4	5
1	File management, recognising file types, names and extensions, exporting, importing, using data storage e.g. USB, navigating a network					
2	Create, save and manage files with different versions of the same programme e.g. saving a word file as 2003 in order to open it in a higher version					
3	Taking screen shots and adding them to documents					
4	Transferring data between programmes e.g. tables or graphs between Word and Excel					
5	Converting word files into PDFs					
6	Cloud computing and storage – managing files or large files via Dropbox, Sky Drive, We Transfer					

B	**Text/word processing e.g. Microsoft Word, PowerPoint, Publisher**	**Level of Skill** (please tick one box — ✓)				
		1	2	3	4	5
1	Save files in different formats, including HTML and earlier versions of Word					
2	Insert graphics (copy/paste/import as a file)					
3	Add headers and footers					
4	Insert and edit tables					
5	Insert hyperlinks to navigate to pages within a presentation or document					
6	Create publications using text boxes, Word Art/drawing tools					
7	Insert images/photographs					
8	Format text and using columns					
9	Align and group objects					
10	Order objects (send to back, send to front)					
11	Use drawing tools					
12	Save file as a web page and view in a web browser					
13	Embed images, sound clips, videos into a presentation or document					
14	Embed web links into a presentation or document					
15	Use animation					
16	Use automation (set timings for slide transitions)					

C	Spreadsheets	Level of Skill (please tick one box — ✓)				
		1	2	3	4	5
1	Use an existing spreadsheet or create a new one and amend or input information					
2	Sort data e.g alphabetically					
3	Generate charts e.g pie charts, bar charts, line graphs					
4	Format cells					
5	Print a selected area/range					
6	Create a spreadsheet and enter data					
7	Enter text and numerical data					
8	Replicate entries					
9	Insert rows and columns					
10	Change column and row widths or height					
11	Create charts from spreadsheets					
12	Using filters to display data within a spreadsheet					
13	Enter formulae e.g. sum, average					
14	Enter more complex formulae e.g. count, if, countif					
15	Apply conditional formatting to cells					
16	Create and rename new sheets					
17	Perform operations across sheets in a work book					
18	Record macros					

D	Graphics and multimedia	Level of Skill (please tick one box — ✓)				
		1	2	3	4	5
1	Use a scanner to import images					
2	Import images into a graphics/ paint package for editing					
3	Export files in different formats as .gifs, .jpegs or .pngs appropriate to use					
4	Know how to make an interactive white board 'interactive' rather than just as a display tool					
5	Use the pens/rubber and other basic functions on an interactive white board					
6	Be able to split screens to show more than one thing e.g. being able to view two programmes					
7	Download and edit images from a digital camera					
8	Record, download and edit videos from a camera or mobile device					
9	Compress large files, using a 'zip' programme,					
10	Design and create simple but effective web pages using code or software e.g. Dreamweaver, HTML, Java Script etc					
11	Know how to host a web address and make web pages available online					
12	Use a scanner to import images					

E	**Internet, mobile, new and emerging technologies**	**Level of Skill** (please tick one box — ✓)				
		1	2	3	4	5
1	Search app stores and select and download and use apps for specific purposes e.g. QR code readers on smart phones/iPads/android					
2	Program, make and create your own apps and upload these on line					
3	Create You Tube channels and upload and share your own content					
4	Create accounts and upload content and use social networking sites such as Twitter, Facebook to share information					
5	Create video tutorials					

Finally…

If you have any other computer skills which are not listed above, please note them below.

……

……

……

Thank you for your assistance.

APPENDIX VII – The Appledawn ICT CPD Menu

STAFF BULLETIN

Teach a Teacher – ICT CPD "MENU"

If you would like to learn how to do any of the following, or would like one to one training on any aspect of ICT, then contact **Mrs Hill**. This menu provides examples of training on offer from Year 9 pupils, although it is not a definitive list:

Generic skills with ICT
Create, save and manage files with different versions of the same programme e.g. saving a word file as 2003 in order to open it in a higher version
Taking screen shots and adding them to documents
Transferring data between programmes e.g. tables or graphs between Word and Excel
Text/word processing e.g. Microsoft Word, PowerPoint, Publisher
Add headers and footers
Insert and edit tables
Insert hyperlinks to navigate to pages within a presentation or document
Create publications using text boxes, Word Art/drawing tools
Insert images/photographs, use drawing tools
Align and group objects, order objects (send to back, send to front)
Save file as a web page and view in a web browser
Embed images, sound clips, videos, web links into a presentation or document
Use animation for slide transition, use automation (set timings for slide transitions)
Spreadsheets
Generate charts e.g. pie charts, bar charts, line graphs
Format cells
Insert rows and columns, change column and row widths or height
Create charts from spreadsheets
Enter formulae e.g. sum, average, enter more complex formulae e.g. count, if, countif
Create and rename new sheets
Graphics, multimedia and internet
Use the pens/rubber and other basic functions on an interactive white board
Be able to split screens to show more than one thing e.g. being able to view two programmes
Download and edit images from a digital camera
Record, download and edit videos from a camera or mobile device
Create You Tube channels and upload and share your own content
Create video tutorials

APPENDIX VIII – Sample Transcript – Observation

Mr Williams, Alice and Rebecca

W So if I can go in here [clicks on drop down menu], we can do control and C [selecting option on screen]. Well, let's just do that *on the, yeah.* And then I go back here [go back to PowerPoint]. *Is that another one*? Paste it? [pastes text]

A Yeah.

W Highlight it [highlights text], right click [clicks mouse], hyperlink [selects hyperlink], then paste it in there [selects option]. Is that right? Okey dokey.

A Yes, and then it should, if you play it from the current slid when you click on it. [W selects option to play slide]

W Right, OK, easy enough. So how do we do it in the screen? Show me. [clicking through different webpages/tabs]

A If the

W Rebecca, [R stands up] do you want to help me with that one? [R comes in front of computer]

A Come and sit.

W If we do, let's do another new slide.

A Rebecca [W selects options on screen] you can sit down. [R sits down, takes control of computer]

W So what you were saying, the pictures, show new pictures, so usually, what it is, we show little clips and stuff. That'll do.

R [gesturing] So you can take any picture and copy and paste it onto a slide and hyperlink that

W Right.

R Or you can screenshot the site, so you'll have a picture of the actual site up already. [clicks mouse through different options] Where's the *little* bar at the bottom? [slide goes to full screen] Oh. [appears to press Escape key, exits full screen] There. [clicks mouse - webpage/tab changes on screen] *Choose* and click Print Screen [presses Print Screen on keyboard], which *comes up with*

W What did you do there?

R Print screen [points towards Print Screen key on keyboard], *sending*

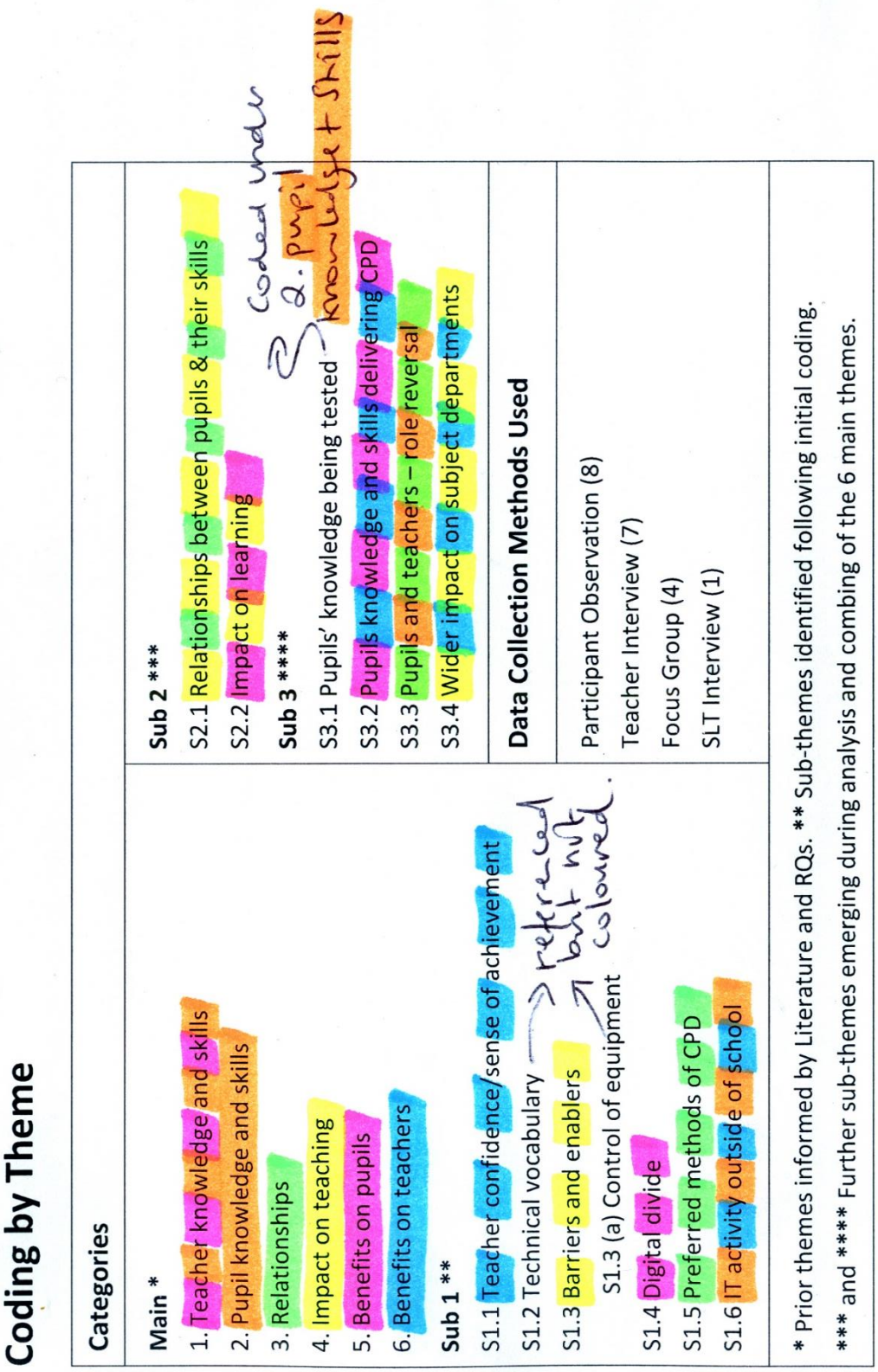
W Did you hold the control key?

A No, its just you just press Print Screen [clicks mouse – screen goes back to PowerPoint, clicks through slides]

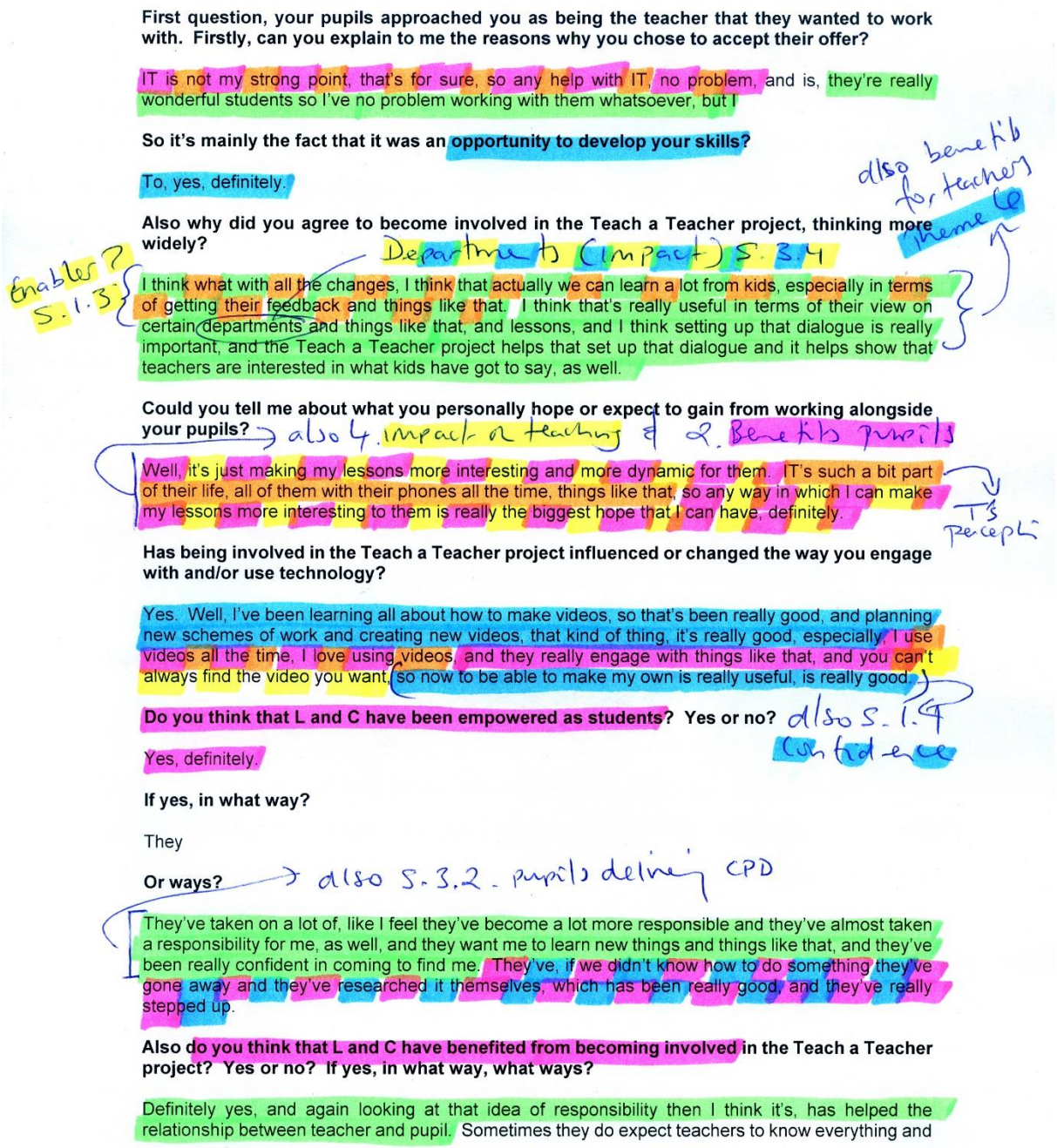
words/phrases in italics may not be accurate
… indicates inaudible words/phrases

APPENDIX IX – Example of Colour Coding Transcripts

Colour key for coding themes.



Example page of coded transcript – teacher interview.



First question, your pupils approached you as being the teacher that they wanted to work with. Firstly, can you explain to me the reasons why you chose to accept their offer?

IT is not my strong point, that's for sure, so any help with IT, no problem, and is, they're really wonderful students so I've no problem working with them whatsoever, but I

So it's mainly the fact that it was an opportunity to develop your skills?

To, yes, definitely.

Also why did you agree to become involved in the Teach a Teacher project, thinking more widely?

I think what with all the changes, I think that actually we can learn a lot from kids, especially in terms of getting their feedback and things like that. I think that's really useful in terms of their view on certain departments and things like that, and lessons, and I think setting up that dialogue is really important, and the Teach a Teacher project helps that set up that dialogue and it helps show that teachers are interested in what kids have got to say, as well.

Could you tell me about what you personally hope or expect to gain from working alongside your pupils?

Well, it's just making my lessons more interesting and more dynamic for them. IT's such a bit part of their life, all of them with their phones all the time, things like that, so any way in which I can make my lessons more interesting to them is really the biggest hope that I can have, definitely.

Has being involved in the Teach a Teacher project influenced or changed the way you engage with and/or use technology?

Yes. Well, I've been learning all about how to make videos, so that's been really good, and planning new schemes of work and creating new videos, that kind of thing, it's really good, especially, I use videos all the time, I love using videos, and they really engage with things like that, and you can't always find the video you want, so now to be able to make my own is really useful, is really good.

Do you think that L and C have been empowered as students? Yes or no?

Yes, definitely.

If yes, in what way?

They

Or ways?

They've taken on a lot of, like I feel they've become a lot more responsible and they've almost taken a responsibility for me, as well, and they want me to learn new things and things like that, and they've been really confident in coming to find me. They've, if we didn't know how to do something they've gone away and they've researched it themselves, which has been really good, and they've really stepped up.

Also do you think that L and C have benefited from becoming involved in the Teach a Teacher project? Yes or no? If yes, in what way, what ways?

Definitely yes, and again looking at that idea of responsibility then I think it's, has helped the relationship between teacher and pupil. Sometimes they do expect teachers to know everything and

APPENDIX X – Example of Data Saturation When Coding Transcripts

Over 25,000 words of transcribed data were analysed and coded. This short extract relates to theme 5 and shows reference points for mapping against other themes (see Appendix IX) and points where data saturation was reached.

5. Benefits on Pupils

Participant Observation

No additional data for **POs 1 – 8.**

Benefits on Pupils

Teacher Interviews

Mr H (F and J) – (TI: 1)

H identifies some of the benefits to pupils by explaining the reasons **why he chose to accept the offer of working with F and J.**

> Two things. First one was I was encouraging them to being more independent and take responsibility, because they're two bright lads and I thought, well, there's a way they can gain a bit of confidence. And it's good experience for them, as well, to be able to be in a situation where they're in control of a teacher, an adult. (P. 2)
>
> ***[Also theme: S3.2]***

Miss K (L and C) – (TI: 2)

K responds to the question: **Do you think that L and C have been empowered as students? Yes or no?**

> Yes, definitely. They've taken on a lot, like I feel they've become a lot more responsible and they've almost taken a responsibility for me, as well, and they want me to learn new things and things like that, and they've been really confident in coming to find me. (P. 1)
>
> ***[Also theme: S3.2]***

Mrs S (B and J) – (TI: 3)

S identifies some of the benefits to pupils by explaining the reasons **why she agreed to become involved in the Teach a Teacher Project.**

> I think that kids should really see teachers in a different light and them feeling that they could help the teachers I thought would be really good, not only for their self-esteem but also in how they viewed teachers. Because I think, it depends how you teach. Some teachers are, particularly in secondary, are very far removed from the kids, they're kind of a totally separate island. I think perhaps because I've taught in primary and I've taught in special [schools], I don't feel I'm quite that far removed so I think that maybe I [particularly] have a different relationship with the kids and I just felt it [the project] was a really good way for the kids to have a different relationship with teachers. (P. 1)
>
> ***[Also themes: 3, S3.3]***

When asked **have the pupils benefitted from being involved in the project,** S responds in a positive way:

> Yes, because I think it's empowered them and also as I said, it's made them realise just the ins and outs of teaching, it's not as easy as just standing up there and waffling. You have to actually think what you're doing. (P. 2)
>
> ***[Also themes: S3.2, S3.3]***

Miss F (H and S) – (TI: 4)

When asked **have the pupils benefitted from being involved in the project,** F responds in a positive way:

> Yeah, definitely confidence wise. And showing their ability and talking with each other and helping each other and saying [to me] well, you've done that with it . . . what about this? (P. 2)
>
> ***[Also theme: S2.1]***

Miss C (K and C) – (TI: 5)

C echoes the above sentiment – **Have C and K been empowered as students?**

> I would've thought yes, it would help with their confidence as another aspect of things. (P. 1)

Mr M (S and C) – (TI: 6)

M echoes C and F above:

> I think, in many ways I'd like them to increase their own confidence in sitting down with a teacher and showing them something, and I think it was a mutually beneficial thing, yeah, absolutely. (P. 1)
>
> ***[Also themes: 1, 2, 3, 5, 6]***

When asked whether **S and C have been empowered as students** M responds:

> I think they feel empowered in the fact that they know that actually it's quite empowering to know that they know certain things about the 21st century tools that we use, actually they know a little bit more than their own teachers, so I

> think they feel the confidence to maybe ask more about their own issues that they feel difficult with or find that they have difficulty with. (P. 2)
>
> ***[Also themes: 2, 3, S1.4, S3.2, S3.3]***

When asked **in what ways have the students have benefited from being involved with the Teach a Teacher project** M makes some interesting observations:

> . . . if they felt that there wasn't a huge amount for them, maybe, let's say, in the playgrounds because it just wasn't their scene, I think it's probably a good starting point for them to say, well, actually this is something we are interested in, we like sitting down with somebody else explaining things to them. It's exploring a little bit more about who they are as people and what they want to do maybe later on, so I think they felt good from, for doing that. (P.2)
>
> ***[Also themes: 3, S3.2]***

In terms of **the impact that the project has had on your own teaching, considering the children you teach** M observes that:

> I think that they look forward [more] to having a presentation. I think in the olden days it was a, oh, gosh, here we go, another PowerPoint, and it was the standard for either them presenting something to me or me presenting something to them, but actually now they, there's a little extra dimension to it, which usually there isn't. (P. 3)

Mr W (R and A) – (TI: 7)

Do you think that R and A have been empowered as students?

> Absolutely, yeah. I think it's great for them to say, well, we've actually gone and helped a teacher improve their teaching as such, so absolutely I think it will empower them, yeah. (P. 1)

[Also themes: 3, 6,]

Do you think that R and A have benefited from being involved in the Teach a Teacher project, and if so, in what ways:

> I think so, yeah. I think they've probably developed their confidence, as well, teaching a teacher, I suppose, maybe made them more inclined to offer up help within a lesson if they see something going wrong with IT, something they can answer. Yeah, I think it's helped them. (P. 1)

Benefits on Pupils

Pupil Focus Groups

C K L & C – (FG: 1)

No additional data.

B S & H – (FG: 2)

Pupils were asked what they hoped to gain from the project and what they felt the benefits were:

> B: . . . leadership skills, because obviously you're telling people what to do, so obviously that's leadership.
>
> S: And also it helps when you have taken part in this, which like B said, is leadership. And also that you show that you can work maturely with people who aren't your own age and show respect to them will probably help in the future.
>
> ***[Also themes: 3, S3.2]***

B: I also found that, as well as teaching the teacher, you're actually teaching yourself because some of our partners know more stuff than we do, so we learn stuff from our partners as well.

[Also themes: 3, S2.1]

J F R & A – (FG: 3) and **S C L & M – (FG: 4)**

No additional data.

Benefits on Pupils

SLT Interview

B Senior Leader – (SLTI: 1)

B was asked: **What sort of impacts do you think the project has had on the pupils?**

Confidence, Massively, and one [pupil] in particular. I knew her. I've only taught one pupil out of all of those [referring to the cohort] once so most of them are unknown to me, but one girl in particular who I used to speak to in the playground and would barely say two words, and, in fact, hasn't throughout her Year 7 and Year 8 time here has said anything unless she has to, is very, very confident and when she talks about it she lights up and she can give all the examples and talk very confidently. So definitely confidence, definitely that development of relationship to a level which I wasn't expecting, because I wasn't expecting it to spill over to myself, I thought it would have been with the teachers involved, and I think obviously teacher interest was more than I was expecting, as well.

[Also theme: 3]

As an outcome of the project, B comments on the **pupils' levels of confidence:**

> . . . they're very confident. I've had a couple of them come and ask me about IT programs that we don't have in school, would I be interested in, and the type of dialogue is purely off the back of this project. (P. 1)

B was asked about the extent to which senior managers were aware of the project:

> Our Headteacher is just loving the fact that such research is going on and the fact that the students are the ones who are primarily benefiting. (P. 2)

APPENDIX XI – Risk Assessment

Name of Assessor:	**David Morris**	**Date of Assessment**	
Event title:	**Classroom based Fieldwork**	**Date, time and location of activity:**	**Ongoing – The Appledawn School**
Signed off by Manager (Print Name)			
Please describe the activity in as much detail as possible (include nature of activity, estimated number of participants, etc) If the activity to be assessed is part of a fieldtrip or event please add an overview of this below:			
Doctoral research carried out in a coeducational secondary school. This will be classroom based with a cohort between 14 – 25 students and 7-10 members of staff.			
Overview of FIELD TRIP or EVENT:			
Educational Action Research based in a classroom setting concerning the use of technologies to assist teaching and learning.			

Guide to risk ratings:

a) Likelihood of Risk	b) Severity of Risk	c) Risk Rating (a x b = c)
1 = Low (low or minimal risk)	1 = Slight (minor injury)	1-2 = Minor = No action required
2 = Moderate (small change = accident)	2= Moderate (injury or disease)	3-4 = Medium = May require control measures
3 = High (100% certain to occur)	3 = High (death or serious injury)	6-9 = High = Must Implement control measures

Activity / Task Involved	Describe the potential hazard?	Who is at risk?	Likelihood of risk	Severity of risk	Risk Rating (Likelihood x Severity)	What precautions have been taken to reduce the risk?	What further action is needed to reduce risk (By whom and by when?)	Review Date
Classroom based activity	False accusations against me by pupils of impropriety	myself	Low (1)	Low (1)	Low (1)	CRB check in place. Avoid being alone with a pupil and ensure there is someone else present	Ensure my contact (Senior Manager) is on site during visits	ongoing
As above	Participants i.e. pupils causing distress or upsetting each other	Myself and pupil participants	Low (1)	Low (1)	Low (1)	participants briefed to establish ground rules on how to speak to and interact with each other	Code of conduct agreed and signed by participants	ongoing
As above	Causing stress regarding demands made on teachers' time	Staff who are participating	Low (1)	Low (1)	Low (1)	Place onus on staff to choose times and dates which are convenient to them	Ongoing confirmation via email that arrangements are agreeable	ongoing
As above	Impact on pupils' learning and studies	Pupils	Low (1)	Low (1)	Low (1)	Liaise with staff on times when pupils' withdrawal will not affect learning	Coordinate with subject teachers Head of Year as required	ongoing
As above	Fire alarm/evacuation	All in school	Low (1)	Medium (2)	Medium (2)	I am aware of the school evacuation procedure	Following procedure if the fire alarm sounds. Those present are registered.	ongoing
As above	Pupil medical safety e.g. Health Care Plans, allergies or medication taken	Pupils	Low (1)	Medium (2)	Medium (2)	I have been given records of pupils' medical histories/allergies	Point of contact for emergency ids known.	ongoing
As above	Child Exploitation and Online Protection (CEOP)	Pupils	Low (1)	Low (1)	Low (1)	I am familiar with school's Acceptable Use Policy regarding the school's use of the Internet	Following school procedure policy and reporting arrangements if issues of online content arise	ongoing

Appendix XII – Systems and Abbreviations Used When Referencing Participants

Abbreviations Used and Details of Participants

OPT = Observation of pupils and teachers working together

TI = Interview with teacher

PFG = Pupil Focus Group

SLI = Interview with Senior Leader

Observation of pupils and teachers

OPT-1	Mr Maxwell, Simon and Chris
OPT-2	Mr Kennedy, Marcus and Leon
OPT-3	Ms Flowers, Sarah and Hermione
OPT-4	Mr Williams, Rebecca and Alice
OPT-5	Ms Caterham, Claire and Katie
OPT-6	Ms Sanderson, Barry and James
OPT-7	Mr Harvey, Frank and John
OPT-8	Ms Keane, Lenny and Craig

Pupil Focus Groups

PFG-1	Lenny, Craig, Katie and Claire
PFG-2	Barry, Sophie, Hermione and James
PFG-3	Frank, John, Rebecca and Alice
PFG-4	Leon, Marcus, Simon** and Chris

Teacher Interviews

TI-1	Mr Harvey
TI-2	Ms Keane
TI-3	Ms Sanderson
TI-4	Mr Maxwell
TI-5	Ms Caterham
TI-6	Ms Flowers
TI-7	Mr Williams
TI-8	*

Senior Leader Interview

SLI	Belinda

* TI-8 would have been Mr Kennedy but he withdrew during the research

** Simon withdrew during the research

APPENDIX XIII – The *Teach a Teacher* Project Display Case